

# Resettlement Plan (Draft)

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May 2011

## IND: National Grid Improvement Project

Prepared by Power Grid Corporation of India Ltd. for the Asian Development Bank.

**POWERGRID CORPORATION OF INDIA LTD.  
(A Government of India Enterprise)**



**DRAFT RESETTLEMENT PLAN**

**May 2011**

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## A. EXECUTIVE SUMMARY

### 1. Introduction

1. POWERGRID, the Central Transmission Utility (CTU) of the country, is engaged in power transmission with the mandate for planning, co-ordination, supervision and control over the entire Inter-State transmission system. POWERGRID has been contributing significantly towards the development of the Indian power sector by undertaking coordinated development of power transmission networks along with the effective and transparent operation of regional grids and through continuous innovation in technical and managerial fields.

The objective of the project is to transfer and evacuate power from future IPP generation projects in the State of Chhattisgarh to the North-Western Region in Punjab.

2. The project scheme is divided into two components:

– Component 1: HVDC interregional transmission system between the Western and Northern regions (Chhattisgarh and Haryana)

- (i) A  $\pm 800$ kV 6,000MW HVDC bipole transmission line (circa 1,300 km) between Champa in Chhattisgarh (the Western region) and Kurukshetra in Haryana (the Northern region), initially to be operated at 3,000MW;
- (ii) Expansion of an existing pooling substation at Champa; and
- (iii) Establishment of  $\pm 800$ kV 3,000MW HVDC bipole terminals at Champa and Kurukshetra.

– Component 2: Transmission system strengthening in the Northern region (Haryana and Punjab)

- (i) Establishment of the 400/220kV 2x500 MVA substation at Kurukshetra;
- (ii) 400kV D/C (nearly 300 km) between the Kurukshetra substation and the existing Jallandhar substation via the existing 400/220kV Nakodar substation ; and
- (iii) Loop-in loop-out (LILO) of Abdullapur to Sonapat (32 km) 400kV D/C at the Kurukshetra substation.

3. While component 2 will not be financed by the ADB loan, the component has been fully assessed in the resettlement plan as it comprises an integral part of the overall scheme. The component will be treated as an associated facility and will be planned and implemented consistent with ADB SPS 2009 and POWERGRID's ESPP 2009 requirements as applicable in such cases. As such, no semiannual monitoring reports will be required for component 2.

4. To meet the funding requirement for the proposed project, POWERGRID is negotiating a loan of USD 750 million (USD 500 million as Sovereign and USD 250 million as Non-Sovereign) with the Asian Development Bank (ADB) for the implementation of HVDC Substations at Champa and Kurukshetra and a transmission line extending between the two points.

5. The basic aims and objectives of the Resettlement Plan (RP) are to mitigate all unavoidable adverse impacts resulting from land requirements and to provide appropriate compensation in accordance with the proposed entitlement framework for both permanent and temporary damages as may be applicable.

**Table 1: Project at a Glance  
Impact on Land and other assets<sup>1</sup>**

Description	800 kV Champa Substation	800 kV Kurukshetra Substation
Total number of Project Affected Families	13	25
Total number of Project Affected Persons	65	125
Total Area for Substation	116.7 acres	225 acres
Government Land (acre)	90 acres	150 acres
Total area of private land (acre)	26.7 acres	75 acres
Trees approximately	250 nos.	00
Transmission Line Champa to Punjab	Approximately 1,600 KM	
Total RP cost	<b>USD 15.13 million (@Rs.44.59 per USD</b>	

6. The proposed Project is classified as Category B in accordance to the Asian Development Bank's (ADB) Safeguard Policy Statement (2009). Details of the nature, scale and significance of the adverse resettlement impacts associated with the project are discussed in detail in this RP. To address these, a Resettlement Plan based on preliminary assessment and sample survey has been prepared by a consultant on behalf of POWERGRID. The Resettlement Plan will include impacts resulting from the construction of substations along with entitlement framework for compensation and R&R and a Compensation Plan for Temporary Damages for impacts resulting from the transmission system project. This RP describes the proposed substation and transmission system investments, socio-economic impacts, Legal Framework and applicable policies, public consultations, proposed mitigation measures, Budget, Monitoring and Evaluation and the preliminary Resettlement Plan (RP)

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<sup>1</sup> All figures in the report are based on the most recent data collected as of July 2011.

## B. PROJECT DESCRIPTION

### 1. Objective

7. The objective of the project is to provide transmission arrangement so as to transfer power from future IPP generation projects in the State of Chhattisgarh to the north-western part of Punjab.

### 2. Benefits of the project

8. The proposed scheme shall facilitate strengthening of North-West transmission corridor for dispersal of power with reliability and security. Additionally, the project is likely to generate direct and indirect employment opportunities, promote industrial growth and stimulate overall development of the region. POWERGRID, as a responsible corporate entity, always undertakes community development works around the location of its substations. Hence, the basic infrastructure around the proposed substation will also improve substantially.

### 3. Description of Project Developments

9. In accordance with the requirements of the transmission system for transfer of power to Northern/Western region from generation projects coming up in Chhattisgarh, following system strengthening in North-West inter-regional transmission corridor is proposed (see Figure 1). The scheme is divided into the following two components:

- Component 1: HVDC interregional transmission system between the Western and Northern regions (Chhattisgarh and Haryana)
  - (iv) A  $\pm 800$ kV 6,000MW HVDC bipole transmission line (circa 1,300 km) between Champa in Chhattisgarh (the Western region) and Kurukshetra in Haryana (the Northern region), initially to be operated at 3,000MW;
  - (v) Expansion of an existing pooling substation at Champa; and
  - (vi) Establishment of  $\pm 800$ kV 3,000MW HVDC bipole terminals at Champa and Kurukshetra.
- Component 2: Transmission system strengthening in the Northern region (Haryana and Punjab)
  - (iv) Establishment of the 400/220kV 2x500 MVA substation at Kurukshetra;
  - (v) 400kV D/C (approximately 300 km) between the Kurukshetra substation and the existing Jalandhar substation via the existing 400/220kV Nakodar substation ; and
  - (vi) Loop-in loop-out (LILO) of Abdullapur to Sonapat 400kV D/C at the Kurukshetra substation.

10. While component 2 is not financed by the ADB loan, the component has been fully assessed in the resettlement plan as it comprises an integral part of the overall scheme. The component will be treated as an associated facility of the loan and will be planned and implemented consistent with ADB SPS 2009 and POWERGRID's ESPP requirements, as applicable in such cases. As such no semiannual monitoring report will be required for component 2.

11. The resettlement plan provides an integrated assessment of both temporary and permanent impacts. Permanent impacts are those that will result from the land acquisition process for obtaining the substation sites. Permanent resettlement impacts will be assessed, mitigated and managed by POWERGRID in a Resettlement and Rehabilitation Plan (R&R). The R&RP will include a description and summary of the land acquisition process, a full social impact assessment of affected areas, qualitative / quantitative details on the exact nature, scale and significance of impacts on peoples'

livelihood's, a bespoke entitlement and compensation framework, community development works integrating gender enhancement and mainstreaming features (where and as applicable), in addition to other aspects.

12. A Compensation Plan for Temporary Damages (CPTD) will describe, mitigate and manage the process of compensating affected peoples for the loss of crops or trees resulting from the installation of the transmission line connecting the Champa, Kurukshetra, and Jallandhar substations.

T13. All mitigation measures will be designed in alignment with ADB's SPS, 2009 and POWERGRID's ESPP 2009.

14. POWERGRID undertook an extensive assessment of three project alternatives. The assessment informed and guided the site selection process for each of the substation sites and transmission line corridors. The assessment broadly analyzes each alternative, provides an overview of the socio-economic features, the social / environmental issues and preliminary technical details of each, enabling decision makers to decide on the most appropriate and sustainable option.

15. The alternatives study was carried out by POWERGRID's corporate environmental and social team (ESMD & Engineering) along with the regional field team (Regional Engineering and Site Team). The main objective was to identify sites that required minimal land acquisition or impacts to forested areas. The Champa and Kurukshetra sites were selected on this basis.

16. The analysis of alternatives for the Transmission Line under Component 1 is provided in **Annex 1** herein. The entire transmission line for the scheme features the distance from Champa (Chhattisgarh) to Jallandhar (Punjab) via Kurukshetra. Three different alignments were studied with the help of published data/maps and walkover surveys to arrive at the most optimum route for detailed survey. As can be referenced in Annex-1, Alternative-I is the most optimum route as it involves minimum ecological sensitive areas like forest, has minimum social impacts and has a shorter line length compared to the other alternatives. Hence, **Alternative-I** has been finalised for the project.

17. While identifying the transmission corridor, preliminary route selection is done by POWERGRID based on the topography sheets of the GOI (Survey of India and Forest Atlas). During route alignment, all possible efforts are made to avoid and / or minimize impacts to forested areas.

18. Additionally, the following points are taken into consideration:

- (i) The route of the proposed transmission line does not involve any human habitation.
- (ii) Any monument of cultural or historical importance is not affected by the route of the transmission line.
- (iii) The proposed route of transmission line does not create any threat to the survival of any community with special reference to Tribal Community.
- (iv) The proposed route of transmission line does not affect any public utility services like playgrounds, schools, other establishments etc.
- (v) The line route does not pass through any sanctuaries, National Park etc.
- (vi) The line route does not infringe with area of natural resources.

19. In order to achieve this, POWERGRID undertakes route selection for individual transmission lines in close consultation with representatives from the Ministry of Environment and Forests and the Department of Revenue. While under National Law POWERGRID have the right to eminent domain, alternative alignments are still considered according to the above-mentioned factors during site selection, with minor alterations often added during the execution stage to avoid any unforeseen environmentally sensitive areas and or settlements.

- (i) As a rule, alignments are generally sited 10-15 km away from major towns, whenever possible, to account for future urban expansion.



- (ii) Similarly, forests are avoided to the extent possible, and when it is not possible, a route is selected in consultation with the local Divisional Forest Officer, that causes minimum damage to existing forest resources.
- (iii) Alignments are selected to avoid wetlands and unstable areas for both financial and environmental reasons.

20. In addition, care is also taken to avoid National parks and Sanctuaries and any other biologically rich or sensitive areas in flora or fauna.

21. The proposed  $\pm$  800 kV HVDC bipole transmission line between Champa Pooling Station and Kurukshetra and Kurukshetra to Jalandhar is being carried out with the above principles in mind. As such different alternatives were studied with the help of GOI published data like the Forest atlas, Survey of India topographical maps, satellite imagery, etc. to arrive at the most optimum route which can be taken up for detailed survey and assessment of environmental & social impacts for their proper management (Refer Annex -1).

22. The basic aims and objectives of the Resettlement Plan (RP) is to mitigate all unavoidable adverse impacts due to land requirements and provide appropriate compensation in accordance with the proposed entitlement framework for both permanent and temporary damages, as applicable, thereby improving or maintaining peoples livelihoods and way of life. The issues identified and addressed in the RP are:

- (i) Legal framework and relevant policies;
- (ii) Socio-economic details of the project area and the affected population;
- (iii) Impact due to land acquisition;
- (iv) Consultation, information dissemination, disclosure, and grievance redressal;
- (v) Institutional arrangements for implementation of the RP;
- (vi) Implementation schedule;
- (vii) Resettlement budget; and
- (viii) Monitoring and evaluation.

### **C. LEGAL FRAMEWORK AND RELEVANT POLICIES**

23. A different policy and regulatory framework applies to: a) the substation projects, than b) the transmission lines. In the case of substations, the project envisages permanent land acquisition which generates long term impacts on affected families. Applicable laws and policies will detail the requirements for addressing these impacts accordingly. Entitlements, compensation and assistance packages are designed in accordance with the national and state level laws, in addition to ADB's SPS 2009.

24. Impacts generated during the erection of the transmission lines are temporary in nature, thus the applicable laws or policies will ensure addressing the impacts accordingly. The applicable laws are the Electricity Act 2003 and the Indian Telegraph Act of 1885.

ADB's SPS 2009 and POWERGRID's ESPP 2009 will apply to all project activities and components.

#### **1. Laws and policies applicable to the substations**

26. The Substations are located in Champa (Chattisgarh) and Kurukshetra (Haryana). Champa substation is located in Jhanjgir-Champa District of Chattisgarh. The substation will require 116 acres, under the jurisdiction of the Taga panchayat. The Kurukshetra substation will be built in Karnal District of Haryana. It will consist of 225 acres of land located in the jurisdiction of Bhadson Panchayat.

27. The basic laws applicable to both substations are: The Land Acquisition Act, 1894 (LAA, amended in 1984) and The National Rehabilitation and Resettlement Policy, 2007 (NRRP); and respectively, the Chattisgarh Rehabilitation Policy, 2007, and the Haryana Resettlement and Rehabilitation Policy of 2009.

28. A brief description of the national and state laws and relevant policies is provided below in the following section.

**a. The National Rehabilitation and Resettlement Policy (Ministry of Rural Development, Department of Land Resources), 2007**

29. The NRRP 2007 was adopted by the Government of India on the 31<sup>st</sup> October 2007 to address development-induced resettlement issues. The NRRP stipulates the minimum facilities to be ensured for persons displaced due to the acquisition of land for public purposes and to provide for the basic minimum requirements. All projects leading to involuntary displacement of people must address the rehabilitation and resettlement issues comprehensively. The State Governments, Public Sector Undertakings or agencies, and other requiring bodies shall be at liberty to put in place greater benefit levels than those prescribed in the NRRP.

30. The objectives of the Policy are:

- (i) to minimize displacement and to promote, as far as possible, non-displacing or least displacing alternatives;
- (ii) to ensure adequate rehabilitation package and expeditious implementation of the rehabilitation process with the active participation of the affected families;
- (iii) to ensure that special care is taken for protecting the rights of the weaker sections of society, especially members of the Scheduled Castes and Scheduled Tribes, and to create obligations on the State for their treatment with concern and sensitivity;
- (iv) to provide a better standard of living, making concerted efforts for providing sustainable income to the affected families;
- (v) to integrate rehabilitation concerns into the development planning and implementation process; and
- (vi) where displacement is on account of land acquisition, to facilitate harmonious relationship between the requiring body and affected families through mutual cooperation.

31. The NRRP'07 is applicable for projects where over 400 families in the plains or 200 families in hilly or tribal or Desert Development Program (DDP) areas are displaced. However, the basic principles can be applied to resettling and rehabilitating regardless of the number affected. NRRP's provisions are intended to mitigate adverse impacts on Project Affected Families (PAFs). The NRRP comprehensively deals with all the issues and provides wide range of eligibility to the affected persons and meets most of the requirement of ADB's Policy on Involuntary Resettlement (1995). The non-title holders, under NRRP, are recognized as the people living in the affected area not less than three years at the time of declaration of the area as affected area. The NRRP addresses the vulnerable families with adequate entitlements and provides special provisions for Scheduled Castes (SC) and Scheduled Tribes (ST) Families. The NRRP takes in to account all the transparency as far as consultation, dissemination of information, disclosure and grievance is concerned. However, the law relating to the acquisition of privately owned immovable property is the Land Acquisition Act of 1894.

**b. Land Acquisition Act, 1894**

32. The LAA provides a framework for facilitating land acquisition in India. LAA enables the State Government to acquire private land for public purposes. LAA ensures that no person is deprived of land except under LAA and entitles Affected Persons to a hearing before acquisition. The main elements of LAA are:

- (i) Land identified for the purpose of a project is placed under Section 4 of the LAA. This constitutes notification. Objections must be made within 30 days to the District Collector (DC, the highest administrative officer of the concerned District).
- (ii) The land is then placed under Section 6 of the LAA. This is a declaration that the Government intends to acquire the land. The DC is directed to take steps for the acquisition, and the land is placed under Section 9. Interested parties are then invited to state their interest in the land and the price. Under Section 11, the DC will make an award within one year of the date of publication of the declarations. Otherwise, the acquisition proceedings shall lapse.
- (iii) In case of disagreement on the price awarded, within 6 weeks of the award, the parties (under Section 18) can request the District Collector (DC) to refer the matter to the Courts to make a final ruling on the amount of compensation.
- (iv) Once the land has been placed under Section 4, no further sale or transfer is allowed.
- (v) Compensation for land and improvements (such as houses, wells, trees, etc.) is paid in cash by the project authorities to the State Government, which in turn compensates landowners.
- (vi) The price to be paid for the acquisition of agricultural land is based on sale prices recorded in the District Registrar's office averaged over the three years preceding notification under Section 4. An additional 30 percent is added to the award as well as an escalation of 12 percent per year from the date of notification to the final placement under Section 11. For delayed payments, after placement under Section 11, an additional 9 percent per annum is paid for the first year and 15 percent for subsequent years.

### **c. Chattisgarh Rehabilitation Policy, 2007**

33. Main objective of the policy is to provide adequate land to projects under state or private and to provide adequate compensation to the affected person along with facility for his resettlement and employment in such a manner that affected person's condition is improved or at least maintained as it is at the time of land acquisition. In this regard the following special provisions have been made to ensure that:

- (i) Before displacement, PAPs to get alternate land for acquired land and immovable property and/or adequate compensation.
- (ii) It is to be ensured that PAP's whose land or residential property is acquired, to get planned resettlement in the new place along with such basic facility which is equal or better than before.
- (iii) To ensure that PAPs to get permanent job in the project.
- (iv) To ensure that the Landless PAFs whose livelihood is based on other work/ employment than agriculture, should get similar work or provide alternate employment
- (v) It is to ensure that only required land is acquired for project. In case the acquired land is not getting used for the intended project and where law permits such land should be used for other useful project.
- (vi) To organize monitoring and evaluation setup to ensure that the PAF/ PAP's are getting the rehabilitation according to this policy

34. The above objectives will be achieved by following the directive principles:

- (i) This policy will be applicable to all the projects from the date of its publishing where the land acquisition procedure has not been completed or to say where Award resolution is not complete.
- (ii) For the purpose of rehabilitation there will be no difference between Revenue village and Forest village.
- (iii) Acquired land must be used by govt or private organization for specified purpose or specified purpose by an able officer within the scheduled time limit.
- (iv) In certain cases where the residential / habitation land is acquired for the project, rehabilitation plan will have the provision for planned resettlement alternative near the project area. Alternate resettlement will develop the basic residential, commercial, trade facilities which will be equivalent or better than earlier condition.

- (v) Rehabilitation plan will give special attention to the people of weaker section and scheduled areas. For this all those people will be covered who are doing activities on the government land for more than 3 years at the time of publishing of notice under section 4 of Land Acquisition Act or such people who are doing agricultural activity in the scheduled area on government land on or before 1990.
- (vi) For speedy construction and development of new resettlement area for the PAPs all the development activities/ plan of the state will be given priority for implementation, so that the new resettlement will have basic and public facilities better than earlier.
- (vii) 1 person from the PAF will get a job in the project as per his capability, if he is losing 75% of his land for commercial project. In case of land acquisition is for Industrial or mining project, 1 person from the PAF will get a job as per his capability in the project.
- (viii) To improve the quality of life/ conditions of PAF's, government's beneficial schemes including self employment schemes will be provided. To get the full benefit out of the schemes, proper training will be imparted.
- (ix) Implementation of Land acquisition and rehabilitation plan will be made simultaneously for the project.
- (x) For the timely implementation of rehabilitation plan and timely distribution of benefits to PAPs, state and Zila level committees will be formed for monitoring and evaluation.

#### **d. Haryana Resettlement and Rehabilitation Policy, 2010**

35. Haryana Governments Resettlement and Rehabilitation Policy 2010 has realized the impact of land acquisition on PAFs and PAPs. In this regard the Government of Haryana has come out with a better policy. In addition to the other best practices adopted from the various external funding projects it provides:

- (i) an annuity to land owners for 33 years @ Rs. 21000.00 to Rs. 42000.00 per acre per annum as per the project with fixed annual increase of Rs. 750.00 or Rs. 1500.00 as per the project.
- (ii) No litigation incentive which is unique. It gives 20% additional price of basic cost as no litigation incentive for land acquisition.
- (iii) 2% for the total compensation package for developing community and infrastructure at community level.
- (iii) 1% of the total amount for skill development.
- (iv) recognition to every section of society which constitute a village.

#### **e. Environment and Social Policy Procedures (ESPP), 2009**

36. POWERGRID's Environment and Social Policy and Procedures as adopted in 2009 includes the basic principles of Resettlement and Rehabilitation covering the national laws and the ADB's Safeguard Policy Statement of 2009.

POWERGRID has developed its corporate Environmental and Social Policy and Procedures (ESPP) to address the environment and socio-economic issues arising from its activities based on the basic principles of Avoidance, Minimization and Mitigation. The ESPP outlines POWERGRID's approach and commitment to deal with environmental and social issues relating to its transmission projects, lays down the management procedures and protocols for the purpose that includes the framework for identification, assessment, and management of environmental and social concerns at both organizational and project levels.

POWERGRID has articulated a "Social Entitlement Framework" based on National Rehabilitation and Resettlement Policy, 2007 and other progressive trends in its corporate policy – Environment and Social Policy & Procedures (ESPP) applicable for the affected families.

37. POWERGRID's prime concern is to rehabilitate and resettle people affected by its operations. Its endeavour is always to avoid/minimise hardship to PAPs and their families through options like Land for Land as far as possible, Rehabilitation Assistance and adoption of Income Generating Scheme and training instead of cash because it has been experienced that extending cash compensation does not fully achieve the objective of rehabilitation. POWERGRID while implementing

the social entitlement framework gives special attention to this fact and exhaust all options before arriving at cash compensation.

38. POWERGRID's social entitlements within its Resettlement and Rehabilitation framework are varied and include different types of compensation packages. These are provided in detail in Annex 2 of the report.

**f. ADB'S Safeguard Policy Statement, 2009**

39. ADB has adopted Safeguard Policy Statement (SPS) in 2009 including safeguard requirements for environment, involuntary resettlement and indigenous people.

40. The objectives of the Involuntary Resettlement Safeguard policy is to avoid involuntary resettlement wherever possible; to minimize involuntary resettlement by exploring project and design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.

41. The involuntary resettlement safeguards covers physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. It covers them whether such losses and involuntary restrictions are full or partial, permanent or temporary.

42. The main policy principles of the Involuntary Resettlement Safeguard are:

- (i) Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks.
- (ii) Carry out meaningful consultations with affected persons, host communities, and concerned non-government organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, and monitoring and evaluation of resettlement programs. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, and Indigenous Peoples, and those without legal title to land, and ensure their participation in consultations. Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns. Support the social and cultural institutions of displaced persons and their host population. Where involuntary resettlement impacts and risks are highly complex and sensitive, compensation and resettlement decisions should be preceded by a social preparation phase.
- (iii) Improve, or at least restore, the livelihoods of all displaced persons through (i) land-based resettlement strategies when affected livelihoods are land based where possible or cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where possible.
- (iv) Provide physically and economically displaced persons with needed assistance, including the following: (i) if there is relocation, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities, and extension of project benefits to host communities; (ii) transitional support and development assistance, such as land development, credit facilities, training, or

employment opportunities; and (iii) civic infrastructure and community services, as required.

- (v) Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with appropriate income sources and legal and affordable access to adequate housing.
- (vi) Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.
- (vii) Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.
- (viii) Prepare a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.
- (ix) Disclose a draft resettlement plan, including documentation of the consultation process in a timely manner, before project appraisal, in an accessible place and a form and language(s) understandable to affected persons and other stakeholders. Disclose the final resettlement plan and its updates to affected persons and other stakeholders.
- (x) Conceive and execute involuntary resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a stand-alone operation.
- (xi) Pay compensation and provide other resettlement entitlements before physical or economic displacement. Implement the resettlement plan under close supervision throughout project implementation. Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports.

Annex 3 provides a comparative analysis of the laws and policies that guide the project, including ADB's SPS 2009 and POWERGRID's Resettlement Framework for substation sites.

## **2. Laws applicable to the Transmission Lines**

43. Laws and policies applicable to the transmission line include the Electricity Act of 2003 and the Indian Telegraph Act of 1885. The main provisions concerning each of these are described in detail below:

### **a. The Electricity Act, 2003, Part-VIII, Section 67 & 68**

#### **Section 67 (3-5):**

Quote:

- (3) A licensee shall, in exercise of any of the powers conferred by or under this section and the rules made thereunder, cause as little damage, detriment and inconvenience as may be, and shall make full compensation for any damage, detriment or inconvenience caused by him or by any one employed by him.*
- (4) Where any difference or dispute [including amount of compensation under sub-section (3)] arises under this section, the matter shall be determined by the Appropriate Commission.*

- (5) *The Appropriate Commission, while determining any difference or dispute arising under this section in addition to any compensation under sub-section (3), may impose a penalty not exceeding the amount of compensation payable under that sub-section.*

**Section 68 (5 & 6):**

- (5) *Where any tree standing or lying near an overhead line or where any structure or other object which has been placed or has fallen near an overhead line subsequent to the placing of such line, interrupts or interferes with, or is likely to interrupt or interfere with, the conveyance or transmission of electricity or the 36 to interrupt or interfere with, the conveyance or transmission of electricity or the accessibility of any works, an Executive Magistrate or authority specified by the Appropriate Government may, on the application of the licensee, cause the tree, structure or object to be removed or otherwise dealt with as he or it thinks fit.*

44. When disposing of an application under sub-section (5), an Executive Magistrate or authority specified under that sub-section shall, in the case of any tree in existence before the placing of the overhead line, award to the person interested in the tree such compensation as he thinks reasonable, and such person may recover the same from the licensee.

**b. The Indian Telegraph Act, 1885, Part-III, Section 10:**

*Power for telegraph authority to place and maintain telegraph lines and posts – The telegraph authority may, from time to time, place and maintain a telegraph line under, over, along, or across, and posts in or upon any immovable property:*

*Provided that –*

- a) the telegraph authority shall not exercise the powers conferred by this section except for the purposes of a telegraph established or maintained by the [Central Government], or to be so established or maintained;*
- b) 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 post; and*
- c) except as hereinafter provided, the telegraph authority shall not exercise those powers in respect of any property vested in or under the control or management of any local authority, without the permission of that authority; and*
- d) in the exercise of the powers conferred by this section, 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 in clause (c), shall pay full compensation to all persons interested for any damage sustained by them by reason of the exercise of those powers.*

45. The local authorities / District Magistrate have been provided with absolute powers to fix the compensation and even adjudicate during the dispute for compensation in section 16 of the Indian telegraph Act.

**D. SOCIO-ECONOMIC PROFILE OF AFFECTED AREAS**

46. POWERGRID has taken considerable steps to ensure that acquisition of private land for substations is avoided or minimized to the extent possible, thus avoiding significant social impacts. Table 1 above identifies land use and ownership details. The socio-economic profile of each affected district is provided in detail below.

**Table 1: Project at a Glance  
Impact on Land and other assets<sup>2</sup>**

Description	800 kV Champa Substation	800 kV Kurukshetra Substation
Total number of Project Affected Families	13	25
Total number of Project Affected Persons	65	125
Total Area for Substation	116.7 acres	225 acres
Government Land (acre)	90 acres	150 acres
Total area of private land (acre)	26.7 acres	75 acres
Trees approximately	250 nos.	00
Transmission Line Champa to Punjab	Approximately 1,600 KM	
Total RP cost	<b>USD 15.13 million (@Rs.44.59 per USD)</b>	

47. The socio-economic information about the project has been gathered using primary and secondary sources of data. Information/data collected to date will be further substantiated through detailed socio-economic surveys that will be carried out for the substation sites after Section 4 notification, per the LA Act of 1894.

48. Below is a socio-economic profile of the two states where the substations will be located, Chattisgarh (Champa Substation) and Haryana (Kurukshetra Substation), followed by a socio-economic profile of the states through which the transmission line crosses (Chattisgarh, Madhya Pradesh, Uttar Pradesh, Haryana and Punjab).

### 1. Substation Champa

49. Champa substation will be located in the district of Jhanjgir-Champa in Chattisgarh State. Chhattisgarh, the 26th State of India, was carved out of Madhya Pradesh on November 1, 2000. Located in central India it covers an area of 135,133 sq km. The state has a population of 20.83 million and population density of 154 per sq. km. (compared to a national average of 312/km<sup>2</sup>). There are 16 districts, 146 blocks, and 20,308 villages. Raipur is the capital of Chhattisgarh. Chhattisgarh is bordered by Bihar, Jharkhand and Uttar Pradesh in the north, Andhra Pradesh in the south, Orissa in the east and Madhya Pradesh in the west. The state lies at 17°46' N to 24°5'N latitude and 80°15' E to 84°20' E longitude.

51. Chhattisgarh is rich in mineral resources, including diamonds. It is dominated by steel, aluminum and cement industries. Chhattisgarh also contributes substantially to the human development of India. Several hundred students from the State qualify for admissions in prestigious academic institutions every year. Bhilai, the knowledge capital of the State, alone sends over 50 students to the elite Indian Institutes of Technology every year. A unique Private Universities Act has been passed to attract investments in quality higher-education.

52. Its large power surplus attracts power-intensive industries, and the State is poised to become the power-hub of the nation. Its central location helps facilitate power transmission to any part of the country. The State supplies power to Delhi, Gujarat and Karnataka, among others. Chhattisgarh ranks high in terms of good industrial relations and labor productivity. There has been no labour unrest in either Bhilai or Korba, the power capital, in several decades.

53. 2% of India's forests are in Chhattisgarh, and 44% of the State's land is forested. Identified as one of the most biologically diverse States, Chhattisgarh has the densest forests in India, rich wildlife,

<sup>2</sup> All figures in the report are based on the most recent data collected as of July 2011.



and above all, over 200 non-timber forest products (NTFP), with tremendous potential for value addition.

54. Bilai, is a modern and cosmopolitan city just 30 km from Raipur, the State capital. A new world-class capital city is to come up near Raipur's airport. Raipur enjoys excellent rail and road networks between Mumbai and Kolkata, and is well connected to Delhi and Chennai. Bilaspur's Railway Division is the most profitable railway operation in the country, contributing 17% of Indian Railways revenue.

55. One third of Chhattisgarh's population is comprised of tribes, mostly living in the forested areas in the North and South. The central plains of Chhattisgarh are known as the "Rice Bowl" of Central India. Female literacy has doubled in the last decade, and male literacy is higher than India's average. Gender ratio is next only to Kerala.

**Table 2: District Wise Socio-economic profile of Chattisgarh State**

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Employment Rate (%)
1	Koriya	5978	586327	946	44.4	63.1	47.7
2	Surguja	16359	1972094	972	54.6	54.8	49.8
3	Jashpur	6205	743160	999	63.2	63.8	53.5
4	Raigarh	6836.33	1265529	994	35.4	70.2	47.5
5	Korba	7145.44	1011823	964	41.5	61.7	42.6
6	Janjgir - Champa	4466.74	1317431	998	11.6	65.9	43.7
7	Bilaspur	6377	1998355	971	19.9	63.5	42.9
8	Kabirdam	4447.05	584552	1002	20.9	55.2	49.9
9	Rajnandgaon	8022.55	1283224	1023	26.6	77.2	50.6
10	Durg	8537	2810436	982	12.4	75.6	41.4
11	Raipur	13083	3016930	980	12.1	68.5	41.9
12	Mahasamund	3902.39	860257	1018	27	67	47.9
13	Dhamtari	2029	706591	1004	26.3	74.9	50.1
14	Kanker	5285.01	650934	1005	56.1	72.9	54.1
15	Bastar	8755.79	1306673	1011	66.3	43.9	52.6
16	Dantewada	9046.29	719487	1016	78.5	30.2	52.8
17	Bijapur*	6555	-	-	-	-	-
18	Naryanpur*	6640	-	-	-	-	-

Source: Census of India 2001; \*New district formed in 2007; Bijapur\* (Dantewada District); Naryanpur\* (Bastar District)

**a. Project Location District Profile**

58. The project is located in the district of Janjgir-Champa, on National Highway 200. Janjgir is 65 km away from Bilaspur and 175 km from Raipur by road. Janjgir, the District headquarter, is on the Hawarah-Mumbai main line of the South-Eastern-Central Railway. Raipur is 152 km from Janjgir by rail. The nearest railway stations in Janjgir District is Naila and Champa.

59. The profile of the District is provided in **Table 3**.

**Table 3: District and Tehsil wide Population (Janjgir – Champa)**

TRU		Household	Total Population	Total Male	Total Female
District	Total (T)	254080	1317431	659388	658043
	Rural (R)	226803	1172112	584520	587592
	Urban (U)	27277	145319	74868	70451
Tehsil	Total (T)	69301	361190	182698	178492

TRU		Household	Total Population	Total Male	Total Female
	Rural (R )	55972	288872	145336	143536
	Urban (U)	13329	72318	37362	34956

Source: Census of India 2001

60. Literacy and employment levels are provided in **Table 4**. The female employment rate is 43% in the district and 40% in the Tehsil.

**Table 4: District and Tehsil wise Literacy and Employment details in Janjgir – Champa**

TRU		Population Literacy	Male Literacy	Female Literacy	Total Population Employed	Male Employment	Female Employment
District	Total	720507	445925	274582	575923	326441	249482
	Rural	622990	388426	234564	528461	289898	238563
	Urban	97517	57499	40018	47462	36543	10919
Tehsil	Total	206012	127687	78325	148729	88673	60056
	Rural	156956	98803	58153	126262	71075	55187
	Urban	49056	28884	20172	22467	17598	4869

Source: Census of India 2001

61. A profile of Taga village, location of the proposed Champa substation in Jhangir-Champa District of Chattisgarh is provided below. The total population of the village is 2727 persons and 486 households. The male female ratio is indicated in **Table 5**. The literacy level is 52% of the total population. Of these, 62% of males are literate. Some 39% of the population is employed; 40% of these are female. This is indicated in **Table 6**.

**Table 5: Demography of Taga Village**

Name of village	Household	Total Population	Total Male	Total Female
Taga	486	2727	1387	1340

Source: Census of India, 2001

**Table 6: Worker Profile of Taga Village**

Village Name	Population Literacy Rate	Male Literacy	Female Literacy	Population Employed	Employed Male Population	Employed Female Population
Taga	1431	881	550	1074	658	416

Source: Census of India, 2001

## 2. Substation Kurukshetra

62. This section provides a brief socio-economic profile of Haryana State, where Kurukshetra substation will be located.

**a. Project location district Profile**

63. The state of Haryana has an area of 44,212 sq. km. and a population of 21.14 million. It has 21 districts, 119 blocks and 6955 villages. The State has a population density of 478 persons per km<sup>2</sup> (compared to the national average of 312). The decadal growth rate of the state is 28.43% (against 21.54% for the country) and the population of the state continues to grow at a much faster rate than the national rate.

64. The state of Haryana is bounded by Uttar Pradesh in the east, Punjab in the west, Himachal Pradesh in the north and Rajasthan in the south. The Union Territory of Delhi is surrounded by Haryana in the north-west, west and south. The south-west of Haryana is dry sandy and barren. The natural boundaries are: the Shivalik hills in the north, the river Yamuna in the east and the river Ghaggar in the west. The south western boundary is provided by the range of Aravalli hills, which run through southern Delhi and the Gurgaon district up to Alwar. There are some high ridges running from the north-west to south-east with numerous spurs branching out in all directions. These hills are known as the Morni and Tipra ranges. They belong to the outer ranges of the Himalayas.



65. Karnal is an important city on the Delhi Ambala Rail Line and the Sher Shah Suri Marg road. It is well connected to important economic centers in the region. It is located 123 km from Delhi and 130 km from Chandigarh.

**b. Socio-economic Profile of Karnal District**

68. The literacy rates in the District of Karnal (**Table 7**) are about 67%. Only 35% of the population is employed. There is no ST population in the district. The sex ratio is 865 females to 1000 males in the district, demonstrating the low birth rate of women compared to men.

**Table 7: Socio-economic profile of Karnal District, Haryana**

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Work Participation Rate (%)
1	Karnal	2475	1274183	865	0	67.7	35.7

Source: Census of India 2001;

69. Most people in Karnal District live in rural areas. This can be demonstrated in **Table 8** below.

**Table 8: Population of Karnal District**

TRU		Household	Total Population	Total Male	Total Female
Karnal	Total (T)	224230	1274183	683368	590815
	Rural (R)	160252	936341	501890	434451
	Urban (U)	63978	337842	181478	156364

Source: Census of India 2001

70. Literacy rates are higher in rural areas of Karnal District, than in urban areas. This is indicated in **Table 9**. Female literacy rates and female participation in economic activity is low, indicating gender mainstreaming activities could help to empower women in the district and increase their participation in activities outside of the home.

**Table 9: Literacy and Worker details of Karnal District**

TRU		Population Literacy	Male Literacy	Female Literacy	Total Population Employed	Male Employment	Female Employment
Karnal	<b>Total (T)</b>	732609	440070	292539	455455	342914	112541
	<b>Rural (R )</b>	497405	306156	191249	349157	251926	97231
	<b>Urban (U)</b>	235204	133914	101290	106298	90988	15310

Source: Census of India 2001

71. A socio-economic profile of Badson village, where the Kurukshetra substation will be located, is provided in this section. The total population in the village is 2715 persons and 485 households. Approximately 52% of the total population is literate. Of these, 17% are women, indicating a very low female literacy rate and number of women who have attained grade school level education or higher. The female workforce is also considerably low. Only 145 women (5% of the total population) are employed. Other details are provided in **Table 10** and **Table 11**.

**Table 10: Demography of Badson Village**

Name of village	Household	Total Population	Total Male	Total Female
<b>Badson</b>	485	2715	1525	1190

**Table 11: Worker Profile of Badson Village**

Village Name	Population Literate	Male Literate	Female Literate	Total Worker Population	Worker Male Population	Worker Female Population
<b>Badson</b>	1428	951	477	981	836	145

### 3. Socio-economic profile of affected states and districts through which the Transmission Line traverses

72. Socio-economic data was collected for each of the affected districts traversed by the transmission line. The line crosses the following states: Chattisgarh, Madhya Pradesh, Uttar Pradesh, Haryana and Punjab. Data was collected from primary and secondary sources of information including, but not limited to, the Census of India 2001, official government websites, discussions with POWERGRID officials, and visual inspections and site reconnaissance visits to the project sites. Though tower locations are not fixed until nearing construction, the near final alignment is finalized and analyzed for the purpose of clearing the Right of Way (64-85 m on either side of the transmission line). Below is a brief socio-economic profile of the states through which the transmission line traverses.

**a. Socio-economic Profile of Chattisgarh**

75.

76. The transmission line begins at the Champa substation in Chattisgarh. The substation will be located in Janjgir – Champa District of Chattisgarh. The transmission line (TL) will traverse the districts of Korba and Bilaspur in Chattisgarh before entering Madhya Pradesh. The line traverses a mix of agricultural and/or barren land towards the border of Madhya Pradesh. Once in Madhya Pradesh, the line takes a circular route to avoid the sensitive forest belts in Chattisgarh, but passes through designated reserved forest areas before entering into Madhya Pradesh.

77. The socio-economic profiles of Korba, Janjgir-Champa and Bilaspur Districts in Chattisgarh can be referenced in **Table 12**. The table shows that the total population of these three districts is about 43 lakhs with a literacy level of 63% and a working population of about 42%. This indicates that the level of educated unemployment is high in these districts. Korba is the main tribal group in the area. Prominent features of the three affected districts is that they have a better sex ratio.

**Table 12: District Wise Socio-economic profile of Chattisgarh**

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Work Participation Rate (%)
1	Korba	7145.44	1011823	964	41.5	61.7	42.6
2	Janjgir - Champa	4466.74	1317431	998	11.6	65.9	43.7
3	Bilaspur	6377	1998355	971	19.9	63.5	42.9
<b>Total</b>		<b>17989.18</b>	<b>4327609</b>	-	-	-	-

Source: Census of India 2001;

78. District wise population of these three districts shows maximum population in the Bilaspur district, followed by Janjgir-Champa and Korba. Population is more concentrated in Rural areas across all the three districts. This is given in **Table 13**.

**Table 13: District wise Populations of Chattisgarh**

TRU		Household	Total Population	Total Male	Total Female
Korba	<b>Total (T)</b>	<b>203104</b>	<b>1011823</b>	<b>515147</b>	<b>496676</b>
	<b>Rural (R )</b>	129044	644860	323739	321121
	<b>Urban (U)</b>	74060	366963	191408	175555
Janjgir – Champa	<b>Total (T)</b>	<b>254080</b>	<b>1317431</b>	<b>659388</b>	<b>658043</b>
	<b>Rural (R )</b>	226803	1172112	584520	587592
	<b>Urban (U)</b>	27277	145319	74868	70451
Bilaspur	<b>Total (T)</b>	<b>390354</b>	<b>1998355</b>	<b>1013875</b>	<b>984480</b>
	<b>Rural (R )</b>	297867	1511661	761994	749667
	<b>Urban (U)</b>	92487	486694	251881	234813

Source: Census of India 2001

79. Literacy data shows that more literate people are in rural areas in the three districts as indicated in **Table 14**. Bilaspur has the high literate population, followed by Janjgir-Champa and Korba. Compared to male, females are less educated, which means more awareness for women education is required. Female worker is less in these three districts, which means more female can be accommodated into training for income generating activities and increased employment opportunities could be explored.

**Table 14: District wise Literacy and Worker details of Chattisgarh**

TRU		Population Literate	Male literate	Female Literate	Total Population	Worker	Worker Male Population	Worker Female Population
Korba	Total (T)	518372	324912	193460	431002		266892	164110
	Rural (R )	271162	179368	91794	326241		178659	147582
	Urban (U)	247210	145544	101666	104761		88233	16528
Janjgir – Champa	Total (T)	720507	445925	274582	575923		326441	249482
	Rural (R )	622990	388426	234564	528461		289898	238563
	Urban (U)	97517	57499	40018	47462		36543	10919
Bilaspur	Total (T)	1048167	656225	391942	857577		503677	353900
	Rural (R )	710013	462010	248003	704132		383781	320351
	Urban (U)	338154	194215	143939	153445		119896	33549

Source: Census of India 2001

### b. Socio-economic Profile of Madhya Pradesh Affected District

80. Similarly the socio-economic profile of the six districts of Madhya Pradesh has been indicated in this section of the report. The POWERGRID Team from this division has carried out various exercises to avoid traversing through the rich forest belt of Central India which is located in the state of Madhya Pradesh. They have been successful in doing so and finalizing their alignment through designated reserved forests which do not have much of vegetation cover also at this stage. These areas have been protected as forest areas due to their designated status and look forward in future to keep them restricted from any development in that region. Thus the transmission line traverses through partially agriculture belts, barren land and partly through the forested belts as indicated above.

81. Socio-economic profile of Madhya Pradesh reveals that 6 districts (**Table 15**) through which the line passes, have a vulnerable section of people (Scheduled Tribe) mainly at Dindori, Mandla and Anoopur with 64.5%, 57.2% and 46.5%, Literacy rate in these 6 district is above 50% with Jabalpur having the highest literacy rate of 75.7% followed by Damoh at 61.8%. Despite high literacy rate the work percentage both at Jabalpur and Damoh is low. Sex ratio is lowest in Chattarpur at 869 where gender awareness is envisaged.

**Table 15: District Wise Socio-economic profile of Madhya Pradesh**

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Work Participation Rate (%)
1	Chattarpur	8687	1474723	869	3.5	53.3	40.2
2	Jabalpur	5211	2151203	908	15	75.7	37.2
3	Dindori	6128	580730	991	64.5	54.2	57

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Work Participation Rate (%)
4	Mandla	8771	894236	996	57.2	56.5	54.3
5	Anooppur	3701	667155	957	46.5	58.7	43.3
6	Damoh	7306	1083949	901	12.6	61.8	44.9

Source: Census of India 2001;

82. District wise population reveals that out of these six districts except Jabalpur, all of the districts have more rural population than urban as indicated in **Table 16**.

**Table 16: District wise Populations of Madhya Pradesh**

TRU		Household	Total Population	Total Male	Total Female
Chattarpur	Total (T)	251334	1474723	788933	685790
	Rural (R )	196491	1150428	615842	534586
	Urban (U)	54843	324295	173091	151204
Jabalpur	Total (T)	431968	2151203	1127304	1023899
	Rural (R )	197788	923863	479621	444242
	Urban (U)	234180	1227340	647683	579657
Dindori	Total (T)	125459	580730	291716	289014
	Rural (R )	119665	553860	277902	275958
	Urban (U)	5784	26870	13814	13056
Mandla	Total (T)	190035	894236	447956	446280
	Rural (R )	171366	802322	400731	401591
	Urban (U)	18669	91914	47225	44689
Shahdol (Anooppur)	Total (T)	322125	1575303	804988	770315
	Rural (R )	245066	1177149	595089	582060
	Urban (U)	77059	398154	209899	188255
Damoh	Total (T)	218777	1083949	570229	513720
	Rural (R )	181113	879598	462648	416950
	Urban (U)	37664	204351	107581	96770

Source: Census of India 2001

83. Literacy rate concentration is higher in rural areas, except for Jabalpur. Female literacy rate is below than male, which needs more sensitization and awareness. Again females working population is less than male, where more gender sensitization is required to achieve better livelihood. This is provided in **Table 17**.

**Table 17: District wise Literacy and Worker details of Madhya Pradesh**

TRU		Population Literate	Male iterate	Female Literate	Total Worker Population	Worker Male Population	Worker Female Population
Chattarpur	Total (T)	631370	416441	214929	592470	388777	203693
	Rural (R )	433752	297669	136083	493905	310259	183646
	Urban (U)	197618	118772	78846	98565	78518	20047
Jabalpur	Total (T)	1396120	818931	577189	799602	567494	232108
	Rural (R )	490334	306991	183343	416820	256325	160495
	Urban (U)	905786	511940	393846	382782	311169	71613
Dindori	Total (T)	261764	169782	91982	330907	171872	159035
	Rural (R )	242992	158974	84018	322341	165103	157238
	Urban (U)	18772	10808	7964	8566	6769	1797
Mandla	Total (T)	446998	276499	170499	464397	248821	215576
	Rural (R )	378422	238501	139921	435959	226593	209366
	Urban (U)	68576	37998	30578	28438	22228	6210
Shahdol (Anooppur)	Total (T)	767630	480446	287184	681924	419967	261957
	Rural (R )	504354	324599	179755	574494	327459	247035
	Urban (U)	263276	155847	107429	107430	92508	14922
Damoh	Total (T)	548331	350142	198189	486486	302571	183915
	Rural (R )	407510	268085	139425	416524	251945	164579
	Urban (U)	140821	82057	58764	69962	50626	19336

Source: Census of India 2001

### c. Socio-economic Profile of Uttar Pradesh Affected District

84. The transmission line in this state passes through 12 districts. The socio-economic profile of these twelve districts of Uttar Pradesh has been indicated in this section of the report. The POWERGRID Team from this division has carried out various exercises to avoid traversing through any forested areas of the state. They have been successful in doing so and finalizing their alignment through generally agriculture or barren land.

85. The line passes through 12 districts (**Table 18**) in the state of Uttar Pradesh. The highest population concentration is in the district of Muzaffarnagar, followed by Ghaziabad, Meerut, Aligarh and Etah. Rest of district has low population concentration. Sex Ratio is low and needs more gender sensitization. None of the districts has vulnerable (Schedule Tribe) population.

86. Literacy rate is as high as 70.5% in the district of Auraiya and as low as 54.6% in the district of Etah. Despite high literacy rate, the work participation is low in these 12 affected districts, with as low as 27.5% in the districts of Mainpuri and Etawah.

**Table 18: District Wise Socio-economic profile of Uttar Pradesh State**

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Work Participation Rate (%)
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Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Work Participation Rate (%)
1	Muzaffarnagar	4049	3543362	871	0	60.7	33.1
2	Meerut	272	2997361	872	0	64.8	29.9
3	Ghaziabad	1967	3290586	860	0	69.7	28.5
4	Bulandsahar	4353	2913122	879	0	59.4	40.3
5	Aligarh	33.98	2992286	862	0	58.5	30.6
6	Etah	2434	2790410	849	0	54.6	28.8
7	Mainpuri	2760	1596718	857	0	65.1	27.5
8	Etawah	2434	1338871	858	0	69.6	27.5
9	Auraiya	2054	1179993	856	0	70.5	32.9
10	Jalaun	3825	1454452	849	0	64.5	36
11	Hamirpur	1118	1043724	851	0	57.4	39.2
12	Banda	4413	1537334	860	0	54.4	40.3

Source: Census of India 2001;

87. District wise population shows more concentration of people in the rural areas. This is indicated in **Table 19**.

**Table 19: District wise Populations of Uttar Pradesh**

TRU		Household	Total Population	Total Male	Total Female
Muzaffarnagar	Total (T)	529134	3543362	1893832	1649530
	Rural (R )	395327	2639480	1414221	1225259
	Urban (U)	133807	903882	479611	424271
Meerut	Total (T)	458106	2997361	1601578	1395783
	Rural (R )	229845	1545378	826908	718470
	Urban (U)	228261	1451983	774670	677313
Ghaziabad	Total (T)	538009	3290586	1769042	1521544
	Rural (R )	224275	1474171	793186	680985
	Urban (U)	313734	1816415	975856	840559
Bulandsahar	Total (T)	456218	2913122	1550326	1362796
	Rural (R )	354342	2238664	1192952	1045712
	Urban (U)	101876	674458	357374	317084
Aligarh	Total (T)	465488	2992286	1607402	1384884
	Rural (R )	334714	2127592	1146456	981136

TRU		Household	Total Population	Total Male	Total Female
	Urban (U)	130774	864694	460946	403748
Etah	Total (T)	427839	2790410	1509199	1281211
	Rural (R )	356884	2306747	1252724	1054023
	Urban (U)	70955	483663	256475	227188
Mainpuri	Total (T)	243022	1596718	859934	736784
	Rural (R )	207519	1363625	736658	626967
	Urban (U)	35503	233093	123276	109817
Etawah	Total (T)	214222	1338871	720749	618122
	Rural (R )	166389	1030789	557439	473350
	Urban (U)	47833	308082	163310	144772
Auraiya	Total (T)	193269	1179993	635762	544231
	Rural (R )	166830	1011026	546142	464884
	Urban (U)	26439	168967	89620	79347
Jalaun	Total (T)	230664	1454452	786641	667811
	Rural (R )	179174	1113926	604295	509631
	Urban (U)	51490	340526	182346	158180
Hamirpur	Total (T)	175948	1043724	563801	479923
	Rural (R )	147357	869916	470298	399618
	Urban (U)	28591	173808	93503	80305
Banda	Total (T)	249911	1537334	826544	710790
	Rural (R )	210592	1293316	694989	598327
	Urban (U)	39319	244018	131555	112463

Source: Census of India 2001

88. District wise literacy population shows (Table 20) that only two district – Meerut and Ghaziabad has more urban literate population than rural. Female literacy population is low and needs more awareness. Worker population index shows that only Ghaziabad has more workers in urban areas compared to other affected districts. Female work population is low and more work opportunity needs to be created through awareness in the region.

**Table 20: District wise Literacy and Worker details of Uttar Pradesh**

TRU		Population Literate	Male iterate	Female Literate	Total Worker Population	Worker Male Population	Worker Female Population
Muzaffarnagar	Total (T)	1738529	1099632	638897	1173153	927961	245192
	Rural (R )	1246724	808167	438557	927443	707934	219509

TRU		Population Literate	Male iterate	Female Literate	Total Worker Population	Worker Male Population	Worker Female Population
	Urban (U)	491805	291465	200340	245710	220027	25683
Meerut	Total (T)	<b>1606469</b>	<b>992005</b>	<b>614464</b>	<b>895856</b>	<b>746084</b>	<b>149772</b>
	Rural (R )	786410	507416	278994	510867	395115	115752
	Urban (U)	820059	484589	335470	384989	350969	34020
Ghaziabad	Total (T)	<b>1899735</b>	<b>1168462</b>	<b>731273</b>	<b>938251</b>	<b>807147</b>	<b>131104</b>
	Rural (R )	755060	488692	266368	451506	365443	86063
	Urban (U)	1144675	679770	464905	486745	441704	45041
Bulandsahar	Total (T)	<b>1408082</b>	<b>936195</b>	<b>471887</b>	<b>1173805</b>	<b>788883</b>	<b>384922</b>
	Rural (R )	1050592	719217	331375	975773	623114	352659
	Urban (U)	357490	216978	140512	198032	165769	32263
Aligarh	Total (T)	<b>1420604</b>	<b>938492</b>	<b>482112</b>	<b>916298</b>	<b>731930</b>	<b>184368</b>
	Rural (R )	966008	667517	298491	695501	533336	162165
	Urban (U)	454596	270975	183621	220797	198594	22203
Etah	Total (T)	<b>1220398</b>	<b>820349</b>	<b>400049</b>	<b>802418</b>	<b>701260</b>	<b>101158</b>
	Rural (R )	965722	668740	296982	678555	590359	88196
	Urban (U)	254676	151609	103067	123863	110901	12962
Mainpuri	Total (T)	<b>842119</b>	<b>536794</b>	<b>305325</b>	<b>439198</b>	<b>392804</b>	<b>46394</b>
	Rural (R )	698444	453772	244672	384240	342433	41807
	Urban (U)	143675	83022	60653	54958	50371	4587
Etawah	Total (T)	<b>766407</b>	<b>475991</b>	<b>290416</b>	<b>368609</b>	<b>329534</b>	<b>39075</b>
	Rural (R )	566082	360838	205244	291024	259051	31973
	Urban (U)	200325	115153	85172	77585	70483	7102
Auraiya	Total (T)	<b>680440</b>	<b>418605</b>	<b>261835</b>	<b>388260</b>	<b>307875</b>	<b>80385</b>
	Rural (R )	563940	352305	211635	344991	268981	76010
	Urban (U)	116500	66300	50200	43269	38894	4375
Jalaun	Total (T)	<b>782033</b>	<b>509536</b>	<b>272497</b>	<b>522881</b>	<b>387174</b>	<b>135707</b>
	Rural (R )	574210	384381	189829	431597	305939	125658
	Urban (U)	207823	125155	82668	91284	81235	10049
Hamirpur	Total (T)	<b>490606</b>	<b>333921</b>	<b>156685</b>	<b>408700</b>	<b>277311</b>	<b>131389</b>
	Rural (R )	385505	268812	116693	358682	235595	123087
	Urban (U)	105101	65109	39992	50018	41716	8302

TRU		Population Literate	Male iterate	Female Literate	Total Worker Population	Worker Male Population	Worker Female Population
Banda	Total (T)	670986	462956	208030	619361	404308	215053
	Rural (R )	522924	372052	150872	552650	346982	205668
	Urban (U)	148062	90904	57158	66711	57326	9385

Source: Census of India 2001

#### d. Socio-economic Profile of Affected District of Haryana

89. The transmission line passes through 3 districts: Karnal, Kurukshetra and Ambala. The socio-economic profile of these three districts of Haryana has been indicated in this section of the report.

90. POWERGRID has carried out various exercises to avoid traversing through any forested areas of the state. They have been successful in doing so and finalizing their alignment through generally agriculture or barren land.

91. In the three districts of Haryana, Karnal district has the highest population, followed by Ambala and Kurukshetra (**Table 21**). Work participation is low at approx. 33 %, despite high literacy rate. Which means more educated people need to be provided appropriate training opportunities in the region, which will directly improve their socio-economic profile. Low sex ratio is the direct impact of prevalent social ill belief, where more gender sensitization is required. These three districts have no ST population.

**Table 21: District Wise Socio-economic profile of Haryana**

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	ST (%)	Literacy Rate (%)	Work Participation Rate (%)
1	Kurukshetra	1682	825454	866	0	69.9	37.4
2	Karnal	2475	1274183	865	0	67.7	35.7
3	Ambala	1569	1014411	868	0	75.3	32

Source: Census of India 2001;

92. Haryana's Karnal district has the highest rural population followed by Ambala and Kurukshetra. This is indicated in **Table 22**.

**Table 22: District wise Populations of Haryana**

TRU		Household	Total Population	Total Male	Total Female
Kurukshetra	Total (T)	142950	825454	442328	383126
	Rural (R )	102663	609943	325726	284217
	Urban (U)	40287	215511	116602	98909
Karnal	Total (T)	224230	1274183	683368	590815
	Rural (R )	160252	936341	501890	434451
	Urban (U)	63978	337842	181478	156364
Ambala	Total (T)	184319	1014411	542977	471434
	Rural (R )	114125	657383	349932	307451

TRU	Household	Total Population	Total Male	Total Female
Urban (U)	70194	357028	193045	163983

Source: Census of India 2001

93. Literate population is more in the rural area than in urban areas of these three affected districts. Karnal district has the highest literate population followed by Ambala and Kurukshetra. Literacy data shows that females are not encouraged in education, which means more awareness in educating female is required. Gender disparity is much visible in these three affected districts in terms of literacy and workforce. This is indicated in **Table 23**.

**Table 23: District wise Literacy and Worker details of Haryana**

TRU	Population	Male	Female	Total Worker	Worker	Worker	
	Literate	Iterate	Literate	Population	Male	Female	
					Population	Population	
Kurukshetra	Total (T)	494873	293615	201258	308392	226410	81982
	Rural (R)	342169	205997	136172	243748	171666	72082
	Urban (U)	152704	87618	65086	64644	54744	9900
Karnal	Total (T)	732609	440070	292539	455455	342914	112541
	Rural (R)	497405	306156	191249	349157	251926	97231
	Urban (U)	235204	133914	101290	106298	90988	15310
Ambala	Total (T)	662789	384828	277961	324521	276632	47889
	Rural (R)	392937	232099	160838	207983	175039	32944
	Urban (U)	269852	152729	117123	116538	101593	14945

Source: Census of India 2001

#### e. Socio Economic Profile of Punjab

94. There are five districts in Punjab through which the transmission line traverses. Out of which maximum population concentration is in the district of Ludhiana (about 3 million), followed by Jalandhar (1.9 million), Patiala (1.8 million), Kapurthala (0.75 million) and Fatehgarh Sahib (0.53 million). Sex ratio is low, and gender sensitization programs will be taken during implementation and post implementation. Though the literacy rate is around 70%, the working participation is low with approx. 35%. This shows that more educated people are unemployed or not working and awareness generation is required in these 5 districts. ST population is nil in these 5 districts. This is indicated in **Table 24**.

**Table 24: District Wise Socio-economic profile of Punjab**

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	Literacy Rate (%)	Work Participation Rate (%)
1	Fatehgarh Sahib	1180	538041	854	73.6	38.3
2	Patiala	3625	1844934	868	69.8	37
3	Ludhiana	3767	3032831	824	76.5	37.9
4	Jalandhar	3401	1962700	887	78	34.5

Sr. No.	District	Area (in sq. km)	Total Population	Sex Ratio	Literacy Rate (%)	Work Participation Rate (%)
5	Kapurthala	1633	754521	888	73.9	34.8

Source: Census of India 2001;

95. District wise population shows that except Ludhiana, rest of the 4 district indicates a high population in rural areas. This is given in **Table 25**.

**Table 25: District wise Populations of Punjab**

TRU		Household	Total Population	Total Male	Total Female
Fatehgarh Sahib	Total (T)	93414	538041	290137	247904
	Rural (R )	65017	386950	207937	179013
	Urban (U)	28397	151091	82200	68891
Patiala	Total (T)	327859	1844934	987390	857544
	Rural (R )	203659	1200224	642633	557591
	Urban (U)	124200	644710	344757	299953
Ludhiana	Total (T)	558650	3032831	1662716	1370115
	Rural (R )	235747	1339178	712593	626585
	Urban (U)	322903	1693653	950123	743530
Jalandhar	Total (T)	364030	1962700	1040177	922523
	Rural (R )	186704	1030717	539021	491696
	Urban (U)	177326	931983	501156	430827
Kapurthala	Total (T)	136664	754521	399623	354898
	Rural (R )	89648	507994	265973	242021
	Urban (U)	47016	246527	133650	112877

Source: Census of India 2001

96. Literacy index shows that Ludhiana has highest literacy rate in urban area. Female literacy rate is lower where more awareness is required. Again Ludhiana has more working population than other district with low women work participation. This is indicated in **Table 26**.

**Table 26: District wise Literacy and Worker details of Punjab**

TRU		Population Literate	Male Iterate	Female Literate	Total Worker Population	Worker Male Population	Worker Female Population
Fatehgarh Sahib	Total (T)	347364	197686	149678	206139	159372	46767
	Rural (R )	242063	138085	103978	156008	115257	40751
	Urban (U)	105301	59601	45700	50131	44115	6016

TRU		Population Literate	Male Literite	Female Literate	Total Worker Population	Worker Male Population	Worker Female Population
Patiala	Total (T)	1119824	646751	473073	681951	529088	152863
	Rural (R )	653331	385411	267920	465169	350743	114426
	Urban (U)	466493	261340	205153	216782	178345	38437
Ludhiana	Total (T)	2036278	1170514	865764	1149638	923641	225997
	Rural (R )	852383	483809	368574	537996	382545	155451
	Urban (U)	1183895	686705	497190	611642	541096	70546
Jalandhar	Total (T)	1352044	752915	599129	676835	558502	118333
	Rural (R )	668228	373065	295163	364982	289261	75721
	Urban (U)	683816	379850	303966	311853	269241	42612
Kapurthala	Total (T)	487554	273723	213831	262741	211066	51675
	Rural (R )	307881	172293	135588	179075	139772	39303
	Urban (U)	179673	101430	78243	83666	71294	12372

Source: Census of India 2001

## E. SOCIAL IMPACT ASSESSMENT

### 1. Champa Substation<sup>3</sup>

#### a. Socio-economic impacts

97. The project development envisages impact to the people living on the land required for the construction of substation. The land requirement envisages permanent acquisition of land for the purposes mentioned above. This is also in line with the Land Acquisition Act of 1894. There shall be permanent impact on land due to construction of 800kV substation. Out of total 116.7 acres of land, 90 acres is government land and 26.7 acres is private land which has around 13 families. Total 116.7 acres of land has approx. 250 trees that are about 3-5 years old. Affected families will permanently lose land and these will be fully covered under the resettlement plan. The project will approximately impact a total of 65 persons (each family consisting of approximately 5 members, in accordance with the Census of India guideline). When a detailed survey will be conducted after the Section 4 notification as per the Land acquisition act and the ESPP of the POWERGRID, then only the actual loss to the family can be estimated. At this point we envisage this to be a significant impact to 9 families (45 peoples), as these would be losing their main source of livelihood. In accordance with the entitlement matrix assistance has been recommended and a training program for the income restoration is also being proposed as per the ESPP of the POWERGRID.

98. In view of this we have developed this resettlement plan that will provide for the appropriate compensation and assistance as per the Government of India, Government of Chattisgarh, The ESPP of the POWERGRID, the ADB guidelines and the entitlement framework that has been proposed in this Resettlement Plan. The basic aims and objectives of this Resettlement Plan are to

<sup>3</sup> All data and figures represent the status of the project as of June 2011. Upon board approval, POWERGRID will be responsible for updating this information as and when needed to reflect the actual situation.

mitigate all unavoidable impacts due to land requirement and appropriate compensation in accordance with the proposed resettlement framework. The issues identified and addressed in this RP are i) Impact due to land requirement; ii) socio-economic details of the project area and the affected population; iii) policy, legal framework and entitlement matrix; iv) consultation, information dissemination, disclosure, and grievance redress; v) Institutional arrangements; vi) Resettlement budget; vii) Implementation schedule; and viii) Monitoring and evaluation.

**b. Gender Issues**

99. The Project development will provide livelihood opportunities for women in the affected village and the habitation within the vicinity of the project area. There will be education opportunities for women groups within the project affected area villages This will include training to the local women on various vocational traits available in the region. The training will be for the local programs that are being implemented by other line agencies in the village are or the district administration. . Further to this the women of the affected families will be engaged in various household and housekeeping activities on the Substation campus. Any other options available for the women from the affected families' will be recommended by the POWERGRID.

**c. Minimization of impacts on land and other assets**

100. Necessary and adequate measures were taken by the executing agency to avoid and/or minimize the impact on land by considering the location of substation on government and private land wherever possible. This has been done with proper consultation with the local authorities. Suggestions have been appraised from design prospective and incorporated wherever it is technically feasible. Selection of final land has been made based on analysis of three alternatives and the best option was considered. While selecting the best land, all possible options from social and environment point of view were reviewed to get a prior idea on probable impacts and their mitigation measures likely to be because of the proposed project development. **Table 27** gives the land requirement for construction of Substation. In addition to this there are no structures that are being affected in the project area, the land that has been identified is also barren in the government owned area and on the private land a few are cultivated in the rainy season only with one crop a year. Generally they grow rice in this region.

**Table 27: Impact on Land and other assets**

Name of the Substation	800 kV Champa Substation
Total number of Project Affected Families	13
Total number of Project Affected Persons	65
Total Area for Substation	116.7 acres
Government Land (acre)	90 acres
Total area of private land (acre)	26.7 acres
Trees approximately	250 nos.

**d. Loss of Trees**

101. The survey has revealed that around 250 trees are within the proposed substation land. All these mostly with government ownership shall be removed for the construction of substation. The loss of private trees shall be compensated based on the timber value at market price, and compensation for perennial crops and fruit trees (if any) at annual net product market value multiplied by remaining productive years. This will be determined in consultation with the stakeholders for timber trees. Fruit bearing trees and perennial crops (Refer to Entitlement Matrix). The economy and



livelihood base of the state Chhattisgarh is not tree based. Also, the impacted land, and trees are covered over a small area so the severity of impact is minimal.

**e. Temporary/Permanent Impacts during Construction:**

102. **Temporary/Permanent impacts during the construction phase** of the project are to be mitigated as per the entitlement framework and in accordance with the guidelines mentioned above. Construction works shall be planned only after paying the due compensation and implementation of Resettlement plans.

**f. Restrictions on Use of Land**

103. Land use restriction will be limited to the substation of 116.7 acres of land. The area directly used of cannot be utilized for any other activity. The impact summary for various foreseen impacts is presented in the **Table 28**. There will be access restriction of the project affected person due to the proposed substation during post project scenario.

**Table 28: Impacts on Land and Resettlement under the Project**

SI No	Category	Impact Assessment
1	Land	The amount of land required for substation will have permanent impact to PAFs/PAPs due to land acquisition.
2	Structures	No structures are found
3	Trees	Based on the field survey it has been found that most of the trees are on government property and in total approx. 250 numbers of trees are required to be cut for construction of substation.
4	Crops	20% of the land to be used for construction of substation is agricultural land. Permanent loss of land for each affected family/person is envisaged under the project so the standing crops at the point of acquisition should be compensated accordingly.
5	Restrictions on use of land	There will be permanent restrictions for carrying out the agricultural activities in the acquired land.

**2. Kurukshetra Substation<sup>4</sup>**

**a. Socio-economic impacts**

104. The project development envisages impact to the people dependent on the land required for the construction of substation. The land requirement envisages permanent acquisition of land for the purposes mentioned above. This is also in line with the Land Acquisition Act of 1894. There shall be permanent impact on land due to construction of 800kV substation. Out of Total 225 acres of land, 150 acres is government land and 75 acres is private land with approximate 25 families. Total 225 acres of land has no trees . Affected families will permanently lose their land and thus they will be

<sup>4</sup> All data and figures represent the status of the project as of June 2011. Upon board approval, POWERGRID will be responsible for updating this information as and when needed to reflect the actual situation.

covered as per the resettlement plan. The substation will impact approximately 125 persons and a total of 25 families (each family consisting of 5 members approximated in accordance with the Census of India guideline). The impact will accrue loss of agriculture land as has been identified through the preliminary survey. However, when a detailed survey will be conducted after the Section 4 notification as per the Land acquisition act and the ESPP, POWERGRID will be able to gather the actual loss to each family. At this point we envisage this to be a significant impact to the 25 families as they would be losing their main source of livelihood. In accordance with the entitlement matrix assistance has been recommended and also a training program for the income restoration is being proposed as per the ESPP of the POWERGRID.

105. In view of this we have developed this resettlement compensation plan that will provide for the appropriate compensation and assistance as per the Government of India, Government of Haryana, The ESPP of the POWERGRID, the ADB guidelines and the entitlement framework that has been proposed in this Resettlement Plan.

The basic aims and objectives of this Resettlement Plan are to mitigate all unavoidable impacts due to land requirement and appropriate compensation in accordance with the proposed resettlement framework. The issues identified and addressed in this RP are i) Impact due to land requirement; ii) socio-economic details of the project area and the affected population; iii) policy, legal framework and entitlement matrix; iv) consultation, information dissemination, disclosure, and grievance redress; v) Institutional arrangements; vi) Resettlement budget; vii) Implementation schedule; and viii) Monitoring and evaluation.

**b. Gender Issues**

106. The Project development will provide livelihood opportunities for women in the affected village and indirectly affected areas of the project area. There may be education opportunities for women groups within the project affected area villages This will include training to the local women on various vocational traits available in the region. The training will be for the local programs that are being implemented by other line agencies in the village are or the district administration. Further to this the women of the affected families may be engaged in various household and housekeeping activities on the Substation campus. Any other options available for the women persons from the affected families' preference will be recommended by the POWERGRID for employing the persons from the affected village or the habitations within this region.

**c. Minimization of impacts on land and other assets**

107. In accordance with the requirements of the SPS 2009 and the ESPP it is always recommended to minimize the adverse impacts to the communities being affected due to the project development. In this context necessary and adequate measures were taken by the executing agency to avoid and/or minimize the impact on land and the people by considering the location of substation on Government land wherever possible. Under this project the Executing Agency has carried out formal consultations and discussions with the local authorities to identify the land that is generally government owned. Selection of final land has been made based on alternate land survey and the best option from social and environment point of view. The impact envisaged under this project has been provided in the summary in **Table 29**. In addition to this there are no structures that are being affected in the project area. The land identified is barren land belonging to the government within minimum private land.

**Table 29: Summary of Impact on Land and other assets**

Name of the Substation	+/-800 kV Kurushetra Substation
Total number of Project Affected Families	25

Total number of Project Affected Persons	125
Total Area for Substation	225 acres
Government Land (acre)	150 acres
Total area of private land (acre)	75 acres
Trees.	00

**d. Loss of Trees**

108. There are no trees in the affected area.

**e. Temporary/Permanent Impacts during Construction:**

109. Temporary/Permanent impacts during the construction phase of the project are to be mitigated as per the entitlement framework and in accordance with the guidelines mentioned above. Construction works shall be planned only after paying the due compensation and implementation of Resettlement plans.

**f. Restrictions on Use of Land**

110. Land use restriction will be limited to the substation of 225 acres of land. There will be total restriction on land use the 225 acres of land.

The impact summary for various foreseen impacts is presented in the **Table 30**. There will be access restriction of the project affected person due to the proposed substation during post project scenario.

**Table 30: Impacts on Land and Resettlement under the Project**

SI No	Category	Impact Assessment
1	Land	The amount of land required for substation will have permanent impact to PAFs/PAPs due to land acquisition.
2	Structures	No structures are found
3	Trees	00
4	Crops	35% of the land to be used for construction of substation is agricultural land. Permanent loss of land for each affected family/person is envisaged under the project so the standing crops at the point of acquisition should be compensated accordingly.
5	Restrictions on use of land	There will be permanent restrictions for carrying out the agricultural activities in the acquired land.

111. The land acquisition process will be adopted as per Land Acquisition Act, 1894 as amended by each of the states. For the Chattisgarh substation, the compensation and R&R will be in line with the Chattisgarh Resettlement and Rehabilitation Policy and for the Kurukshetra substation it shall be in line with the Haryana Resettlement and Resettlement Policy. However entitlement framework both these states will also be guided by the ESPP of the POWERGRID and the SPS, 2009 of the ADB which addresses the vulnerable groups and the livelihood issues to the benefit of the affected families. The process that will be adopted is discussed in this section.

### **g. Land Acquisition Process**

112. In the event of the land being utilized for the construction of substation an appropriate compensation will be finalized in consultation with the negotiation committee which will comprise of the members as listed below. In order to obtain the private land it is decided to carry out a direct negotiation process with each land owner in place of evoking the land acquisition process as per the land acquisition act. This is being proposed not only to expedite the process but also to reduce conflicts or delays. This process being adopted is defined as the direct compensation payment which could also be termed as consent award process - the direct negotiation and mutual agreement between the private land owner and the department. This will help in arriving at a mutually agreed rate of compensation with the land owners, which will eliminate resentment from the land owners regarding rate of compensation, thus reducing the scope for approaching the civil courts for higher compensation. This is also as per the requirement of the SPS, 2009 of the ADB which indicates that the compensation for land or any asset lost should be provided on the market value. The process adopted also provides for the replacement value of the land at market value.

113. The circle value for the land price fixation as per the Department of Registration for different categories of land for the village will be obtained from the district registrars. This guidance value will be referred to by the negotiation committee. The compensation payment for loss of land paid through negotiation + additional stamp paper and registration cost + 30% solatium<sup>5</sup> on the negotiated price.

### **h. Process of price fixation**

- (i) The concerned LAO who is the secretary of the negotiation committee will call for a meeting.
  - (ii) The dates for price negotiation will be provided village wise. Negotiation will be conducted village wise by gathering all the land losers at one point in time for negotiation. This is to ensure transparency.
  - (iii) Minimum negotiated price will be 1.5 times the circle value.
  - (iv) The negotiation committee will negotiate the price with the land owners.
  - (v) Compensation will be given within 30 days of taking possession and receiving all the necessary documents by the LAO and District commissioners. In case of delay a 9% interest will be given to the beneficiary upto a period of one year after which it will be increase to 15% per annum thereafter (this is as per the provision of the LA Act).
- Civil works will start after payment of compensation.

### **i. Compensation payment process**

- (i) Compensation to be finalized by the negotiation committee with the consent of the land owners.
- (ii) The award will be approved by the District Commissioners.
- (iii) All payments should be done through cheques only. The PGCIL local staff will assist the affected people to open a bank account in case they do not have a bank account.

## **3. Transmission Line Corridor**

### **a. Socio-economic impacts**

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<sup>5</sup> This has been included in accordance with the Land Acquisition Act 1894 which would ensure not only appropriate compensation package but also a higher value

114. The project development proposes to establish a transmission line between Champa and Kurukshetra Substation which is further extended to Nakodra in Punjab covering a distance of approximately 1,600 kms. In general there is one tower erected at a distance of about 400 mts from each other, this indicates that a maximum of 2.5 towers can be erected within a distance of 1 km, i.e.,  $2.5 \times 1584 = 3960$  towers within this distance. Each tower will require an average area of about 100 sq.mts that indicates for 3960 towers we would require an area of  $3960 \times 100 = 396000$  sq. mts in total. In hectares this would be about 39.60 ha which is not a concentrated impact, but a scattered impact over a distance of nearly 1,600 kms. (A mention could be made stating that the actual area required for the tower location for its four legs is about 1 sq mt. for each tower which calculates to 3960 sq.mts i.e., 0.3960 ha that would be affected). The other area below the tower location can be utilized by the farmers for their cultivation. However, any tall trees or structures will not be permitted to be planted or established. Thus the cumulative impact is insignificant which justifies the definition of a “B” Category project under the ADB guidelines.

115. In continuation to this the envisaged impacts are to the standing crops which will be affected at the time project implementation. In addition to this the total Right Of Way area of a width of 85 mts ( a right way as prescribed by the Forest Act of India of 1980 for 800 kV lines) for the entire length of approximately 1,600 kms will be also compensated for the standing crops, if any.

116. Keeping in view the distance and the information that we have gathered in consultation with the POWERGRID team the list of districts in each state through which the line traverses has been provided in **Table 31**.

**Table 31: List of Districts through which the +/- 800KV HVDC Champa- Kurukshetra & Kurukshetra-Jalandhar Transmission Line Traverses**

S.No.	District	State	Region	Approx. Line length (In Kms)	Total Area to be considered for the Tower Locations
1.	Bilaspur	Chhattisgarh	WR-I	145	- 362 towers
2.	Korba				- 36200 sq. Mts
3.	Janjgir-Champa				- 3.62 ha
4.	Chhatarpur	Madhya Pradesh	WR-II	460	- 1150 towers
5.	Damoh				- 115000 sq. Mts
6.	Anooppur,				- 11.5 ha
7.	Jabalpur				
8.	Mandala				
9.	Dindori				
10.	Muzaffarnagar	Uttar Pradesh	NR-I	649	- 1622 towers
11.	Meerut				- 162200 sq. Mts
12.	Ghaziabad				- 16.22 ha
13.	Bulandsahar				
14.	Aligarh				

S.No.	District	State	Region	Approx. Line length (In Kms)	Total Area to be considered for the Tower Locations
15.	Etah				
16.	Mainpuri				
17.	Etawah				
18.	Auraiya				
19.	Jalaun				
20.	Hamirpur				
21.	Banda				
22.	Kurukshetra	Haryana	NR-II	114	- 285 towers
23.	Karnal				- 28500 sq. Mts
24.	Ambala				2.85 ha
25.	Fatehgarh Sahib	Punjab	NR-II	216	540 towers
26.	Patiala				54000 sq mts.
27.	Ludhiana				5.40 ha
28.	Jalandhar				
29.	Kapurthala				
<b>Total</b>				1584	- 3960 towers - 385800 sq. Mts - 38.58 ha

117. The project development does not envisage any major impacts as defined above. Moreover the utilization of land is temporary for which assistance will be provided. There is no permanent acquisition. The agriculture activity can be carried out after the tower is erected. The only restriction in this regard is the periodic clearance of the trees or any high growing bushes, etc. and there should be no high rise buildings or structures built or constructed within this area. Thus the insignificant impact is considered.

118. In view of this we have designed the compensation plan for temporary damages that will provide for the appropriate compensation and assistance as per the existing laws/guidelines of Government of India and concerned States applicable policies if any and ESPP of the POWERGRID, the ADB guidelines and the entitlement framework. The basic aims and objectives of this compensation plan is to mitigate all unavoidable impacts due to land requirement and provide appropriate compensation.

119. As envisaged the transmission line will have temporary impacts due to the erection of the towers along the route that has been finalised. In accordance with this the category of impacts has been discussed in this section. They include:

**b. Temporary/Permanent Impacts during Construction:**

120. Temporary/Permanent impacts during the construction phase of the project are to be mitigated as per the entitlement framework and in accordance with the guidelines mentioned above. Construction works shall be planned only after paying due compensation as per the CPTD.

**c. Restrictions on Use of Land**

121. . A summary of predicted impacts is presented in Table 32.

**Table 32: Impacts on Land and Compensation under the Project**

SI No	Category	Impact Assessment
1	Land	The amount of land required for tower locations will have temporary impact to PAFs/PAPs.
2	Structures	No structures are found
3	Trees	Based on the field survey it has been found that most of the trees are on government property, however any on private land within the Right Of Way of 85 m will be accordingly compensated before being cut or trimmed as per requirement.
4	Crops	Most of the land to be used for erecting the towers is agricultural land. Loss of standing crop for each affected family/person is envisaged under the project so the standing crops at the point of implementation or acquisition will be compensated accordingly.
5	Restrictions on use of land	There will be temporary restrictions for carrying out the agricultural activities in the acquired land during construction period.

**d. Gender Issues**

122. The Project development will provide livelihood opportunities for women in the affected village and the habitation within the vicinity of the project area. There may be education opportunities for women groups within the project affected area/villages. This will include training to the local women on various vocational traits available in the region. The training will be for the local programs that are being implemented by other line agencies in the village are or the district administration. Further to this the women of the affected families shall be engaged in various household and housekeeping activities on the Substation campus. If any other options are available for women, affected families' shall be preferenced.

**F. ENTITLEMENT FRAMEWORK**

**1. Substations**

123. The broad resettlement principle for this project is complying with national legal frameworks, the framework of the ESPP and ADB's Safeguard Policy Statement. This will be the basis for paying "assistance" on top of the compensation payments as required by the 1894 Land Acquisition Act. The entitlements applicable to both titleholders and non-titleholders APs are described under the Entitlement Matrix as given in **Table 33**. It further describes the additional assistance for the vulnerable APs and various rehabilitation measures.

**Table 33: Entitlement Matrix**

<b>Entitlement Matrix</b>				
<b>S. o.</b>	<b>Type of Loss</b>	<b>Unit of Entitlement</b>	<b>Entitlement</b>	<b>Details</b>
1	Loss of residential/commercial structure by squatters/Informal settlers	Household	Will receive no compensation for land but assistance for lost non-land assets and additional assistance for training and income generation for vulnerable households.	<ul style="list-style-type: none"> <li>a) Compensation for the loss of structure at replacement cost.</li> <li>b) Cost of Structure;</li> <li>c) Onetime payment between Rs.5000 – 25000 depending on the type of structure and family size because family size has direct bearing on extent of impact plus transition benefits like provision of transport or equivalent cash for shifting of material. However, to become eligible for above benefits squatters have to establish that he/she is living there continuously for last 3 years prior to section 4 notifications.</li> </ul>
	Loss of access to agricultural land by encroachers	Household	Will receive no compensation for land but compensation for loss of crops and additional assistance for training and income generation for vulnerable households	<ul style="list-style-type: none"> <li>a) Encroachers will be notified and given a time in which they will be required to remove their assets and harvest their crops.</li> <li>b) To be assisted on case to case basis by considering relevant facts on family income and existing assets only in the case of persons being members of the vulnerable group. Training would be provided for up gradation of skills to the APs belonging to vulnerable groups.</li> </ul>
	Common Property Resources	Community	Compensatory replacement	Cash compensation or reconstruction of the community structure in consultation with the community.
4	Temporary impact during construction include disruption of normal traffic, increased noise levels, and damage to adjacent parcel of land / assets due to movement of heavy machinery	Community / Individual	Compensation	<ul style="list-style-type: none"> <li>a) The contractor shall bear the cost of any impact on structure or land due to movement of machinery during construction</li> <li>b) All temporary use of lands outside defined Right of Way to be through written approval of the landowner and contractor.</li> <li>c) Location of Construction camps by contractors in consultation with POWERGRID.</li> </ul>



Entitlement Matrix				
S. o.	Type of Loss	Unit of Entitlement	Entitlement	Details
5	Loss of land – Titleholders	Household	<p>Will receive land for land within same village / panchayat, but not exceeding 1 ha of irrigated or 2 ha of unirrigated;</p> <p style="text-align: center;">+</p> <p>Registration Charges for transfer of land;</p> <p style="text-align: center;">+</p> <p>If alternate land is degraded or wasteland then an onetime assistance of Rs.15000 is provided.</p> <p>And / OR</p> <p>Cash compensation against land acquired.</p>	<p>Rehabilitation assistance:</p> <p><b>(i)</b> 750 days of minimum agricultural wages for families losing entire land, which may adversely affect their livelihood source if no other source is available;</p> <p><b>(ii)</b> 500 days of minimum agricultural wages for families losing part land and consequently becoming a marginal farmer (&lt; 1 ha. of irrigated land);</p> <p><b>(iii)</b> 375 days of minimum agricultural wages for families losing part land and consequently becoming a small farmer (&gt; 1 ha. of irrigated land).</p> <p><b>(iv)</b> 100-200 days of minimum agricultural wages for big farmers or families losing part/negligible amount of land but left with sufficient land to sustain its family.</p>
6	Tenants/sharecroppers/leaseholders or Non titleholders	Individual	Assistance	200 days of minimum agricultural wages
7	Encroachers	Individual	Assistance	375 days of minimum agricultural wages if they are cultivating the acquired land continuously for last three years from date of section-4 notification
8	Livelihood loss	Individual	Assistance	<p>625 days of minimum agricultural wages preferably in shape of a Income Generating Scheme of equivalent amount depending upon the aptitude/skills posses.</p> <p>In addition to this short and need based training on development of entrepreneurship skills required for successful implementation of selected IGS shall also be organised for such PAFs by POWERGRID.</p>
9	Any other impact not yet identified, whether loss of asset or livelihood	Individual / Community	Compensation/ Assistance	Unforeseen impacts will be documented and mitigated based on the principles agreed upon in this policy framework.



**a. Eligibility and Cut-off-Date**

124. APs entitled for compensation or at least rehabilitation provisions under the Project are:

- (i) All APs losing land either covered by legal title/traditional land rights, or without legal status;
- (ii) Tenants and sharecroppers whether registered or not;
- (iii) APs losing livelihood sources;
- (iv) Owners of buildings, crops, plants, or other objects attached to the land; and
- (v) APs losing business, income, and salaries.

125. Compensation eligibility will be limited by a cut-off date to be set for the project. For the legal title holder, the issuance of Section 4 notification of LA Act will serve as the cut-off date. To prevent subsequent influx of encroacher or others who wish to take advantage of R&R benefits an eligibility, cut-off date is required to be established and this generally could be the date of the Census Survey that will serve as the cut-off-date. APs who settle in the affected areas after the cut-off date will not be eligible for compensation. They, however will be given sufficient advance notice, requested to vacate premises and dismantle affected structures prior to project implementation.

**2. Transmission Line**

**a. Compensation framework**

126. Compensation Plans for Temporary Damages (CPTDs) are prepared for transmission lines, which only require temporary land acquisition.

127. CPTD needs to be prepared for the transmission line projects as no resettlement impacts are expected and impacts are likely to be only on a temporary basis.

**b. Compensation Policy and Framework applicable to the Transmission Lines**

128. The CPTD is based on the Indian Telegraph Act and Indian Electricity Supply Act for construction of transmission lines. This has been discussed in detail in Section C under Objectives, Policy Framework and Entitlements of the CPTD. An Entitlement Framework for the Transmission Line is given in **Table 34**.

**Table 34: Entitlement Framework**

SN	TYPE OF ISSUE/IMPACT	BENEFICIARY	ENTITLEMENT OPTIONS
1.	Loss of crops and trees	Owner/Titleholder	Compensation at market rate for crops and 8 years income for fruit bearing trees. APs will be given advance notice to harvest their crops. Timber will be retained by the owner.
2.	Tenant loss of access by share croppers/leaseholders to crops and /or trees	Tenant/ sharecropper/ leaseholder/Non-titleholders	Only the cultivator will get compensation at market rate for crops and 8 years income for fruit bearing trees. APs will be given advance notice to harvest their crops.
3.	Other damages (if applicable)	All APs	Replacement cost as assessed by the concerned authority.
4.	Additional assistance for vulnerable groups	IPs, women headed households, widows, disabled, elderly, etc.	In addition to compensation of losses as per above, vulnerable groups will receive additional compensation based upon individual needs as

SN	TYPE OF ISSUE/IMPACT	BENEFICIARY	ENTITLEMENT OPTIONS
			assessed.

**c. Procedure for Compensation Plan for Temporary Damage Preparation**

129. The EA will undertake social impact assessment for each identified project, based on the preliminary technical design. According to ADB's procedures and the EA's corporate policy, CPTDs will be prepared according to the provisions in this RF and in full consultations with all APs and stakeholders, in the following manner:

- (i) A compensation plan includes objectives and strategy, with (i) organizational responsibilities; (ii) community participation and disclosure arrangements; (iii) legal framework, including eligibility criteria and an entitlement matrix; (iv) mechanisms for resolution of conflicts and appeals procedures; (v) identification of alternative sites and selection; (vi) inventory, valuation of, and compensation for, lost assets; (vii) infrastructure, and social services; (viii) environmental protection and management; (ix) monitoring and evaluation; (x) a detailed cost estimate with budget provisions; and (xi) an implementation schedule, showing how activities will be scheduled with time-bound actions in coordination with the civil works.
- (ii) CPTDs will include measures to ensure that socio-economic conditions, needs, and priorities of women are identified and that the process of temporary acquisition does not disadvantage women.

130. The detailed process and steps of preparation of the plans 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 (socio economic census); v) preparation of the budget; vi) preparation of the schedule; and vii) disclosure of relevant information to APs.

131. The compensation process is an integral part of project implementation and hence no additional procedure for instant project will be developed. CPTD will comply with relevant sections of Indian Telegraph Act 1885, Electricity Act 2003 and POWERGRID's ESPP (2009). In any case, no AP shall lose any asset before full compensation is awarded. EA will set the cut-off date on the day of notice. The EA will also ensure that this CPTD is closely followed when a CPTD is formulated for a future project. The EA will further ensure that adequate budgets, an experienced social institution/civil society organization/ grass-root organization /NGO /consultant (Soc.Org.) for timely implementation of the plans, if needed.

**d. Procedure of Tree/crop compensation**

132. In exercise of the powers vested with POWERGRID under Indian telegraph Act'1885, part 3, section 10 to 19 conferred under section 164 of the Electricity Act 2003 through Gazette by India, extra ordinary dated 24th Dec. 2003 has the domain to place and maintain transmission lines under over along or across and posts in or upon, any immovable property. As per the provisions of Indian Telegraph Act 1885 Part III Section 10 (b) which prohibits acquisition of any rights other than that of use only, land for tower and right of way is not acquired and agricultural activities are allowed to continue. However, as per clause 10 (d) of same act stipulates that the user agency shall pay full compensation to all interested for any damages sustained during the execution of said work. Accordingly, POWERGRID pays compensation to land owners towards damages if any to trees or crop during implementation of transmission project as well as during Operation and maintenance phase. The procedure followed for such compensation is as follows:

133. POWERGRID follows the principle of avoidance, minimization and mitigation in the construction of line in agricultural field having crop due to inherent flexibility in phasing the construction activity and tries to defer construction in cropped area to facilitate crop harvesting. However, if it is unavoidable and is likely to affect project schedule, compensation is given at market rate for standing crops. All efforts are also taken to minimize the crop damage to the extent possible in such cases. As regards trees coming in the Right of Way (ROW) following procedure is adopted for enumeration:

- (i) All the trees which are coming within the clearance belt of ROW on either side of the centre line are identified and marked/numbered from one AP to the other and documented.
- (ii) Type, Girth (Measured 1 m. above ground level), approximate height of the tree is also noted for each tree
- (iii) Trees belonging to Government, Forest, Highways and other local bodies may be separately noted down or timely follow up with the concerned authorities for inspection and removal.
- (iv) Guava, Lemon, and other hybrid trees which are not of tall growing nature are not marked for cutting since these trees can be crossed using standard tower extensions if required.

134. A notice under Indian Telegraph Act, 1885 is served to the land owners informing that the proposed transmission line is being routed through the property of the individual. The notice shall contain the particulars of the land, ownership details and the details of the trees/crops inevitably likely to be damaged during the course of the construction of the proposed transmission line and acknowledgement received from land owner. A copy of said notice is further issued to the Revenue Officer, who has been authorized by the State Government for the purpose of assessment/valuation and disbursement of compensation to the affected parties.

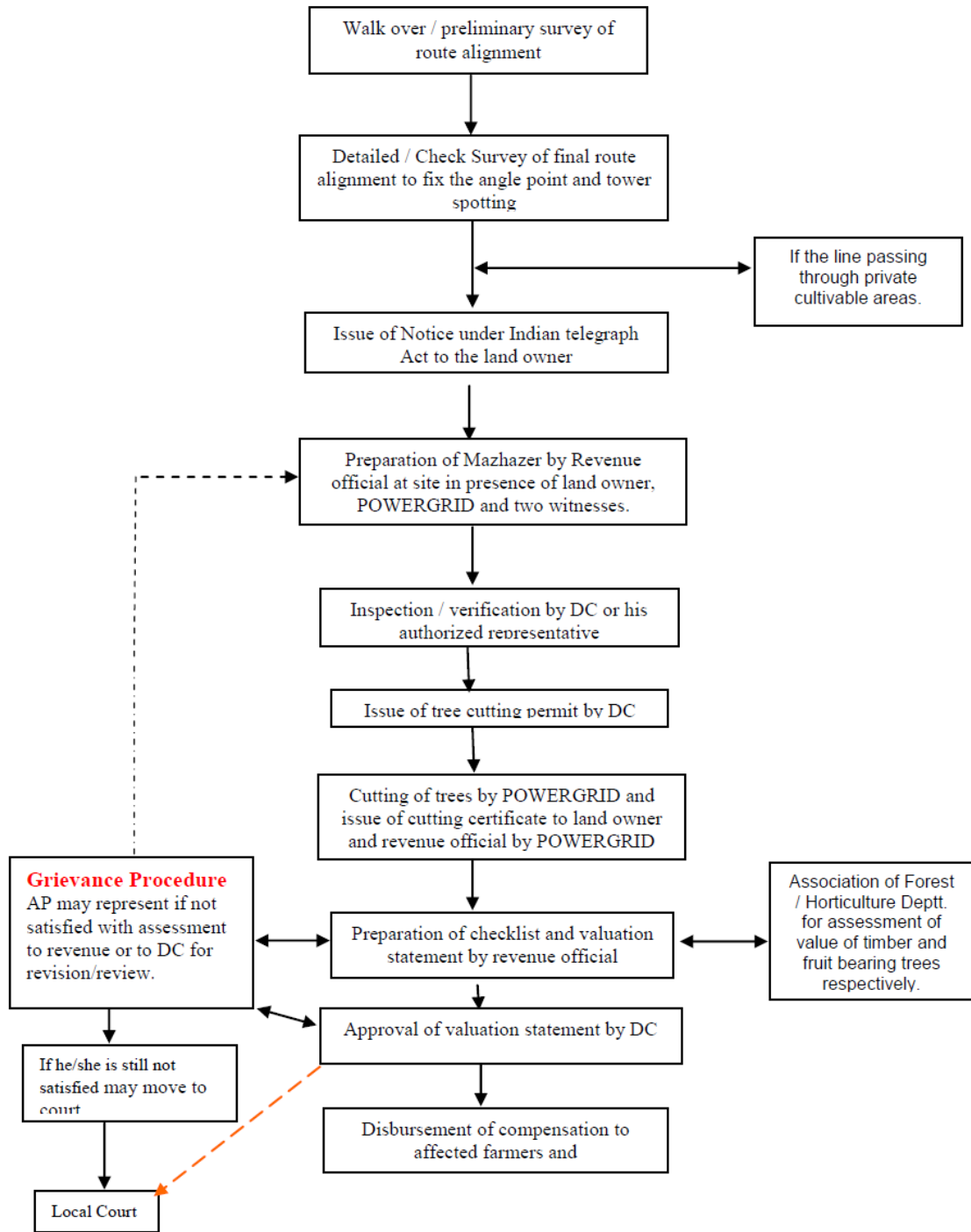
135. The revenue officer shall further issue a notice of intimation to the concerned land owner and inspect the site to verify the documents related to the proof of ownership and a detailed document is prepared for the identified trees and crops inevitably damaged during the course of the construction. For assessing the true value of timber yielding trees, help of forest officials is taken and for fruit bearing trees, help of Horticulture department is taken.

136. The Revenue record shall contain the land owner details type of tree/crop, its present age, variety, yielding pattern etc. and the same is prepared at site in the presence of the land owner. These records are further compiled and a random verification is conducted by the concerned District Collector or his authorized representative in order to ascertain the assessment carried out by the revenue office is genuine and correct. After this process the District collector issues a tree cutting permit to POWERGRID Corporation to enable removal / damage to the standing tree/crop identified in the line corridor.

137. Once the tree/crop is removed / damaged, POWERGRID shall issue a tree cutting/crop damaged notice to the land owner with a copy to the Revenue Officer to process the compensation payment. Based on the above the compensation payment is prepared for this purpose. The detailed Valuation statement is verified at various levels and approval of payment of compensation is accorded by the concerned District Collectors.

138. On approval of compensation, the revenue officer shall further intimate the amount payable to the different land owners and POWERGRID arranges the payment by way of Demand Draft or money order to the affected parties. The payment is further disbursed at the local village office after due verification of the documents in presence of other witnesses. The process has been given in **Figure 1**:

**Figure 1: TREE/CROP COMPENSATION PROCESS**



## **G. INFORMATION DISCLOSURE, AND CONSULTATION**

### **1. Public Consultation**

139. As part of the participatory approach, the project has been designed in due consultation with all the stake holders. Public consultation is highly mandatory for any investment in infrastructural development program. This is an important tool to ensure peoples' participation in the planning and implementation phase of this project. The aim of the public consultation is to make the people aware about the developmental activities being undertaken in their locality and to incorporate their views for making a sustainable plan during the design to the successful completion of the project. Various informal consultations with all stakeholders at different stages of the project preparation were undertaken and issues related to local needs, problem and prospects of resettlement, compensation options etc. were discussed. The project will therefore ensure that the affected people and other stakeholders are informed, consulted, and allowed to participate actively in the development process. This will be done throughout the project, both during preparation, implementation, and monitoring of project results and impacts.

140. Consultations were conducted during the initial stage of project preparation. However, additional consultations were also carried out as part of the continuous participation during the preparation of this resettlement plan among various stake holders, i.e., concerned officials of the executing agencies, local community and their leaders. Informal consultations were carried out at village namely Taga. The participants were affected persons, village leaders, farmers, women and other stake holders.

141. The need for public consultation for such intervention is many folds. Following points will be taken in to account while conducting the informal consultations as major objectives.

- (i) For identification of sites for the new sub stations.
- (ii) Understand the views of the people affected, with reference to use of land and its due compensation.
- (iii) Understand views of people on resettlement options, if any.
- (iv) Identify and assess major economic and social characteristics of the villages to enable effective planning and implementation.
- (v) Resolve issues related to impacts on community property and their relocation.
- (vi) Examine APs' opinions on health safety issues during the construction and selection garbage materials or the waste materials.
- (vii) Identify levels and extent of community participation in project implementation and monitoring.
- (viii) To establish an understanding for identification of overall developmental goals and benefits of the project.
- (ix) To develop a thorough coordination between all the stakeholders for the successful implementation of the project.
- (x) To align with the government's policy on Right to Information (RTI).

### **2. Methods of Public Consultation**

142. Informal consultations in the project area were held at various villages where the proposed substation will be established. The following methodology has been adopted for carrying out public consultations in this project:

- (i) Disseminating information and requesting villagers to attend the public consultation meetings.
- (ii) Walk over survey and informal discussion with people at the substation area.
- (iii) Conducting focused group discussions
- (iv) Individual interviews with concerned stake holders.

- (v) Sharing the opinions and preferences of the APs.
- (vi) Involving the APs and all other stake holders in decision-making including RP implementation.

### 3. Key Findings of the Consultation

143. The key findings of the consultation on various issues such as: general perception about the project, suggestions to mitigate any damage or loss of livelihood are presented below.

- (i) The proposed investment, according to the people, will be beneficial to the local community. The EAs consulted and took the informal no objection from the people for the sub stations sites and availability of land during the project preparation. Therefore, People are aware about the project and welcomed the project.
- (ii) People consented to cooperate during the project implementation stage.
- (iii) People were of the opinion that adequate cash compensation should be given for the loss and damage of crop as per the market value.
- (iv) Construction of substation will have permanent acquisition. Cultivators prefer cash compensation and sufficient prior notification to harvest the crop
- (v) It was advised that project implementation should be planned mostly during the off season in order to avoid the damage.
- (vi) APs requested local representation in the Grievance Redress Committee.
- (vii) People asked about creation of employment opportunities during project construction and later phases of the project.
- (viii) People suggested that adequate safety measures should be provided such as uninterrupted social life.

144. People perceived certain benefits from the proposed investment program, such as improved electricity, good power supply, better irrigation and better living condition, more economic opportunities, etc.

- (i) There are major power cuts and low voltage in the village areas. People are seeking better electricity supply for their agricultural purpose for which they are ready to pay for.
- (ii) According to the female participants, it has been observed that supply of better electricity through this investment will be more beneficial to the women and children community as the living condition will be improved and people will get more time for entertainment, etc.
- (iii) There was an appeal from the local people that all the schools and hospitals in the village areas should be compulsorily electrified on the priority basis which will attract more students to join the school.
- (iv) According to the farmers crop should be compensated keeping in view the annual yielding and the market rate of the crop.

### 4. Public Consultations – Locations

145. The informal public consultations were carried out in the following villages for the substations and the transmission lines. They are:

#### a. Substations

- The consultations for the *Champa substation* were carried out with the directly affected village members. The name of the village is Taga which comprises about 75% of scheduled castes, 10% of scheduled tribes and 15% belonging to other groups. The people were positive and opined that the project development will enable the village to



obtain employment opportunities and this development provided improved economic opportunities in the region too.

- The *Kurukshetra substation* is located in Badson Village of Karnal District. In these informal consultations the local people are informed about the project development and its resultant benefits. The people have opined that they are aware of the project through the POWERGRID's officials during the land identification and provided their consent for the establishment of the substation in this location. The project development has also indicated to bring in economic opportunities to the local population and contribute to the overall development of the region due to the availability of power.

## **b. Transmission Line**

### *Champa – Jalandhar via Kurukshetra*

- Informal public consultation were carried out with Village panchayat head and members, village members etc. living in the villages along the transmission line. Some of the villages that were visited during the survey are i) Kiorari, ii) Sankar, iii) Madhua, iv) Chilora, v) Ulsapur, vi) Nagbhora, vi) Ratanpur, vii) Kendra, viii) Navapadda, ix) Navagaon, x) Daripada, xi) Karra, xii) Sarrapadda.
- In general the people are supportive of the project as there is no major impact from the development activity. They only mentioned that the construction activities should be carried out with appropriate information so that the farmers could harvest their crops and their loss minimizes.

### **Remarks**

- The public consultations were carried out on an informal level with the institutional and the community level stakeholders. This has been in discussion with the POWERGRID officials at the corporate level and the field regional level. The general practice of the POWERGRID is to conduct any public consultations, both informal and/or formal, is after Section 4 notification of the LA act in case of land acquisition and tower marking survey for the transmission lines.

## **5. Continuation of Public Consultations**

146. The consultation process will remain continued by the POWERGRID over the entire period of project implementation. Consultations during RP implementation will involve agreements on compensation, assistance options, and entitlement package and income restoration. The other round of consultations will occur when compensation and assistance are provided and actual resettlement begins. Information disclosure is pursued for effective implementation and timely execution of the RP.

## **6. Disclosure**

147. The draft RP will be made available in relevant local government agencies and in relevant PGCIL corporate and site offices before the appraisal. The summary RP will be made available in Chattisgarh, Haryanvi, Punjabi and Hindi language as may be applicable to each state that the substations and the transmission lines are traversing. Finalized RP will also be disclosed in ADB's website; and information dissemination and consultation will continue throughout program implementation. The disclosure process has been on-going depending on the progress of work. This RP will also be disclosed to the APs.

## **7. Disclosure of temporary damages under transmission line**

148. The draft summary of the compensations for the temporary damages will be disclosed by the POWERGRID to the affected households and other stakeholders by placing it on web site for review and comments on the policy in general and adequacy of the mitigation measures in particular. The compensations for the temporary damages will be translated into the local language(s) and will be placed at various public offices, places such as *tehsil* and district offices, schools, *panchayat* office and concerned officials and local dignitaries. The summary of compensations for the temporary damages will be disclosed on the ADB website.

149. The collection of comments will take place after one month of the disclosure of the compensations for the temporary damages, followed by the compilation of the comments and responses received. Subsequently, the POWERGRID will organize further public consultation meetings with the stakeholders to share the views of public on the Plan for all possible clarifications. The feedback from the consultation will be reviewed and incorporated in the revised and final compensations for the temporary damages. The consultation process will continue throughout the project implementation period.

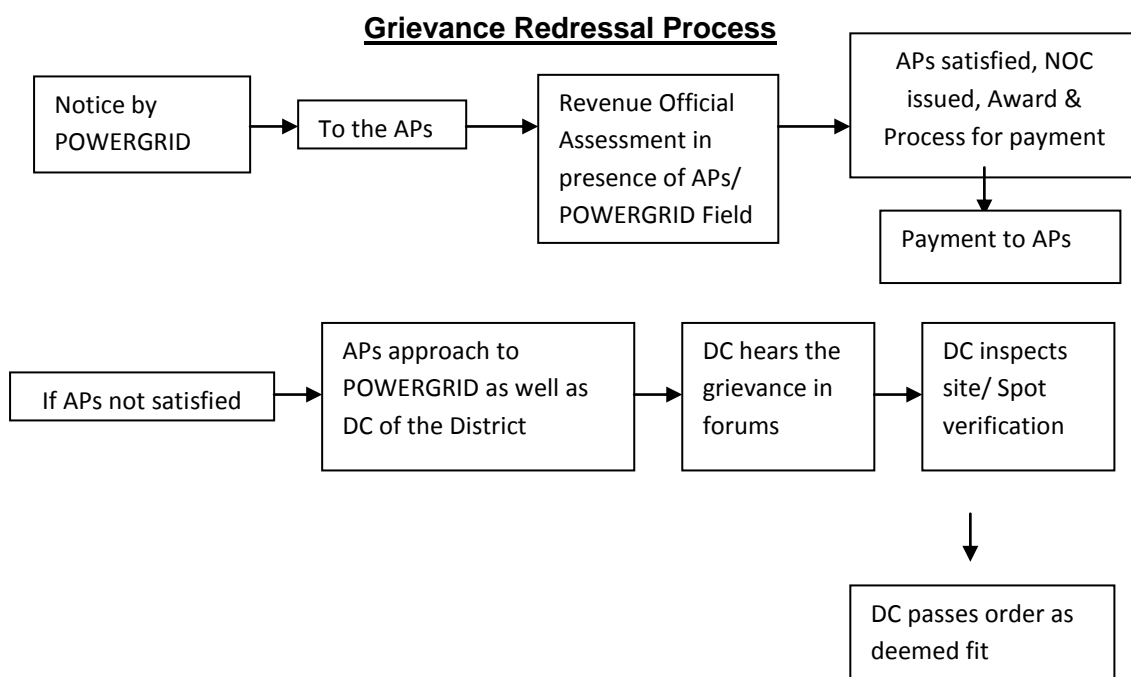
## **H. GRIEVANCE REDRESS MECHANISMS FOR SUBSTATIONS**

### **1. Substation**

150. Efficient Grievance redress mechanism has been developed to assist the APs resolve their queries and complaints. Grievances of APs will first be brought to the attention to the site office level of the POWERGRID. Grievances not redressed by the POWERGRID staff (field level) will be brought to the Grievance Redress Committee (GRC). The GRC has representatives from APs, POWERGRID, Village Panchayat, field level staff, district magistrate/commissioner, local administration, revenue authority and local community. The main responsibilities of the GRC are to: (i) provide support to APs on problems arising from the use of their land/property ; (ii) record AP grievances, categorize, and prioritize grievances and resolve them; (iii) immediately inform the POWERGRID of serious cases; and (iv) report to APs on developments regarding their grievances and decisions of the GRC. 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. The GRC will meet every month (if grievances are brought to the Committee), determine the merit of each grievance, and resolve grievances within a month of receiving the complaint—failing which the grievance will be referred to appropriate court of Law for redressal. Records will be kept of all grievances received including: contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were effected, and final outcome.

### **2. Transmission Line**

151. Grievance Redressal is in built in the process of compensation because after the notice the revenue officials assess the damages based on actual site condition and the version of land owner. After the preliminary assessment owner is given a chance to substantiate the claim if he is not satisfied with the assessment. If the owner is not satisfied he/she is allowed to access the higher authority for any grievance towards compensation that is generally addressed in open forum and in the presence of many witnesses. Process of spot verification and random checking by the district collector (DC) also provides forum for raising the grievance towards any irregularity/complain. Apart from this, POWERGRID officials also listen to the complaints of affected farmers and the same are forwarded to revenue official for doing the needful.



## I. INSTITUTIONAL ARRANGEMENTS

### 1. Substation

152. PGCIL will function as the Executing Agency (EA) of the proposed project investment program. There is already an existing local POWERGRID system which is functional and is responsible for implementing this ADB loan and is also responsible for the preparatory work for the proposed component.

153. POWERGRID has a corporate level Environment and Social Management Department (ESMD) in-charge field level officer at each of the designated zones of the POWERGRID. These officers will be responsible for the implementation of the RP at the ground level. ESMD will do the overall coordination, preparation, planning, and implementation. The EA will ensure that key institutions including local governments are involved in RP preparation, updating and implementation. Further details on agencies responsible for RP activities are listed in **Table 35**.

**Table 35: Institutional Roles and Responsibilities for Substation R&R implementation**

Activity	Responsible Agency
<b>Sub-component Initiation Stage</b>	
Finalization of sites for sub-components	PGCIL Zonal office
Disclosure of proposed land acquisition and sub-component details by issuing Public Notice	PGCIL Zonal office
Meetings at community/household level with APs	PGCIL Zonal office
<b>RP Preparation and Updating Stage</b>	
Conducting Census of all APs	PGCIL Zonal office
Conducting FGDs/meetings/	PGCIL Zonal office
Computation of replacement values of land/properties proposed for acquisition and for associated assets	PGCIL Zonal office/District Administration

Activity	Responsible Agency
Categorization of APs for finalizing entitlements	PGCIL Zonal office/District Administration
Formulating compensation and rehabilitation measures	PGCIL Zonal office/District Administration
Conducting discussions/meetings/consultation with APs and other stakeholders	PGCIL Zonal office
Fixing compensation for land/property with titleholders	PGCIL Zonal office/District Administration
Finalizing entitlements and rehabilitation packages	PGCIL Zonal office/District Administration
Disclosure of final packages	entitlements and rehabilitation PGCIL/ADB/LOCAL ADMINISTRATION
Approval of RP	PGCIL/ADB
<b>RP Implementation Stage</b>	
Sale deed execution and payment	PGCIL Zonal office/District Administration/
Taking possession of land	PGCIL
Implementation of proposed rehabilitation measures	PGCIL
Consultations with APs during rehabilitation activities	PGCIL
Grievances redressal	PGCIL/GRC
Internal monitoring	PGCIL
External monitoring	External Monitoring Consultant

ADB=Asian Development Bank, PGCIL=POWERGRID Corporation of India Ltd., AP=affected person, EA=Executing Agency, ESMC=Environment and Social Management Cell, FGD=Focus Group Discussion, GRC=Grievance Redress Committee, IA=Implementing Agency, LAO=Land Acquisition Officer, RP=Resettlement Plan

## 2. Transmission Line

154. The transmission line between Champa and Jalandhar via Kurukshetra has a length of about approximately 1,600 Km's traversing through the state of Chattisgarh, Madhya Pradesh, Uttar Pradesh, Haryana and Punjab. POWERGRID will implement the CPTD Program and will do the overall coordination, planning, implementation and maintaining all databases, work closely with APs and other stakeholders. The database will be managed by POWERGRID through its Regional ESMC staffs by collecting input from the field staffs which may be monitored/audited by the external monitoring agency, if required.

155. POWERGRID will ensure that local governments are involved in the plan's implementation to facilitate all settlement of compensation related activities before commencing civil works.

Based on regularly updated social assessment & compensation data, a central database will also be maintained by POWERGRID. Roles and responsibilities of various agencies are presented in **Table 36**.

**Table 36: Agencies Responsible for Transmission Line R&R Implementation**

Activity	Agency Responsible
Implementing compensation for temporary damages	Field staffs, POWERGRID

<b>Activity</b>	<b>Agency Responsible</b>
Updating the compensation for temporary damages	ESMC (RHQ), POWERGRID
Review and Approval of compensation for temporary damages	POWERGRID
Verification survey for identification of APs	POWERGRID field staffs & Revenue officials
Survey for identification of plots for Crop/Tree/ other damages Compensation	POWERGRID & Revenue officials
Consultation and disclosure of compensation for temporary damages to APs	POWERGRID & Revenue officials
Compensation award and payment of compensation	Revenue Dept / Competent Authority
Takeover temporary possession of land/houses	POWERGRID and Revenue Department
Hand over temporary possession land to contractors for construction	POWERGRID
Notify construction starting date to APs	POWERGRID field staffs
Compensation to particularly for vulnerable groups	POWERGRID field staffs
Restoration of temporarily acquired land to its original state including restoration of private or common property resources	Contractors subject to monitoring by POWERGRID
Development, maintenance and updating of Compensation database	POWERGRID
Internal monitoring	POWERGRID
External monitoring	POWERGRID & Revenue officials

## **J. RESETTLEMENT BUDGET**

### **1. Substation**

156. The resettlement cost estimate for the project includes compensation and other costs associated with both Components 1 and 2. While Component 2 is an associated facility of the ADB financed loan, these costs have been integrated into the overall budget to reflect the entire compensation package earmarked for the scheme. Project costs include eligible compensation, resettlement assistance and support cost for RP implementation. These are part of the overall project cost. The unit cost for land and other assets in this budget has been derived through rapid field appraisal, consultation with affected families and relevant government authorities. Contingency provisions have also been made to take into account variations from this estimate.

157. The components of the resettlement cost include various features such as, compensation for land at their replacement value; compensation for crops; assistance for transitional allowance, shifting allowances and cost for implementation of RP. PGCIL will arrange in advance in its budget to meet the requirement of land compensation and resettlement cost. The details of the unit rates have been discussed in the budget estimate section of the report.

## 2. RP Implementation and Support Cost

158. Resettlement Specialist/Consultants at ESMC zonal level will provide the support to the local PGCIL office during implementation of the RP. Independent Monitoring and Evaluation Consultant: Not required since project impact has been categorized under Impact Category "B" by ADB.

159. Based on the above parameters the resettlement budget has been prepared. The total cost of compensation for this subproject is estimated to be `Rs. 556 million equivalents to USD 11.37 million (@Rs.44.59 per USD) the details are given in **Table 37 & 38**.

The **RP** and **CPTD** implementation cost is Rs.11 million equivalents to USD 0.13 million (@44.59 per USD).

160. The Total cost for the RP is 11.37 + 0.13 million USD = 11.50 mn USD. The cost of the CPTD compensation (3.63 mn USD) is given separately in Section 2 of this report. Thus the total RP and CPTD cost is **15.13 mn USD**.

<b>Table 37: Champa Substation Estimated Budget</b>					
Item		Unit	Quantity	Unit Rates (Rs.)	Total Cost (Rs.)
<b>A</b>	<b>Compensation for Land and Crops</b>				
A1	Agriculture Land (Private)	Acres	26.7	1000000	26,700,000.00
A2	Barren Land (Government)	Acres	90	500000	45,000,000.00
A3	Loss of crop	Acres	26.7	30000	801,000.00
A4	Solatium 30% on land value (for private land owners)				8,010,000.00
A5	Interest 6% for private land owners	Acres	26.7	60000	1,602,000.00
A6	Registry cost 1% of compensation (for both private and government land transfer)				717,000.00
<b>Sub Total for A</b>					<b>82,830,000.00</b>
<b>B</b>	<b>Trees</b>				
B1	Trees (Timber)	Nos.	210	3000	630,000.00
B2	Trees (Fruit bearing)	Nos.	40	11000	440,000.00
<b>Sub Total for B</b>					<b>1,070,000.00</b>
<b>C</b>	<b>Loss of livelihood</b>				
C1	cost of training for 1 person/HH	Nos.	30	25000	750,000.00
C2	Loss of livelihood	Nos.	75	82500	6,187,500.00
<b>Sub Total for C</b>					<b>6,937,500.00</b>
<b>D</b>	<b>Assistance to Vulnerable Families</b>				
D1	Assistance to Vulnerable Affected Families (both socially & economically) per family	Nos.	10	66000	660,000.00
<b>Sub Total for D</b>					<b>660,000.00</b>
<b>Total (A+B+C+D) (In Rs.)</b>					<b>91,497,500.00</b>

<b>Table 37: Champa Substation Estimated Budget</b>				
Item	Unit	Quantity	Unit Rates (Rs.)	Total Cost (Rs.)
<b>Contingency (10%) on (A+B+C+D)</b>				9,149,750.00
<b>Grand Total</b>				<b>100,647,250.00</b>
<b>Grand Total in USD</b>				<b>2,257,170.89</b>
<b>Grand Total in Million USD</b>				<b>2.26</b>

<b>Table 38: Kurukshetra Substation Estimated Budget</b>					
Item	Unit	Quantity	Unit Rates (Rs.)	Total Cost (Rs.)	
<b>A</b>	<b>Compensation for Land</b>				
A1	Agriculture Land (Private)	Acres	75	1,200,000.00	90,000,000.00
A2	Barren Land (Government)	Acres	150	1,200,000.00	180,000,000.00
A3	Annuity per acre per annum for 33 years Rs. 21000 + Rs. 750 increase per annum	Acres	75	1,089,000.00	81,675,000.00
A4	Solatium 30% on land value (for private land owners)				27,000,000.00
A5	Incentive for no litigation for private owners @20% of basic rate	Acres	75	240,000.00	18,000,000.00
A6	Interest 6% for private land owners	Acres	75	72,000.00	5,400,000.00
A7	Registry cost 1% of compensation (for both private and government land transfer)				2,700,000.00
<b>Sub Total for A</b>					<b>404,775,000.00</b>
<b>B</b>	<b>Crops</b>				
B1	Loss of crops	Acres	75	40,000.00	3,000,000.00
<b>Sub Total for B</b>					<b>3,000,000.00</b>
<b>C</b>	<b>Loss of livelihood</b>				
C1	Cost of training for 1 person/HH	Nos.	25	25,000.00	625,000.00
C2	Loss of livelihood	Nos.	60	108,244.00	6,494,640.00
<b>Sub Total for C</b>					<b>7,119,640.00</b>
<b>D</b>	<b>Assistance to Vulnerable Families</b>				
D1	Assistance to Vulnerable Affected Families (both socially & economically) per family	Nos.	5	86,595.00	432,975.00
<b>Sub Total for D</b>					<b>432,975.00</b>
<b>Sub Total (A+B+C+D)</b>					<b>415,327,615.00</b>
<b>Contingency (10%) on (A+B+C+D)</b>					41,532,761.50

<b>Table 38: Kurukshetra Substation Estimated Budget</b>					
Item	Unit	Quantity	Unit Rates (Rs.)	Total Cost (Rs.)	
<b>Grand Total</b>				<b>456,860,376.50</b>	
<b>Grand Total in USD</b>				<b>10,245,803.465</b>	
<b>Grand Total in Million USD</b>				<b>10.245</b>	

### 3. Transmission Line

161. The resettlement cost estimate for this project includes eligible compensation, temporary damages and implementation. These are part of the overall project cost. The unit cost for lost crops and other assets in this budget has been derived through rapid field appraisal, consultation with the relevant government authorities. Contingency provisions have also been made to take into account variations from this estimate.

#### a. Temporary Damages Implementation and Support Cost

162. Resettlement Specialist/Consultants at ESMC zonal level will provide the support to the local PGCIL office during implementation of the compensation for temporary damages. Independent Monitoring and Evaluation Consultant: Not required since project impact has been categorized under Impact Category "B" by ADB.

163. Based on the above parameters the resettlement budget has been prepared. The total cost of compensation for this subproject is estimated to be `Rs. 161 million equivalents to USD 3.63 million (@Rs.44.59 per USD) the details are given in **Table 39**.

**Table 39: Budget estimate for Temporary Damages under Transmission Line**

<b>Champa to Jalandhar via Kurukshetra Transmission Line</b>		
<b>A</b>	<b>Compensation towards Crops (Non-forest area)</b>	
<b>A1</b>	Champa-Kurushetra 800 kv HVDC Transmission Line	121,143,000.00
<b>A2</b>	Kurushetra-Jalandhar 400kV Transmission Line	26,074,000.00
<b>Sub Total for A</b>		<b>147,217,000.00</b>
<b>Contingency (10%) on (A)</b>		14,721,700.00
<b>Grand Total</b>		<b>161,938,700.00</b>
<b>Grand Total in USD</b>		<b>3,631,726.84</b>
<b>Grand Total in Million USD</b>		<b>3.63</b>

164. The cumulative budget for both the substation and transmission line components is detailed below in **Table 40**.

<b>Table 40: RP implementation cost for both Substation and Transmission Line</b>		
SI.No.	RP Implementation Cost	Cost
<b>1</b>	Socio-economic survey and verification of private owners	800,000.00
<b>2</b>	Other Community Development work	8,000,000.00
<b>3</b>	RAP Monitoring	600,000.00



<b>Table 40: RP implementation cost for both Substation and Transmission Line</b>		
<b>Sl.No.</b>	<b>RP Implementation Cost</b>	<b>Cost</b>
<b>4</b>	Evaluation & Assessment of PAFs (External Agency)	600,000.00
<b>Sub Total A</b>		<b>10,000,000.00</b>
<b>Contingency (10%) on (A)</b>		<b>1,000,000.00</b>
<b>Grand Total</b>		<b>11,000,000.00</b>
<b>Grand Total in USD</b>		<b>246692.083</b>
<b>Grand Total in Million USD</b>		<b>0.246</b>

## **K. IMPLEMENTATION SCHEDULE**

### **1. Substation**

165. Payment of compensation and resettlement benefits except for community development work will be completed before the start of civil works. All land required will be provided free of encumbrances to the contractor prior to handing over of sub-component sites and the start of civil works. However, public consultation and internal monitoring will be continued in an intermittent basis for the entire duration of project. Implementation schedule for R&R activities in the project including various sub tasks and time line matching with civil work schedule is prepared and presented in **Table 41**.

**Table 41: RP Implementation Schedule**

Sl. No.	Activity	Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.	Initial RP Matrix disclosure	—															
2.	Detailed Survey																
3.	Public Consultation			—	—	—	—	—	—	—	—	—	—				
<b>4.</b>	<b>Compensation Plan</b>																
i)	Issue of Notice to APs			—	—	—	—	—	—	—	—	—	—				
ii)	Preparation of APs list				—	—	—	—	—	—	—	—	—				
iv)	List Finalisation				—	—	—	—	—	—	—	—	—				
v)	Assessment by Revenue Official					—	—	—	—	—	—	—	—				
vi)	Assessment disclosure					—	—	—	—	—	—	—	—				
vii)	Compensation Payment					—	—	—	—	—	—	—	—				
<b>5.</b>	<b>Civil Works</b>					—	—	—	—	—	—	—	—				
<b>6.</b>	<b>Review/ Monitoring Activity</b>					—	—	—	—	—	—	—	—				
i)	Monthly					—	—	—	—	—	—	—	—				
ii)	Quarterly					—	—	—	—	—	—	—	—	—	—	—	—
iii)	Half yearly					—	—	—	—	—	—	—	—	—	—	—	—
iv)	Annual					—	—	—	—	—	—	—	—	—	—	—	—
<b>7</b>	<b>Grievances</b>					—	—	—	—	—	—	—	—				
i)	Grievance redressel, if any					—	—	—	—	—	—	—	—				
<b>8.</b>	<b>RP Documentation</b>																
<b>9.</b>	<b>Ext. Auditing, if required</b>																

## 2. Transmission Line

166. The implementation schedule for the transmission line between Champa – Kurukshetra – Jalandhar which is about approximately 1,600 Km as per the road survey that was conducted by the POWERGRID at this in time. The implementation activities have been indicated in table no. 21 which reveals the implementation to be carried out over a period of 4 years (48 months). This duration has been estimated based on the POWERGRID's earlier experience in executing similar length and projects. Schedule has been given in **Table 42**.

**Table : 42 Implementation Schedule for Transmission Line**

Sl. No.	Activity	Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.	Initial CPTD Matrix disclosure	█															
2.	Detailed Survey																
3.	Public Consultation			█	█	█	█	█	█	█	█	█	█				
4.	<b>Compensation Plan</b>																
i)	Issue of Notice to APs			█	█	█	█	█	█	█	█	█	█				
ii)	Preparation of APs list			█	█	█	█	█	█	█	█	█	█				
iv)	List Finalisation				█	█	█	█	█	█	█	█	█				
v)	Assessment by Revenue Official					█	█	█	█	█	█	█	█				
vi)	Assessment disclosure					█	█	█	█	█	█	█	█				
vii)	Compensation Payment			█	█	█	█	█	█	█	█	█	█				
5.	<b>Civil Works</b>			█	█	█	█	█	█	█	█	█	█				
6.	<b>Review/ Monitoring Activity</b>																
i)	Monthly			█	█	█	█	█	█	█	█	█	█				
ii)	Quarterly			█	█	█	█	█	█	█	█	█	█	█	█	█	█
iii)	Half yearly			█	█	█	█	█	█	█	█	█	█	█	█	█	█
iv)	Annual			█	█	█	█	█	█	█	█	█	█	█	█	█	█
7.	<b>Grievances</b>																
i)	Grievance redressel, if any				█	█	█	█	█	█	█	█	█				
8.	CPTD Documentation																
9.	Ext. Auditing, if required																

## **L. MONITORING AND REPORTING**

### **1. Substation**

167. POWERGRID will be the Executing Agency (EA) for the Project. The implementation and monitoring are critical activities shall be followed as per Implementation chart/Schedule. Monitoring is a continuous process for POWERGRID projects at all the stages are it the site selection, construction or maintenance.

168. The success of POWERGRID lies in its strong monitoring systems. Apart from the site managers reviewing the progress on daily basis regular project review meetings are held at least on monthly basis which is chaired by Executive Director of the region wherein apart from construction issues the environmental aspects of the projects are discussed and remedial measures taken wherever required. The exceptions of these meetings are submitted to the Directors and Chairman and Managing Director of the Corporation. The progress of various on-going projects is also informed to the Board of Directors. Following is the organization support system for proper implementation and monitoring of Environmental & Social Management Plan. Performance monitoring of activities will only apply to portions financed by the ADB loan.

#### **a. Corporate Level**

169. An Environmental Management Cell at corporate level was created within POWERGRID in 1992 and subsequently upgraded to an Environment Management Department (EMD) in 1993 and in 1997 it has been further upgraded to Environment & Social Management Department (ESMD) by incorporating social aspect of project. Briefly, the ESMD's responsibilities are as follows:

- (i) Advising and coordinating Regional Head Quarters (RHQs) and respective Site Office (SO) to carry out environmental and social surveys for new projects.
- (ii) Assisting RHQs and SOs to finalise routes of entire power transmission line considering environmental and social factors that could arise enroute
- (iii) Help RHQs and SOs to follow-up with the state forest offices and other state departments in expediting forest clearances and the land acquisition process of various ongoing and new projects
- (iv) Act as a focal point for interaction with the MOEF for expediting forest clearances and follow-ups with the Ministry of Power, if required.
- (v) Imparts training to POWERGRID's RHQs & SOs on environment and social issues and their management plan.

#### **b. Regional Level**

170. At its Regional Office POWERGRID has an Environmental and Social Management cell (ESMC) to manage Environmental and Social issues and to coordinate between ESMD at the corporate level and the Divisional Headquarters. The key functions envisaged for ESMC are:

- (i) Advising and coordinating field offices to carry out environmental and social surveys for new projects envisaged in the Corporate Investment Plan
- (ii) Assisting the ESMD and SOs to finalise routes of entire power transmission lines considering the environmental and social factors that could arise en-route
- (iii) To follow-up forest clearances and land acquisition processes with state forest offices and other state departments for various ongoing and new projects
- (iv) Acting as a focal point for interaction with the ESMD and SOs on various environmental and social aspects.

### **c. Site Office**

171. At the Site Office level, POWERGRID has made the site in-charge responsible for implementing the Environmental and Social aspect of project and are termed as Environmental and Social Management Team (ESMT). Key functions of the ESMT are:

- (i) Conduct surveys on environmental and social aspects to finalise the route for the power transmission projects
- (ii) Interact with the Forest Departments to make the forest proposal and follow it up for MOEF clearance, if any.
- (iii) Implementation of Environment Management Plan (EMP) and SMP
- (iv) Monitoring of EMP and SMP and producing periodic reports on the same.

172. Monitoring will be the responsibility of the EA (PGCIL) through its Zonal offices. The extent of monitoring activities, including their scope and periodicity, will be commensurate with the project's risks and impacts. PGCIL is required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit monitoring reports on their implementation performance. ADB will require PGCIL to:

- (i) establish and maintain procedures to monitor the progress of implementation of safeguard plans,
- (ii) verify the compliance with safeguard measures and their progress toward intended outcomes,
- (iii) document and disclose monitoring results and identify necessary corrective and preventive actions in the periodic monitoring reports,
- (iv) follow up on these actions to ensure progress toward the desired outcomes,
- (v) retain qualified and experienced external expert to verify monitoring information for projects with significant impacts and risks,
- (vi) Submit periodic monitoring reports on safeguard measures as agreed with ADB.

173. The PGCIL monitoring will include daily planning, implementation, feedback and trouble shooting, individual AP file maintenance, community relationships, dates for consultations, number of appeals placed and progress reports. Monitoring reports documenting progress on resettlement implementation and RP completion reports will be provided by the PMU to ADB for review. Additionally, ADB will monitor projects on an on-going basis until a project completion report is submitted.

## **2. Transmission Line**

174. Internal monitoring will be the responsibility of POWERGRID and its internal monitoring will include: (i) administrative monitoring: daily planning, implementation, feedback and trouble shooting, AP file maintenance, and progress reports; (ii) socio-economic monitoring: Compensation of crops/trees or any other damages, demolition if any, salvaging materials, dates for consultations, and number of appeals placed; and (iii) post-implementation monitoring of the APs.

175. Monitoring and reports documenting progress on compensation implementation of CPTD completion reports will be provided by POWERGRID to ADB for review.

176. POWERGRID will engage the services of an independent agency/External monitoring, if required. The external agency will report its findings simultaneously to the POWERGRID and to ADB twice a year. Provisions have been made in the compensation budget component for engaging an external monitor, if required.

### **3. Staff Training on Environment and Social Issues**

177. The Environment and social Management Department (ESMD) in association with HRD organizes training program on Environment and Social Management (E & S M) including ISO-14001 requirement. Till date more than 400 officials of POWERGRID have been imparted training on E & S aspects during the last 6 years. Selected officials have also been nominated to attend The World Bank sponsored training program on R&R at different places like Hyderabad, Bangalore and Udaipur.

178. Executives at ground levels have shown remarkable improvement in appreciating/dealing with these issues. Apart from these, dedicated program in all other technical training program one slot is invariably provided particularly for Environmental & Social issues and it's Management.

### **M. CONCLUDING REMARKS**

The EA in addition to the above activities also carries forward its Corporate Social Responsibility activities at all its substations and transmission line alignments amongst the local population. Even under this project as a policy of the POWERGRID the EA will undertake various activities at the local level. At the proposed Champa substation the POWERGRID is planning certain activities with the local youth and develop certain public amenities that would be valuable to the entire village. In this case there are two water tanks that cater to the water needs other than drinking water supply to the village. Activities like the embankment strengthening, deweeding and desiltation would be proposed and undertaken after discussion and consultation with the local administration and the local communities.

The school building will be considered for renovation with some extra rooms and infrastructure development, etc.

This is a positive and good practice approach that facilitates and provides general amenities to the local communities that are losing their land and providing space for the project development.

**Annex 1**

**Analysis of Alternatives for the Champa to Kurukshetra Transmission Line (Component 1)**

<b>S. N</b>	<b>DESCRIPTION</b>	<b>ALTERNATIVE - I</b>	<b>ALTERNATIVE - II</b>	<b>ALTERNATIVE – III</b>
<b>01</b>	<b>Route Particulars</b>			
(i)	Route Length(Km)	1288	1295.3	1296
(ii)	Terrain (In %)	-	-	-
a	Plain	89	86	85
b	Hilly	11	14	15
<b>02</b>	<b>Environmental Details</b>			
(i)	Name of District/District details (Through which line pass)	<ul style="list-style-type: none"> <li>- <b><u>Chhattisgarh</u></b>—Janjgir Champa,Korba, Bilaspur</li> <li>- <b><u>Madhya Pradesh</u></b> - Dindori,Jabalpur, Damoh &amp; Chhatarpur</li> <li>- <b><u>Uttar Pradesh</u></b>-Banda, Hamirpur, Muzaffarna gar, Jalaun, Etawa, Auriya, Aligarh, Etah , Mainpuri, Ghaziabad, Bulandshahar,Meerut,</li> <li>- <b><u>Haryana</u></b> - Karnal, Kurukshetra</li> </ul>	<ul style="list-style-type: none"> <li>- <b><u>Chhattisgarh</u></b>-Janjgir-Champa,Korba, Bilaspur</li> <li>- <b><u>Madhya Pradesh</u></b> - Dindori,Jabalpur, Damoh &amp; Chhatarpur</li> <li>- <b><u>Uttar Pradesh</u></b> - Banda, Hamirpur,Jalaun, Etawa Auriya, Mainpuri, Etah, Aligarh, Bulandshahar, Ghaziabad, Meerut, Muzaffarnagar</li> <li>- <b><u>Haryana</u></b> - Karnal, Kurukshetra</li> </ul>	<ul style="list-style-type: none"> <li>- <b><u>Chhattisgarh</u></b> – Janjgir-Champa,Korba, Bilaspur</li> <li>- <b><u>Madhya Pradesh</u></b> - Dindori,Jabalpur, Damoh &amp; Chhatarpur</li> <li>- <b><u>Uttar Pradesh</u></b>- Banda, Hamirpur,Etah, Jalaun, Auriya, Aligarh, Etawa, Mainpuri, Ghaziabad Bulandshahar, Meerut, Muzaffarnagar</li> <li>- <b><u>Haryana</u></b> - Karnal, Kurukshetra</li> </ul>



S. N	DESCRIPTION	ALTERNATIVE - I	ALTERNATIVE - II	ALTERNATIVE – III
ii)	Town in Alignment nearby	<ul style="list-style-type: none"> <li>– <b>Chhattisgarh</b>- Sipat Akaltara, , Ratanpur, Belgahan, Kenda, Pendra, Venkatnagar</li> <li>– <b>Madhya Pradesh</b> - Anuppur, Shahpur, Dindori, Sihora, Hatta, Damoh &amp; Chhatarpur</li> <li>– <b>Uttar Pradesh</b> - Naraini,Banda,Rijor Nougaw,Mahoba,Beri Moudah,Kalpi,Jalaun Kuthoindh,Etah Auriya, Ajitmal, Bagi, Bakevar, Bharthana, Ghiroir, Pilawa,Kauda ,Kalan,Manpur,Chausana</li> <li>– <b>Haryana</b> - Jhinhaja, Tana, Bhadeo, Shamli, Banat, Sisauli, Ghiar Barwala, Satheri, Kheri Lawar NP, Machhra, Debai, Alamgeepur, Udaipur, Atruali, Khanpur, Jahagirabad, Marehara, Bhadshon, Bansalu, Makhan majra, Butan Kheri</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Chhattisgarh</b>- Akaltara, Sipat, Ratanpur, Belgahan, Kenda, Pendra, Venkatnagar</li> <li>– <b>Madhya Pradesh</b> - Anuppur, Dindori, Shahpur, Sihora, Hatta, Damoh &amp; Chhatarpur</li> <li>– <b>Uttar Pradesh</b> - Naraini,Banda, Nougaw, Mahoba, Kalpi, Moudah, Beri, Kuthoindh, Jalaun, Auriya,Ajitmal, Bakevar, Bharthana,Karahal Ghiroir,Bagi Rijoir, Etah, Pilawa,Khudan, , Kalan, Chausana</li> <li>– <b>Haryana</b> - Jhinhaja, Tana, Bhadeo, Shamli, Banat, Sisauli, Barwala, Satheri, Lawar NP, Machhra, Debai, Atruali Alamgeepur, Udaipur, , Khanpur, Jahagirabad, Marehara, Ghiar, Kheri, Bhadshon, Bibipur, Jatan, Butan Kheri, Bhadshon</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Chhattisgarh</b>- Akaltara, Sipat, Ratanpur, Belgahan, Kenda, Pendra, Venkatnagar</li> <li>– <b>Madhya Pradesh</b> - Anuppur, Dindori, Shahpur, Sihora, Hatta, Damoh &amp; Chhatarpur</li> <li>– <b>Uttar Pradesh</b>- Naraini,Banda,Rijor Nougaw,Mahoba,Beri, Kalpi, Etah, Kuthoindh, Jalaun, Auriya, Ajitmal, Bakevar, Lachhmipura Bharthana, Karahal Ghiroir,Rijoir, Chausana Pilawa</li> <li>– <b>Haryana</b> - Jhinhaja, Tana, Bhadeo, Shamli, Banat, Sisauli, Barwala, Satheri,LawarNP, Debai Machhra, Alamgeepur, Udaipur, Atruali, Ghiar, Khanpur, Jahagirabad, Marehara, Kheri,Majra, Bhadshon, Khirajpur, Moghal, Baragaon, Gari Gujran</li> </ul>
(iii)	House within ROW	Nil	Nil	Nil
(iv)	Forest in Km/Ha.	75.565 Km	120.02 Km	117.39 Km

S. N	DESCRIPTION	ALTERNATIVE - I	ALTERNATIVE - II	ALTERNATIVE – III
		(521.398 Ha.)	(828.138 Ha.)	(809.991 Ha.)
(v)	Type of forest Reserve/ Protected /Mangrove/Wild life /Biosphere Res./ any other environ. sensitive area	Reserve Forest/ Protected Forest/ Revenue Forest/ Social Forest	Reserve Forest/ Protected Forest/ Revenue Forest/ Social Forest	Reserve Forest/ Protected Forest/ Revenue Forest/ Social Forest
(vi)	Density of Forest	0.1-0.6	0.1-0.6	0.1-0.6
(vii)	Type of fauna	Dog, Crow, Bear, Monkey, Reptiles, Buffalo, Lizard	Dog, Crow, Bear, Monkey, Reptiles, Buffalo, Lizard	Dog, Crow, Bear, Monkey, Reptiles, Buffalo, Lizard
(viii)	Flora	Sal, Tendu, Saja, Teak, Orchard, Babul, Neem, Eucalyptus, Sunflower, spruce	Sal, Tendu, Saja, Teak, Orchard, Babul, Neem, Eucalyptus, Sunflower, spruce	Sal, Tendu, Saja, Teak, Orchard, Babul, Neem, Eucalyptus, Sunflower, spruce
(ix)	Endangered species if any	Nil	Nil	Nil
(x)	Historical/Cultural monument	Nil	Nil	Nil
(xi)	Any other relevant information	Nil	Nil	Nil
<b>03</b>	<b>Compensation Cost</b>			
(i)	Crop (In Lakhs)	1212 Lakhs (Approx.)	1174 Lakhs (Approx.)	1178 Lakhs (Approx.)
(ii)	Forest & NPV (In Lakhs)	5960 Lakhs (Approx.)	9464 Lakhs (Approx.)	9258 Lakhs (Approx.)

S. N	DESCRIPTION	ALTERNATIVE - I	ALTERNATIVE - II	ALTERNATIVE – III
<b>04</b>	<b>No. of Crossing</b>			
( i )	Railway	17	18	19
(ii)	Power Line	174	182	180
(iii)	River Xing etc.	15	17	17
<b>05</b>	<b>Construction problem</b>	– Less problem as this line route is easily approachable through available roads, and also passing mostly through plain area with less involvement of forest area and river & power line crossing	– Less problem as this line is approachable through state highway, village roads but line is passing through more hilly terrain, forest area and river crossing	– Comparatively more problems as approach road is far away and also relatively more hilly terrain, forest area and nos. of river & power line crossing are more in the route alignment
<b>06</b>	<b>O &amp; M Problem</b>	– Very less as most part of the line is approachable and almost parallel to approach road	– Less as most part of the line is approachable and near to state highway, road	– Difficult as approach road are far away and hilly terrain involved
<b>07</b>	<b>Overall Remarks</b>	– Construction and O & M will be comparatively easier.	– Construction and O & M will be comparatively difficult	– Construction and O & M will be comparatively more difficult

## Annex 2

### POWERGRID ESPP RESETTLEMENT AND REHABILITATION FRAMEWORK COMPENSATION PACKAGES AND MEASURES

POWERGRID's social entitlements within its Resettlement and Rehabilitation framework are varied and include different types of compensation packages. These include the following:

- a. **Loss of Land: This impact primarily affects families' access to space for housing (homestead) and, agricultural land.**

**Loss of homestead land** may impact owners with valid titles, or customary and usufruct rights. The entitlement options offered to owner will include compensation finalised by revenue authorities on prevailing market rate. In addition to that, all PAFs of this category shall be provided with equivalent area of land subject to maximum 150 sq. m. in rural areas and 75 sq. m. in urban areas free of cost. The charges towards registration of such land shall also be borne by POWERGRID.

**Loss of agricultural land** is the most prevalent impact and may affect wide range of people ranging from big farmers to marginal farmers. It can be classified into following two categories: Persons with valid titles or customary or usufruct rights: The beneficiary will be the title holder who will be entitled to choose between an alternative land of equivalent productive potential subject to availability preferably within same village/panchayat but not exceeding 1 hectare of irrigated or 2 hectare of un-irrigated land. Registration charges for transfer of this land in the name of affected family shall also be borne by POWERGRID and cash compensation for the extent of land against which replacement land is not provided. Alternate land for allotment to PAFs shall be taken from the State Government or from voluntary sellers at existing land prices to avoid further impact. Since availability of sufficient land in the same area may be a limiting factor therefore the land for land option will be open only to agriculture based PAFs, rendered totally landless by project activities. If the alternate land is wasteland/ degraded land, all eligible PAFs shall be provided one time assistance of Rs. 15,000/- per hectare towards development of land. In case PAFs opt for cash compensation for loss of land or not eligible for land for land option, they will be provided cash compensation at replacement cost which will include compensation as fixed by competent authorities under LA act including solatium and applicable interest plus following rehabilitation assistance based on the severity of losses:

- 750 days of minimum agricultural wages for families loosing entire land thus rendered landless. Since these families are losing entire land, which may adversely affect their livelihood if no other source, is available. Keeping this in view, these PAFs shall be encouraged to opt for Income Generating Scheme (IGS) of equivalent amount based on aptitude/skills of PAFS for maintaining a regular income.
- 500 days of minimum agricultural wages for families loosing part land and consequently becoming a marginal farmer (< 1 ha. of un irrigated land).
- 375 days of minimum agricultural wages for families loosing part land and consequently becoming a small farmer (>1 ha. of un irrigated land).
- 100-200 days of minimum agricultural wages for big farmers or families loosing part /negligible amount of land but left with sufficient land to sustain its family.
- **Tenants/sharecroppers/leaseholders or Non-titled:** In Indian conditions it has been observed that such persons who do not have title or ownership right on agricultural land do take up cultivation as tenants or sharecropper to sustain their families. Acquisition of such land causes only temporarily impact on their livelihood because they can shift to some other such land in the area. However, to compensate the temporarily loss they will be entitled to reimbursement of un-expired lease amount and assistance of 200 days of minimum agricultural wages. Individual will be the beneficiary in this case. Titleholder/owner of such land shall not be eligible for rehabilitation assistance in case of

leaseholder, sharecropper and tenants. However, nontitled (encroachers) will get 375 days of minimum agricultural wages if they are cultivating the acquired land continuously for last three years from date of section-4 notification which shall be established through Govt. records (Voter list, Ration card etc.) or on the basis of socio-economic survey. If affected person with title to the land have encroached from their legitimate landholding onto land that they do not own, they will be compensated only for the legitimately occupied piece and legitimate assets. The above mentioned value (amount) of rehabilitation assistance shall not exceed the amount of compensation fixed by competent authorities

- **Availability of Land for allotment to PAPs:** Availability of land for persons opting for “land for land” shall be decided as follows:
- POWERGRID will take up the matter with concerned State Government for release of Government land for allotment to the eligible PAPs.
- If Government land is not available, POWERGRID will purchase private land on a willing buyer and seller basis keeping in mind that the purchase of land does not promote any indirect displacement. The land will be purchased from voluntary sellers at existing rates finalised through negotiations.
- For purchase of private land a “Land Purchase Committee” shall be constituted by RHQ comprising of representatives of POWERGRID, Local Authorities PAFs, Gram Panchayat or any well reputed person as mutually agreed with the local authorities and PAFs

**Loss of Structure:** This category of impact includes Individuals/families/households losing their houses or shops and other institutional structures. Loss of houses will impact families with valid title, customary or usufruct rights. The beneficiary unit is the individual having ownership right who will be entitled for cash compensation as finalised by revenue authorities and Rs. 25,000/- as one time assistance (based on prevailing Government of India norms for weaker section housing) for construction of house plus transition benefits like provision of transport or equivalent cash for shifting of material. In the case of tenants and leaseholders the beneficiary unit will be the individual who will be entitled to a lump sum payment equivalent to 6 month rent based on production of proof or Rs. 5,000/- whichever is higher as disturbance allowance to re-establish residence. In the case of squatters the beneficiary unit will be the Household/ family who will be entitled to cost of structure and onetime payment ranging between Rs. 5000/- to Rs. 25000/- depending on type structure and family size because family size has direct bearing on extent of impact plus transition benefits like provision of transport or equivalent cash for shifting of material. However, to become eligible for above benefits squatters have to establish that he/she is living there continuously for last 3 years prior to section 4 notifications. Cattle shed: It has been noticed in past that some people have erected a temporarily shed for keeping cattle in their fields which sometimes are not considered by authorities for any compensation if it is not properly build. Therefore to off set the loss owner of cattle shed shall be entitled to one time payment of Rs. 15,000/- in addition to compensation fixed by revenue authorities. Loss of shop/ dhaba or institutional structures will affect units with valid titles, customary or usufruct rights. The beneficiary will be the individual/owner who will be entitled to cash compensation for structure and Rs. 25,000/- for construction of working shed/shop and rehabilitation assistance equivalent to 1 year income towards disturbance plus transition benefits like provision of transport or equivalent cash for shifting of material. In case of tenants and leaseholders, the beneficiary will be the individual who will be entitled to a transitional allowance equivalent to 1 year income plus transition benefits like provision of transport or equivalent cash for shifting of material. In case of squatters, the beneficiary will be the individual who will be entitled to a transitional allowance equivalent to 1 year income plus transition benefits like provision of transport or equivalent cash for shifting of material. However, squatters will get these benefits if they are running the acquired shop/establishment for last three years from date of section-4 notification which shall be

established through Govt. records (voter list, Ration card etc.) or on the basis of socio-economic survey.

**Loss of Livelihood/Wage/Occupation:** This impact affects individual access to wage/occupation. However, in case of agricultural labour they can shift to other land since land acquired for substation is quite small in comparison to total available land in the area. But if socio-economic survey finding recognizes certain people who have lost its livelihood due to acquisition of land for substation these individuals will be entitled to rehabilitation assistance equivalent to 625 days of minimum agricultural wages preferably in shape of a Income Generating Scheme of equivalent amount depending upon the aptitude/skills posses by them or alternatively they may be offered units of equivalent amount in joint name of his/her spouse under Monthly Income Scheme for regular income. Apart from this short and need based training on development of entrepreneurship skills required for successful implementation of selected IGS shall also be organised for such PAFs by POWERGRID. Vulnerable group like women headed/SC/ST families etc. under above mentioned categories shall be considered for additional need based benefits.

**Loss of Access to Common Property Resources (CPR) and Facilities:** In this category of impacts, the beneficiary is typically community, and the losses include loss of rural common property resources or urban civic communities. POWERGRID shall try all possible measures to avoid such CPRs for setting up of substation and if it becomes completely unavoidable than it will take following measures to negate its impact:

- In the case of rural common property resources, the beneficiary units will be the community entitled to replacement/ augmentation of common property resources/ amenities or provisions of functional equivalence.
- In the case of urban civic amenities, the beneficiary units will be the community entitled to access to equivalent amenities or services.

#### **Loss of Standing Crops and Trees**

This category of impacts includes standing crops or trees for those with valid title and tenants or lessees. In all cases, the family cultivating the land will be the entitlement beneficiary. In all cases again, the beneficiary family will be entitled to cash compensation at market rate for crops. For fruit bearing trees payment equivalent to 8 years' income and for other trees, compensation as fixed by concerned authorities to the owner of land. In case of tenant/leaseholder/sharecroppers payment for crop may be made to the landowner only if there is a "no objection" certificate from the actual cultivator.

#### **Losses during transition of displaced persons/establishments**

Losses in this category include those during shifting/transport. In all categories, the family or respective individual of commercial or institutional unit will be the beneficiary and will be entitled to provision of transport or equivalent cash (Rs. 10,000/- minimum) for shifting of material/cattle from existing place to alternate place.

#### **Losses to Host Communities**

In this category of impact, the host community, particularly in the resettled area, its access to amenities and services has reduced. The beneficiary host community will be entitled to augmentation of resources to sustain pressure of project affected persons moving from affected site.

#### **Other Rehabilitation Measures:**

**Income Generation:** When alternate land is not available as per above procedures or in cases where a PAF is not entitled to 'land for land' i.e. eligible only for cash compensation as

determined by Revenue Authorities, the PAP may exercise one of the following options for his rehabilitation. A variety of income generation enterprise will be offered on the basis of:  
 Consultation with PAPs and local government  
 Socio-economic survey establishing the need for such schemes

The following Table 3.1 shows list of some of the income generating schemes as an illustrative examples of schemes where affected people earn their living through taking up some activity as per their capacity.

<ul style="list-style-type: none"> <li>- Allied agriculture</li> <li>- Vegetable farming</li> <li>- Fruit orchards</li> <li>- Social forestry</li> </ul>	<ul style="list-style-type: none"> <li>- Manufacture of pottery products</li> <li>- Decorative</li> <li>- Earthen pipes</li> <li>- Pots and pans</li> </ul>
<ul style="list-style-type: none"> <li>- Livestock rearing</li> <li>- Dairying</li> <li>- Poultry</li> <li>- Piggery</li> <li>- Goat rearing</li> <li>- Sericulture</li> <li>- Pisciculture</li> </ul>	<ul style="list-style-type: none"> <li>- Fruit processing and preservation</li> <li>- Canned fruits</li> <li>- Chips and wafers</li> <li>- Dry fruits/vegetables</li> </ul>
<ul style="list-style-type: none"> <li>- Processing of cereals &amp; pulses</li> <li>- Dal processing</li> <li>- Papad making</li> <li>- Bakery products</li> <li>- Bharbhujia, chana, dalia, manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>- Carpentry and blacksmith</li> <li>- Bee Keeping - wax and honey</li> </ul>
<ul style="list-style-type: none"> <li>- Ghani processing of edible oil seeds</li> <li>- Bullock ghani</li> <li>- Improved power ghani</li> <li>- Portable power ghani</li> </ul>	<ul style="list-style-type: none"> <li>- Fiber products</li> <li>- Rope making</li> <li>- Ban making</li> </ul>
<ul style="list-style-type: none"> <li>- Village match Industry</li> </ul>	<ul style="list-style-type: none"> <li>- Bamboo and cane products</li> </ul>
<ul style="list-style-type: none"> <li>- Agarbatti</li> <li>- Handloom</li> <li>- Manufacture of Laundry soap</li> </ul>	<ul style="list-style-type: none"> <li>- Manufacture of cane Gur &amp; Khandasari</li> <li>- Bullock driven</li> <li>- Power driven</li> </ul>

- **Shops** - also are one of the viable rehabilitation options. A limited number of shops in Substation area if available will be earmarked for allotment to PAFs after appropriate consultation regarding the PAFs capability and aptitude. Any assistance needed by PAFs in formulation of schemes for procuring loans from banks and stabilising the same will be rendered by POWERGRID if so desired.
- **Award of Petty Contracts:** All possible efforts shall be made by project authorities to award petty contracts like cleaning, horticulture, etc. on a preferential basis to eligible PAFs.
- **Jobs:** The following options are provided under this category of rehabilitation.
  - a) *Jobs with POWERGRID:* POWERGRID projects do not envisage significant job opportunities to the local residents. However, if there is any requirement of job then PAPs shall be entitled for preference, subject to their meeting of job requirement and specification.
  - b) *Jobs with Contractors:* Contractors will be persuaded to give jobs to eligible PAPs on a preferential basis where feasible.

- **Training** - If the head of the family who is eligible for RA as per entitlement frame work wants to nominate its dependant for vocational training course in lieu of rehabilitation assistance offered to them, POWERGRID may arrange for imparting suitable training. Such training will be imparted through the existing and available training institutions in the vicinity of affected villagers like Polytechnic, ITIs of the State and Central Government. The project authority may meet the cost of training of the persons who are nominated by the head of the eligible PAFs in writing selected from amongst the land oustee families.
- Apart from above POWERGRID will organise need based short training for development of required skill and entrepreneurship development for the selected IGs in the affected village through state government/institutions.
- **Community Development works:** In addition to above measures, POWERGRID based on outcome of social assessment will also undertake need based developmental work like construction of road, drinking water facility, community centre etc. for overall up-liftment of surrounding, village and community. These works shall be carried out in association with local authorities.
- POWERGRID will ensure that all plans are approved by competent authorities; that public consultation takes place at necessary stages; and, that grievance redressal is a priority.



### Annex 3

#### COMPARATIVE ANALYSIS OF THE APPLICABLE LAWS AND POLICIES RELEVANT TO THE PROJECT

This section provides the salient features of each of the applicable policies and guidelines for this project from the point of view of the government of India, the Chattisgarh rehabilitation policy 2007, Haryana resettlement and rehabilitation policy 2010, POWERGRID's ESPP and the ADB safeguard policy statement 2009.

##### Applicability of the various National Policies and the ADB Policy for Substations

Policy Principle	NRRP	ESPP	ADB	Chattisgarh Rehabilitation Policy 2007	Haryana RR Policy 2010	Compliance to ADB or Alternative
1. Involuntary Resettlement must be avoided wherever possible; and if unavoidable it should be minimized	√	√	√	√	√	Compliance to ADB
2. Affected persons must be compensated to replace their lost assets and to restore/improve their living standards	√	√	√	√	RR Policy gives annuity to landowners for 33 years @ 21,000/- per acre per annum, which will be increase Rs. 750/- every year. In case of land acquisition for SEZ, technological city or park, annuity @Rs. 42,000/- per acre for 33 years will be paid with Rs. 1500/- every year increase.	Compliance to ADB
3. Affected persons should be fully informed and consulted in the planning and implementation of resettlement	√	√	√	√	√	Compliance to ADB
4. Compensation for lost assets must be on the	Not defined	√	√	√	Compensation for assets and land allocations are discussed in details	Compliance to ADB

Policy Principle	NRRP	ESPP	ADB	Chattisgarh Rehabilitation Policy 2007	Haryana RR Policy 2010	Compliance to ADB or Alternative
basis of replacement cost						PGCIL ESPP gives:  <b>(i)</b> 750 days of minimum agricultural wages for families losing entire land, which may adversely affect their livelihood source if no other source is available;  <b>(ii)</b> 500 days of minimum agricultural wages for families losing part land and consequently becoming a marginal farmer (< 1 ha. of irrigated land);  <b>(iii)</b> 375 days of minimum agricultural wages for families losing part land and consequently becoming a small farmer (> 1 ha. of irrigated land).  <b>(iv)</b> 100-200 days of minimum agricultural wages for big farmers or families losing part/negligible amount of land but left with sufficient land to sustain its family.
	NA	NA	NA	– Compensation for assets and land allocations are discussed in details		
5. Transaction and transition costs	√	√	√	√	√	Compliance to ADB
6. Wherever feasible land should be an option for compensating loss of	√	√	√	√	√	Compliance to ADB

Policy Principle	NRRP	ESPP	ADB	Chattisgarh Rehabilitation Policy 2007	Haryana RR Policy 2010	Compliance to ADB or Alternative
land						
7. An RP should be prepared in every instance where involuntary resettlement occurs	Only required where over 400 families are affected in plain areas and 200 or more families are affected in hilly areas or tribal areas	Only for permanent acquisition for s/s. For Transmiss ion lines land remains with APs. Crop and tree compensa tion or compensa tion for other damages will be awarded.	As per the ADB Safeguard Policy statement of 2009 the borrower/c lient will prepare a resettleme nt plan, if the proposed project will have involuntary resettleme nt impacts.	Land acquisition and rehabilitation plan will be worked out simultaneously	√	Compliance to ADB
8. The RP must be disclosed to the affected people before finalization	√	√	√	√	√	Compliance to ADB
9. Livelihood loss address	√	√	√	In case of Industrial or Mining project, Guarantees income as per wages or Employment Guarantee Scheme of Govt., to 1 person per PAFs as per his	Livelihood has been addressed. Provides job guarantee in govt. Detailed procedure been given along with prescribed application form.  1% of the total compensation package will be set apart and	Compliance to ADB.  ESPP gives :  - 625 days of minimum agricultural wages preferably in shape of a Income Generating Scheme of equivalent amount

Policy Principle	NRRP	ESPP	ADB	Chattisgarh Rehabilitation Policy 2007	Haryana RR Policy 2010	Compliance to ADB or Alternative
				capability, if he has not been provided job during construction and after implementation of the project within 2 years from the date of LA	expended on skill development initiatives for dependents of oustees and other landless person dependent on agriculture operations over the acquired land.	depending upon the aptitude/skills posses.  In addition to this short and need based training on development of entrepreneurship skills required for successful implementation of selected IGS shall also be organised for such PAFs.
9. Application of policy	The Indian NRRP only applies to projects displacing 400 families or more in plain areas and 200 families or more in hilly areas	All cases where land acquisition is required only for S/S NRRP & LA 1894 is considered	In all cases where involuntary resettlement occurs	In all cases where involuntary resettlement occurs	In all cases where involuntary resettlement occurs due to land acquisition for projects	Compliance to ADB.
10. Entitlements under the policy	Chapter 7.19 of the NRRP defines entitlements without considering the specific	Specific entitlements have been made in this policy for different categories of losses.	Each impact must be defined and appropriate entitlements assigned on the	<ul style="list-style-type: none"> <li>- To ensure that the resettlement plans are made in such a way that before the displacement, resettlement has been done.</li> <li>- Additional</li> </ul>	Specific entitlements have been made in this policy for different categories of losses.	Compliance to ADB.

Policy Principle	NRRP	ESPP	ADB	Chattisgarh Rehabilitation Policy 2007	Haryana RR Policy 2010	Compliance to ADB or Alternative
	<p>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 not less than Rs 20,000/= per family is to be paid.</p> <p>NRRP ch. 7.13.1 (a) states that project involving LA will give preference to AF, 1 person per nuclear family</p>	<p>Land will be compensated as per replacement cost and amount for rehabilitation assistance is provided in this policy.</p> <p>– Land for land within 25 kms of the location being affected</p>	<p>basis of the basic principles of replacing lost assets and restoring livelihoods</p>	<p>compensation of Rs. 11,000/- for PAFs.</p> <p>– Each impact defined and appropriate entitlements assigned on the basis of the basic principles of replacing lost assets and restoring livelihoods.</p> <p>– 1 person per family permanent job provision in the project as per the objective of the policy.</p> <p>– In case of LA for commercial project, PAF's who lose their 75% land, 1 person will get job as per his capability in the project.</p> <p>– In case of LA for mining project, 1 person from the PAF will get a job in the project.</p> <p>– Provision</p>		

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	providing employment in the project, subject to availability & suitability of the AF for the employment. NRRP ch 7.13.1(e) further stress that preference to landless and unemployed AF while engaging labour in the project during construction phase.			for giving more land than acquired based on income group  In case the displaced person wants a bigger land compared to his income group, he can get the same by paying additional cost.  – Person above 18 years in a PAF will be considered as separate PAP		
11. Recognition of untitled persons such as squatters and encroachers etc.	– NRRP states that the landless, forest dwellers, tenants	√	√	Recognised if :  1. At the time of notification under section 4 of LAA that the person was occupying the land for last 3	RR policy goes little further and mentions few sections like blacksmiths, carpenters, potters, masons, barbers etc. and others under this category which together constitutes a village society.  1% of the total compensation package will be used for their skill	ESPP provides :  – 200 days of minimum agricultural wages to tenants/ sharecroppers/ leaseholder or non-titleholders  – For encroachers 375 days of

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	and artisans are more severely affected but no mention is made of specific entitlements for them.			years or 2. Was staying as a legal tenant for min. 1 year.	development. Preference in job in the project.	minimum agricultural wages if they are cultivating the acquired land continuously for last three years from date of section-4 notification
12. Surveys and census required	NRRP & ESPP require survey findings to be disclosed to the affected persons with a view to inviting objections and suggestions	- NRRP & ESPP require survey findings to be disclosed to the affected persons with a view to inviting objections and suggestions	√	LA details and resettlement plans along with compensation details will shared at the earliest with the PAFs. Proper channels been described for inviting objections and suggestions.	Not Defined in exact terms	Compliance to ADB
13. Social networks and cultural links should be preserved	√	√	√	- In order to maintain the emotional attachment with the acquired	2% of the total compensation package will be used for community development and infrastructure development in the village	Compliance to ADB

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				land, new land or area developed for resettlement will have same name of the village or city with prefix "New"		
14. Recognition of vulnerable groups including indigenous people.	<p>√</p> <p>– I R for less than 400 families or less than 2006 in tribal or hilly areas, DDP blocks or areas mentioned under schedule V or VI of constitution, all AF will get basic infrastructural facilities and be</p>	<p>– A dditional rehabilitat ion grant for vulnerabl e groups, women headed, SC/PH/Di sable families</p> <p>– P GCIL gives preferenc e to STs in land allotment. Additional financial assistanc e is also defined for them. Their</p>	<p>√</p> <p>ADB Safeguard Policy Statement 2009 under OM F2/OP states to give employmen t in the project</p>	<p>– Special attention been given to weaker section and people living in scheduled area.</p> <p>– At the time of notification under section 4 of LAA, any person from weaker section living on the government land for past 3 years or person living in the scheduled area before 1990 on the government land will be considered</p>	<p>√</p>	Compliance to ADB



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	<p>included in RP</p> <p>– N RRP Ch 7.21.5 states that Additional 1 time financial assistance to ST equivalent to 500 days min. agricultural wages for loss of customary rights or usages of forest resource.</p> <p>– N RRP and PGCIL give preference to STs in land allotment. Additional financial assistance is also defined</p>	<p>traditional rights to natural resources in the area will be recognized.</p>				

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	<p>for them. Their traditional rights to natural resources in the area will be recognized.</p> <p>– NRRP also state to prepare Tribal Development Plan for IR for 200 or more ST families under ch 7.21</p>					
15. Grievance Redress Procedure	<p>– NRRP gives detailed mechanism under chapter 8 for Grievance redress</p>	√	√	<p>– Only suggestion implementation procedure been discussed</p>	√	Compliance to ADB

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	at project level, district level and inter-state level.					
16. Organization and Management of Resettlement	√	√	√	- Talks about monitoring and evaluation team to be setup at the state and zilla parishad level	√	Compliance to ADB
17. Common property resources should be replaced	√	√	√	- As it is a rehabilitation policy not touching CPR in particular, but talks about maintaining the standard of living at the resettlement place	√	Compliance to ADB
18. All costs relating to resettlement and rehabilitation must be borne by the requiring agency and included in project costs	√	√	√	√	√	Compliance to ADB