

H.P. POWER TRANSMISSION CORPORATION LTD.

(A State Government Undertaking)



Environment and Social Safeguards Policy

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ENVIRONMENT AND SOCIAL SAFEGUARDS POLICY

1. INTRODUCTION

HP Transmission Corporation Limited (HPPTCL) has been incorporated on 27.08.2008 with a view to strengthen the Transmission Network in Himachal Pradesh and to facilitate evacuation of Power from existing and upcoming Generating Plants. HPPTCL has been declared as State Transmission Utility (STU) by Government of Himachal Pradesh (GoHP) vide notification dated 10.6.2010. The Corporation has been entrusted execution of all New Works - both Transmission Lines and Substations; Formulation, Updating, Execution of Transmission Master Plan of HP for strengthening the Power Transmission Network and Power Evacuation systems and maintenance and upkeep of the transmission lines. The Corporation will coordinate the transmission related issues with CTU, CEA, MoP (GoI), GoHP, HPPCL, HPSEBL, IPPs, CPSUs, and other State/Central Government agencies.

2. ORGANIZATION'S AIMS AND OBJECTIVES

The Corporation's aims and objectives are:

- (a) to undertake transmission of electricity through Inter-State and Intra-State Transmission System.
- (b) to discharge all functions of planning and coordination relating to Inter-State and Intra-State Transmission System with:
 - Central Transmission Utility,
 - State Government,
 - Generating Companies.
 - Regional Power Committee
 - Central Electricity Authority
 - Licensees.
 - Any other person/organization that may be involved/connected.
- (c) to ensure development of an efficient, coordinated and economical system of Inter-State and Intra-State Transmission System for smooth flow of electricity from a Generating Station to the Load Centers.
- (d) to provide non discriminatory Open Access to its Transmission System for use by:
 - any licensee or Generating Company on payment of Transmission Charges; or
 - any consumer as and when such open access is provided by the HP Electricity Regulatory Commission (HPERC) Under Sub Section (2) of Section 42, on payment of the Transmission Charges and a Surcharges thereon, as may be specified by the HPERC.

3. ENVIRONMENT AND SOCIAL POLICY STATEMENT

HPPTCL is committed to the goal of sustainable development of power transmission network in harmony with nature and natural resources and seeks to avoid, minimize, mitigate or compensate adverse environmental and social impacts.

4. POLICY GOAL:

The Goal of HPPCL's Environmental and Social Safeguards Policy (ESSP) is to ensure that development of power transmission system network in environmentally and socially sustainable manner and to bring clarity and transparency about it with public disclosure.

HPPTCL shall proactively and voluntarily take all necessary steps to ensure environmental and social sustainability of all its projects.

HPPTCL has developed this document of its corporate Environmental and Social Safeguards Policy (ESSP) to address the environmental and socio-economic issues arising from its activities guided by the basic principles of Avoidance, Minimization and Mitigation. The ESSP outlines HPPTCL's approach and commitment to deal with environmental and social issues relating to its transmission projects.

The main aim of ESSP is to give a human face to corporate functioning and to move away from the classical cost-benefit approach to the larger realm of Corporate Social Responsibility, while mainstreaming the environmental and social concerns in its operations.

5. ENVIRONMENTAL AND SOCIAL ISSUES

HPPTCL's core activity is power transmission for which it has to lay transmission lines and install power substations and create ancillary/associated facilities. Erection and operation of transmission lines and substations, may involve environmental and social impacts. Some of the environmental and social issues that could arise from these projects are unavoidable, and HPPTCL seeks to address them through its ESSP and project specific action.

Environmental and social issues associated with power transmission projects are relatively less severe as compared to other linear projects.

A. ENVIRONMENTAL ISSUES

As already stated in the foregoing, HPPTCL's work can broadly be divided into two categories viz. Laying of Transmission Line and constructing Power Substations. Environmental issues arising from typical HPPTCL projects are discussed as under:

A.i. TRANSMISSION LINES

The key environmental issues associated with installation of transmission lines are listed as under.

(a) DIVERSION OF FORESTLAND TO NON-FOREST USE:

Land for laying the transmission line is required which often passes through forestland and the land for tower locations is diverted to non-forest use. Although efforts are made to align the route in a manner so as to avoid forestland yet in a state where about 65 % of the total geographical area is legally classified as

forestland, possibility of involvement of forestland remains very high in any line of significant length and voltage.

(b) **CLEARING OF TREES WITHIN RIGHT OF WAY:**

Right of Way (RoW) width for transmission line depends on the line voltage. A vertical clearance of 3 meters is presently allowed below each conductor for the movement of tension stringing equipment. Trees on such strips are felled, but after stringing is complete, natural regeneration and afforestation with dwarf species can be allowed to come up.

Lopping of trees is required to facilitate stringing and maintenance of RoW. Lopping and felling of trees can open up forest canopy allowing more sunlight into the under storey where it can lead to an edge effect and allow for proliferation of weeds or even natural regeneration. Felling, pollarding and pruning of tree for electric clearance, whenever necessary, shall be done with permission from the local forest officer with due mitigation and abatement measures as may be prescribed.

(c) **CLEARING OF GROUND VEGETATION FOR MOVEMENT OF MACHINERY:**

Heavy machinery is used for installation of transmission lines and towers and may require clearing of ground vegetation for its movement. This activity causes temporary disturbance to the forest, orchards, plantations and agriculture fields.

(d) **SOIL EROSION DUE TO DIGGING FOR TOWER FOUNDATION ETC:**

Foundation for towers is laid deep inside the earth to provide secure anchoring. This requires digging of foundation and making a platform at the tower base. Many times the digging can lead to soil erosion and also may cause landslides.

A.ii. **SUBSTATIONS**

The key environmental issues in the construction of substations are listed below.

(a) **CLEARING OF GROUND VEGETATION:**

A typical substation requires an area of 5-10 hectares of land. Efforts shall be made to locate it on wasteland or land of least ecological and economic value and least social significance. However, the land that is acquired would need to be cleared of its vegetation to enable construction activity.

(b) **USED TRANSFORMER OIL:**

As a part of routine maintenance, transformer oil is changed every 10-15 years. The used transformer oil is categorized as hazardous wastes as per the Hazardous Waste (Management & Handling) Rules, 2003 and its unscientific disposal in environment may lead to soil and water contamination.

(c) **GEOLOGICAL SAFETY, SOIL EROSION AND LANDSLIDE:**

The site for substations has to be geologically stable and safe so that cutting and leveling for construction of substation does not lead to landslides. Cutting for leveling has to be done with a view to avoid soil erosion and the muck obtained in digging should be used in filling to achieve leveling.

(d) **SF₆ LEAKAGE DURING STORAGE AND ERECTION OF SWITCHGEAR:**

The GIS (Gas Insulated Switchgear) uses SF₆ (Sulfur Hexafluoride) as the insulator and is required to be stored and handled at site for various operations and maintenance requirements. SF₆ is a GHG recognized under Kyoto Protocol 1997. Mishandling and leakage etc can lead to its escape in the atmosphere causing

health and safety hazard besides contributing to global warming. HPPTCL shall follow the Rules and international standards for its storage, handling and disposal.

(e) **NOISE AND VIBRATION:**

Substations make a humming and continuous noise during operation phase with varying intensities. Though its site is selected in such a way that it is located away from houses and dwelling structures yet diaphragm walls shall also be provided to cut-off noise and the workers in the substations shall also be provided with necessary equipment for their health and safety.

B. SOCIAL ISSUES

Social issues associated with transmission lines and substations are discussed as under.

B.i. TRANSMISSION LINES

Key social issues involved in laying transmission lines are listed below.

- (a) Loss of standing crop: Foundation and erection of towers and stringing of transmission lines involve movement of machinery and material. This may cause damage to the standing crops in agriculture fields resulting in serious socio-economic concerns for the cultivators.
- (b) Change in land prices: Installation of transmission towers may reduce the price of the property falling below the line.
- (c) Aesthetic appeal of the area: Erection of transmission towers and lines affects the aesthetics of the area.
- (d) Temporary loss of access: Access to Common Property Resources during construction phase of transmission lines may be limited or restricted leading to temporary hardship. Access to common property resources for the local community may be compromised.
- (e) Land acquisition or permanent diversion of land below towers: Such restriction on land use results not only in the loss of asset but also that of recurring income which previously was accruing to the owners/those dependent on the land.

B.ii. SUBSTATIONS

Social issues associated with establishment of substations are related to land acquisition. A typical substation would require an area of 5 to 10 hectares. HPPTCL shall strive to look for waste land or land which is not of economic or social significance so that the impact on communities residing in that area is minimized. The common social issues involved are identified below.

- (a) Loss of livelihood due to acquisition of private agricultural land: Private agricultural lands sometimes get acquired for the construction of substation. This may result in loss of livelihood to the concerned cultivators and agricultural workers.
- (b) Loss of common property resources due to acquisition of revenue land: The local communities use common property resource lands for various purposes such as grazing ground for their cattle and sourcing biomass for cooking fuel. Acquisition of these lands for construction of substation result in loss of common property resource of the local community that could affect their socio economic condition.

- (c) Loss of homestead: Acquisition of homestead or land for construction of substation may result in involuntary resettlement of the families or loss of livelihood or adverse impact on their livelihood.
- (d) Limitation on land use or unhindered enjoyment of property: Due to construction of substation or laying of transmission line, the unhindered enjoyment of property may be compromised and its value may decrease or may not appreciate as much as the adjoining 'free' land. Similarly, the limitation on the land-use gets imposed in vicinity putting restriction on erection of tall structures including growing of trees etc leading to loss of value or income or livelihood. This issue is common to both, Transmission lines and Substations.

6. LEGAL, REGULATORY AND POLICY FRAMEWORK

The Legal, Regulatory and Policy Framework as applicable to the activities of HPPTCL consist of several provisions under various Acts, Rules, Policies, Guidelines and instructions including the Constitution of India and interpretations afforded by court orders and pronouncements. A summary of the framework is described below and details of Legal, Regulatory and Policy Framework as applicable to HPPTCL are given in Annexure-A.

Environment safeguards related framework

The constitutional provisions consist of rights guaranteed under Article 48 A and Article 51 A (g) as also Article 21. The set of mandatory requirements consists of various Acts and Rules there under as listed below besides some prescriptive regulations.

1. ELECTRICITY ACT, 2003 - Section 68 (1); Section 164 (B);
2. FOREST (CONSERVATION) ACT, 1980
3. ENVIRONMENT (PROTECTION) ACT, 1986
 - a. BATTERIES (MANAGEMENT & HANDLING) Rules, 2001
 - b. HAZARDOUS WASTES (MANAGEMENT & HANDLING) AMENDMENT RULES, 2003
 - c. OZONE DEPLETING SUBSTANCES (REGULATION & CONTROL) RULES, 2000.
4. BIOLOGICAL DIVERSITY ACT, 2002
5. THE SCHEDULED TRIBES & OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHTS) ACT, 2006
6. POLLUTION PREVENTION AND CONTROL (Air and Water)
7. INDIAN FOREST ACT, 1927
8. HIMACHAL PRADESH LAND PRESERVATION ACT (LPA)
9. WILDLIFE (PROTECTION) ACT, 1972.
10. HEALTH AND SAFETY REQUIREMENTS
11. EXPOSURE TO ELECTROMAGNETIC FIELDS (EMF).

Policies relevant to the power transmission sector are listed as under.

- National Environment Policy, 2006
- HP Hydropower Policy 2007

- National Conservation Strategy and Policy Statement on Environment and Development, 1992.
- Policy Statement for Abatement of Pollution, 1992
- Wildlife Conservation Strategy, 2002
- National Forest Policy, 1988

Social safeguards related framework

The policy framework consists of following main regulations:

1. National Resettlement & Rehabilitation Policy, 2007 (NRRP) (MoRD, DoLR).
2. Right of Way and compensation under Electricity Laws.
3. Land Acquisition Act, 1894.
4. The Indian Telegraph Act (ITA), 1885
5. Indian Treasure Trove Act, 1878 as amended in 1949
6. Provisions of the Panchayats (Extension to the Scheduled Area) Act, 1996.
7. The Right to Information Act, 2005
8. Labour Laws

HPPTCL does not foresee the physical displacement to be an issue with transmission projects because land below transmission line is not acquired and only small pieces of land are required for tower base and substations. However, all affected persons/families shall be provided compensation and rehabilitation assistance along with other measures as per HPPTCL's Resettlement, Relief, Rehabilitation and Compensation Policy so as to adequately mitigate the adverse impacts on all affected families.

In addition to above, there are international and/or multilateral funding agencies' (from whom HPPTCL may take loan) requirements and there are international commitments regarding environmental and social safeguarding, with which HPPTCL is expected to comply.

HPPTCL is fully conscious of the provisions of various enactments and it is committed to upholding and implementing the constitutional, legal and policy provisions, especially in its roles and responsibilities with regard to environment and social safeguarding. HPPTCL shall undertake its activities within the purview of the national laws, relevant international obligations and guidelines of the funding agencies.

IMPLICATIONS FOR HPPTCL

HPPTCL shall abide by all the laws, rules and regulations as may be applicable in individual cases. However, a broader analysis of general implications for it is summarized as under.

ENVIRONMENTAL

Presently clearance under the Forest (Conservation) Act, 1980 is the only mandatory requirement under a national law. The Environment (Protection) Act, 1986, as such, is not applicable to transmission projects. However, compliance of EPA, 1986 amendments regarding Batteries (Management and Handling) Rules, 2001 and Hazardous Wastes (Management and Handling) Amendment Rules, 2003 on used oil during operational stage have been made mandatory. HPPTCL commits itself to follow the mandatory and prescriptive requirements.

SOCIAL

Current mandatory requirements are the provisions under the Land Acquisition Act, 1894; The Indian Telegraph Act (ITA) 1885 and NRRP, 2007. The prescriptive requirements are state laws, draft policies and the existing frame work regulating health & safety. HPPTCL has adopted the entitlement framework for its projects based on the national policy and other progressive trends. As regards health and safety of its workers, HPPTCL shall apply the best international practices and standards.

7. THE ENVIRONMENT AND SOCIAL SAFEGUARDS POLICY PRINCIPLES

Keeping in view the environmental and social issues as also the Legal, Regulatory and Policy Framework as applicable to it, the HPPTCL spells out its Environmental and Social Safeguards Policy as under and its commitment thereto.

A. ENVIRONMENT SAFEGUARDS POLICY PRINCIPLES

In tune with its Environment and Social Policy Statement and its commitment to safeguarding the environment, in all its operations, the HPPTCL shall:

- 1) Make all efforts to minimize adverse impacts on the natural environment by consciously economizing on the requirement of resources including land for civil structures,
- 2) Avoid, as far as practicable, operations in environmentally Sensitive Areas, Eco-Sensitive Zones, Wetlands, Ramsar Sites, Wildlife Sanctuaries, National Parks and Biosphere Reserves. If it is inevitable, HPPTCL shall obtain approvals as required under the relevant laws.
- 3) Consider environmental implications of location, terrain and sensitive areas in impact identification and mitigate these with innovative, practical engineering solutions.
- 4) Apply efficient and safe technological practices and standards and it shall strive to keep itself updated on the same.
- 5) Abate pollution in all its activities and operations. It shall adopt the good practices of the sector and shall promote reuse, recycling and safe disposal of resources.
- 6) Minimize energy losses and promote energy efficiency.
- 7) Take suitable and adequate mitigation measures whenever, avoidance to impacting the environment is not possible.
- 8) Ensure total transparency in dealing with all the stakeholders i.e. the concerned government agencies, local communities, individual landowners and employees with their involvement through a well-defined public disclosure and public consultation process as well as dissemination of relevant information about the project at every stage of implementation.
- 9) Maintain high standards of corporate responsibility not only towards communities but also towards the consumers and the civil society.

B. SOCIAL SAFEGUARDS POLICY PRINCIPLES

Harmonizing its operations with the Environment and Social Policy Statement and its commitment thereto, the HPPTCL shall:

- 1) Take due precautions to avoid disturbance to human habitations, tribal areas and places of cultural significance and minimize the same wherever inevitable.
- 2) Inform and consult the affected people from planning, inception stage to operation and maintenance stage.
- 3) Encourage consultation with communities in identifying environmental and social implications of projects. For this purpose it shall share information with local communities about environmental and social implications.
- 4) Pay special attention to marginalized and vulnerable groups and secure their inclusion in overall public participation.
- 5) Take due and adequate care of Project Affected Families.
- 6) Guarantee adequate entitlements and compensation to affected persons.
- 7) Always maintain highest standards of health and safety and adequately compensate affected persons in case of any eventuality.
- 8) Maintaining high standards of human resource development of staff, contractors and others associated with HPPTCL.
- 9) Constantly review the policy and procedures consistent with its guiding principles of prevention, minimum disturbance and innovative remedial measures.

8. STRATEGY FOR ENVIRONMENT AND SOCIAL SAFEGUARDING AND GENERAL ACTION POINTS

To comply with its policy statement, to achieve its stated goal and to implement the principles enunciated for the purpose of environment and social safeguarding, the HPPTCL shall adopt following strategy coupled with some of the general action points. However, the list provided in this document is only indicative and it by no means is conclusive. HPPTCL shall continue to strive to adopt new and innovative methods to achieve safeguarding objectives.

8.1 Strategy for Environment Safeguarding and general action points

- A. HPPTCL shall adopt proactive route alignment approach. Preliminary route selection for transmission lines shall be done by using tools such as the forest atlas, revenue papers and Survey of India maps. It shall strive to move towards using modern tools like GIS/GPS for a precision in route alignment with the larger picture in view while finalizing the route.
 - I. During route alignment, all possible efforts shall be made to avoid forest area or to keep it to the barest minimum. Whenever it becomes unavoidable due to the geography of the terrain or heavy cost involved in avoiding it, different alternative options shall be considered to minimize the requirement of forest area.
 - II. Matching with the requirement of maintaining ambient temperature for energy efficiency and commitment to use least forestland and trees, as far as practicable, a balance shall be maintained in

route alignment between southern aspects and northern aspect of mountains as entire area of the State falls North of Tropic of Cancer. This shall be done to make best use of the fact that mountain slopes with northern aspect in areas to the North of Tropic have cooler temperatures and higher moisture and hence, more vegetation but less habitations whereas southern aspects have higher temperature, lesser moisture and hence, lesser vegetation but more habitations.

- III. For selection of optimum route the following criteria shall be taken into consideration to the extent possible that:
- i. the transmission line avoids environmentally sensitive areas, eco sensitive zones, forests, sanctuaries national parks, biosphere reserves.
 - ii. the transmission line route impacts minimally on natural resources to accomplish this, route selection of transmission line is undertaken in close consultation with representation of the State Forest, Environment and Revenue Departments. Site specific alterations are made to avoid environmentally sensitive areas and settlements at execution stage.
 - iii. the proposed transmission line bypasses human habitation;
 - iv. no monuments of cultural or historical significance are affected .
 - v. the proposed transmission line does not adversely impact any local community assets such as playground, hospitals, schools, places of worship etc.
- B. HPPTCL shall follow the principle of avoidance by skirting forestland unless it is inescapable and in such instances it shall obtain prior clearance from competent authorities. It shall abide by the relevant guidelines, including the directions of the Supreme Court from time to time.
- C. To minimize adverse impacts on natural habitats, human habitations efforts will be made to locate majority of towers on barren, waste or fallow agricultural lands.
- D. Minimum of three alternative routes shall be studied in detail using a set of techno-economical, environmental, ecological and social impact parameters to arrive at the most optimally suitable alignment that is technically feasible, economically viable, socially just and environmentally safe.
- E. Right of Way (RoW) width depends on the line voltage. A maximum width of RoW for transmission lines on forest land and minimum clearances between conductors and trees to be adhered in route selection.

HPPTCL shall attempt at reducing the number and width of the Right of Way (RoW) etc. through adoption of appropriate technological option like construction of narrow base towers, towers with extension, compact towers, multi-circuits, and monopole towers and/or innovating upon standard procedures. Specially designed high towers shall be used for reducing impact on trees, orchards wildlife and crossing wetlands, riverbeds.

HPPTCL shall explore possibility of adopting a variable width RoW, wherever feasible, so as to minimize land requirement especially cutting of trees and removal of other vegetation.

Tower sites shall preferably, as far as technically feasible and permitted by the safety parameters, be located on mountain ridges so as to save trees in the RoW below the conductors on the valley side between two successive towers.

F. All efforts to minimize the involvement of trees falling in RoW shall be made. HPPTCL shall minimize number of trees required to be felled even if their cost has been paid. Pruning of trees will be done wherever required instead of heavy lopping or felling.

G. To minimize damage to the environment HPPTCL shall use manual stringing in thick forest and on slopes wherever possible.

H. Transmission line design shall comply with the limits of electromagnetic interference from overhead power lines.

Visible pathways along the transmission line alignment shall be maintained for patrolling and maintenance purposes.

I. For aviation safety, in addition to putting visible signs along the conductors and on the towers, the route alignment would be shared with the nearest airport or nearest office of the Airports Authority.

J. Measures like Compensatory Afforestation (CA), which involve plantation over twice the area affected by the project which not only help in compensating loss of vegetation but also increase forest cover, shall be ensured. Plantation will be done in all installations not only to improve aesthetics but also for maintaining the desired ecological balance. HPPTCL may permit growing dwarf plants' species or NTFP in the RoW within safety limits. Once permitted, species suitable for hilly terrain shall be planted.

K. HPPTCL shall avoid GHG emission including CFC, SF₆, Halon and take steps to reduce where inevitable. It shall adopt better, improved and safe storage, handling and recycling practices.

SF₆ in particular shall be handled with extreme care as it has very long HLP (3200 years) by adopting suitable standards that keeps its leakage rate to well below 0.1 % per year. Periodic checks shall be carried out for observing the safe limits.

L. Adopt environmentally sensitive labour management with periodic health checks if the workers engagement is prolonged.

Alternate arrangement for fuelwood, heating and cooking shall be made to meet fuelwood requirement of the labour so that it does not cause damage to adjoining forests. If necessary, fuelwood supply will be done only from authorized sources.

Work force shall be prohibited from disturbing the flora, fauna including hunting of animals and fishing in water bodies. Wildlife hunting, poaching, unauthorized NTFP collection or tree felling by labour shall be prevented by frequent checks in labour camps and by creating awareness with the help of local concerned authorities.

The contract conditions shall incorporate necessary provisions to this effect.

M. HPPTCL shall consider water conservation in all activities including water harvesting in the buildings it owns.

N. Waste generation shall be minimized. Wherever waste is generated, effective waste management shall be adopted.

During construction phase, sewage/sanitation shall be provided to labourers. Dry pit latrines may be constructed for the labour.

Solid waste shall be disposed-off properly in an environmentally safe manner. Incineration of solid waste in daily camp fire of labour camps may be adopted.

Proper awareness programme regarding environment protection will be carried out amongst workers and staff.

Appropriate contract conditions shall be made to meet this requirement.

- O. In landslide prone areas, HPPTCL shall design tower bases with leg extension and revetment that prevent soil erosion near the towers.

Stabilization of adjoining land that may become unstable due to cutting and leveling for sub-stations shall be done.

To avoid soil erosion, construction near seasonal rivers, erosion and flood-prone areas shall be restricted to the non-rainy season.

Muck and dust shall be managed effectively during leveling foundation digging and other civil works.

Maximum working shall be done during non-monsoon period to avoid soil erosion.

- P. Transformers and other equipment specifications compliant with GoI rules/regulations & International Electro-technical Commission (IEC) standards shall be followed.

Construction techniques and machinery selection shall be made with a view to minimize ground disturbance.

While planning for substations, drainage lines shall also be marked and studied so as to avoid seepage and leakage and pollution of water sources and springs etc.

Substation location/design to ensure that noise will not be a nuisance to neighbouring properties. Provision of noise barriers near substation sites will be made.

Substation design will comply with the limits of electromagnetic interference within floor area. Security fences will be erected around substations. Warning signs shall be displayed.

- Q. HPPTCL shall adopt good practices and shall always strive for a high standard of house-keeping for its substations and ancillary facilities.

HPPTCL shall incorporate the best technical practices to deal with environmental issues in its working.

Design of substations shall be made so as to include modern fire control systems/firewalls. Provision of firefighting equipment would be made to be located close to transformers, switchgears etc.

- R. In keeping with its approach to reuse, recycle and safe disposal, all the used gas shall be removed with suitable Gas Recovery Equipments. Recovery and reuse shall be done through experts. Experts and licensed/registered agency shall be involved in disposal of used gas, oil and other input materials in an environmentally compatible manner.

- S. HPPTCL shall ensure compliance of all the conditions of clearances and shall review the same periodically to take advance remedial actions.

- T. Training for safety in all aspects of its operations shall be imparted to HPPTCL personnel at regular intervals.
- U. Sponsorship or conduct of awareness campaigns and other efforts of spreading environmental, social and health awareness including HIV/AIDS shall be done.

8.2 Strategy for Social Safeguarding and general action points

- A) HPPTCL shall consult affected people in the issues of RoW's land acquisition, or loss of livelihood.
- B) Involuntary Resettlement shall be avoided to the extent possible. If inevitable, suitable resettlement shall be done before displacement.
- C) HPPTCL shall prepare and implement a well defined Resettlement, Relief, Rehabilitation and Compensation Policy offering set of suitable grants and other assistance to the affected people.
- D) Proper and detailed surveys would be done for identifying the affected families and the type of impact that may be caused.
- E) To locate substations for power transmission projects, HPPTCL shall use flexible approach in that adjustment in project implementation would be made to minimize the adverse socio-economic impacts on the local communities. Such adjustment may include delaying the construction of the substations to accommodate crop harvesting or relocate the substation to protect a sensitive area. If this is unavoidable, then HPPTCL shall provide compensation at market rate of the potential harvest as may be assessed by competent authority of the concerned department.
- F) Agricultural activities that may get disturbed or deferred during construction or maintenance shall be restored to the owners' satisfaction following completion of construction or maintenance activities or paid compensation in lieu.
- G) In case trees on private lands are felled or damaged during construction or maintenance operations, compensation shall be paid to the owner as determined by the forest/horticulture departments.
- H) HPPTCL shall ensure proper valuation of land and assets of Project Affected Families (PAF) through a transparent process and compensation for all categories of PAFs would be disbursed within the stipulated period.
- I) HPPTCL shall strive to provide employment opportunities for marginalized groups in its construction activities.
- J) HPPTCL shall keep in mind according collateral benefit while planning its activities resulting in upgrading the infrastructure facilities of nearby areas.
- K) Land and assets falling along the transmission line route alignment shall be allowed to be used keeping the safety requirements in view.
- L) Although all efforts will be made to avoid aligning the route over any permanent residential or other structure yet if in the rarest of rare case it is not possible to do so, such structure falling below the line shall be acquired and demolished. Suitable compensation shall be paid and grants shall be released in such cases.

9. IMPLEMENTATION MECHANISMS AND RESPONSIBILITY STATEMENT

To implement this policy the HPPTCL shall take all necessary steps for early fructification of its benefits to all concerned. To this end, the organization shall initiate following actions.

- (I) Sensitization of the manpower;
- (II) Placing dedicated human resource for environment and Social, R&R works.
- (III) Clear depiction of Role and Responsibility with emphasis on adherence to this policy for all staff.
- (IV) Environmentally sensitive planning and execution.
- (V) Review its contract documents to ensure suitable provisions for compliance with this policy.
- (VI) Regular progress review mechanism to ensure adherence to environment and social safeguarding policy and principles.
- (VII) Reporting formats to be reviewed to include these safeguarding aspects.

RESPONSIBILITY STATEMENT

A well defined responsibility statement shall be prepared at the organization level to depict apportioning of various tasks between the HPPTCL and its contractors. The same shall be reviewed periodically on commencement of each project or each contract package to check relevance and suitability with the concerned project, individual work or package.

10. PUBLIC DISCLOSURE AND PUBLIC CONSULTATION

This document shall be disclosed to the public and disseminated widely using available media amongst the staff and public.

HPPTCL shall disclose to the public contents of its field projects, their objective, scope of work, survey results and likely impacts as may be assessed and obtain their input before finalizing the same.

Grants released may also be disclosed as per requirement if it does not violate individual's privacy rights.

11. GRIEVANCE REDRESSAL MECHANISM (GRM)

Despite implementation with utmost sincerity and despite taking necessary and adequate precautions, some people either get aggrieved or feel aggrieved. For this purpose, suitable grievance redressal mechanism is necessary to be put in place. Following mechanism shall be followed.

A committee at the project level shall receive and resolve grievances.

The constitution of the committee shall be as under.

- | | |
|--|------------------|
| 1. Project Head | Chairman |
| 2. Head of Finance wing at the project level | Member |
| 3. Representative of local Panchayat | Member |
| 4. Representative of contractor | Member |
| 5. Project Environment or RR staff | Member Secretary |

If an aggrieved person is not satisfied with the resolution by the above committee or the committee has not solved his/her grievance at all, the matter may be referred to the Local Area Development Authority (LADA) or the LADA may *suo moto* take cognizance and resolve the same.

The Managing Director HPPTCL shall be the reviewing authority in all such cases. The GRM as also the committee constitution shall be duly publicized.

12. REVIEW PROVISIONS

HPPTCL believes that the ESSP is not a onetime exercise; instead it acknowledges that it is a dynamic and living document, which shall be further upgraded in the light of the experiences gained from field implementation and other relevant factors and reoriented to remain in tune with the national policies, international commitments and best practices of the sector. Accordingly, this policy may be reviewed by the HPPTCL at an interval of three years or earlier if needed and suitable amendments made to keep it relevant with the ground realities obtaining at the relevant time.

Details of Legal, Regulatory and Policy Framework as applicable to HPPTCL

The constitutional provisions, policy, legal and regulatory frame work for environment and social aspects of power transmission and requirements of multilateral funding agencies are listed as under. HPPTCL is committed to abide by these.

CONSTITUTIONAL PROVISIONS

The Constitution of India (1950) incorporates certain specific provisions for the protection and improvement of the country's environment. The relevant provisions, introduced by the 42nd Amendment Act, 1976 are given below:

Article 48 A - "The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country."

Article 51 A (g) - "It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures."

The Right to life guaranteed by **Article 21** of the Constitution has been interpreted by the Supreme Court of India in several recent judgments to include the right to live in a clean and healthy environment. This interpretation is in favour of environmental protection. Fundamental Rights and Directive Principles guarantee the right to life and liberty.

HPPTCL is committed to upholding and implementing the aforesaid constitutional provisions, especially in its roles and responsibilities with regard to environment and social issues and their safeguarding. HPPTCL shall undertake its activities within the purview of the national laws, relevant international obligations and guidelines of the funding agencies'.

Mandatory requirements under the law and guidelines of the funding agencies; and prescriptive requirements that influence environmental and social issues are briefly touched below.

MANDATORY REQUIREMENTS - ENVIRONMENT

1. ELECTRICITY ACT, 2003

Section 68 (1) - sanction of the Ministry of Power (MOP) is a mandatory requirement for taking up any new transmission project.

Section 164 –under this section HPPTCL has all powers that the telegraph authority possesses and can erect and construct towers without actually acquiring the land.

2. FOREST (CONSERVATION) ACT, 1980

This Act provides for seeking prior approval of the Central Government for diversion of forestland to non-forest use. HPPTCL shall avoid forestlands and if inevitable, minimum of forestland would be used and it shall strive to minimize tree felling even if their cost is paid.

3. ENVIRONMENT (PROTECTION) ACT, 1986

The Environment (Protection) Act, 1986 is an umbrella legislation for the protection and improvement of environment. Since transmission line projects are non-polluting in nature, environmental clearance is not

required for these projects. HPPTCL functions within permissible standards of ambient air quality and noise levels as prescribed by national laws and international regulations.

The other relevant rules and regulations under the Environment (Protection) Act, 1986 applicable to the operations of HPPTCL are described below:

(b) BATTERIES (MANAGEMENT AND HANDLING) Rules, 2001

MoEF has put certain restrictions on the disposal and handling of used batteries. HPPTCL shall ensure that the used batteries are deposited with the dealer, manufacturer or registered recycler for handling and disposal.

(c) HAZARDOUS WASTES (MANAGEMENT AND HANDLING) AMENDMENT RULES, 2003

These rules classify used mineral oil as hazardous waste under the Hazardous Wastes (Management and Handling) Rules, 2003 that require proper handling and disposal. The requirements for disposal of used mineral oil as per the rules are given below.

The used mineral oil will be sent/ sold for re-refining to registered recyclers, if it meets the specification in schedule-5. The waste oil which is not suitable for re-refining shall be used in furnaces if it meets the specifications laid down in Schedule-6. Any waste oil, which does not meet the specifications in Schedule-6 shall not be auctioned, but shall be disposed off in a hazardous waste incinerator.

Used mineral oil generated at the HPPTCL substation meets the requirements of schedule -5 of the above mentioned rule. HPPTCL shall seek authorization for disposal of hazardous waste from State Pollution Control Board as and when required.

(d) OZONE DEPLETING SUBSTANCES (REGULATION AND CONTROL) RULES, 2000.

Certain control and regulation has been imposed on manufacturing, import, export, and use of Ozone Depleting Substances (ODS). HPPTCL shall follow these regulations and will phase out all equipment, which use these substances, and will aim at being CFC free organization in future.

4. BIOLOGICAL DIVERSITY ACT, 2002

This Act is meant to “provide for the conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental there to.”

HPPTCL is fully conscious of the provisions of this enactment and will abide by the same.

5. THE SCHEDULED TRIBES & OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHTS) ACT, 2006

The Act recognizes and vests forest rights and occupation in forestland by forest dwelling Scheduled Tribes and Other Traditional Forest Dwellers who have been residing in such forests for generations but whose rights could not be recorded, and provides for a framework for recording the forest rights so vested and the nature of evidence required for such recognition and vesting in respect of forestland.

HPPTCL is committed to abide by the provisions of the Act, if any portion of its transmission line passes through such forestland to which the Act applies.

6. HIMACHAL PRADESH LAND PRESERVATION ACT (LPA)

The HP LPA besides prescribing for regulation of various activities aimed at preservation of land from erosion and/or degradation provides for regulation of felling of (non-fruit) trees from private lands. In case, trees are to be felled from private land, HPPTCL shall obtain permission from competent authority.

FUNDING AGENCIES' REQUIREMENTS AND INTERNATIONAL COMMITMENTS REGARDING ENVIRONMENTAL SAFEGUARDING

Funding Agencies have got their own set of environmental guidelines. These guidelines classify development projects in various categories based on environmental and/or social sensitivity. For instance ADB classifies projects in three Categories - A, B & C based on possible environmental and social impacts.

Category A: Projects having significant adverse environmental impacts that are sensitive, diverse or unprecedented. These projects require a detailed Environmental Impact Assessment (EIA) to address significant impacts.

Category B: Projects having some adverse impacts that are not as significant as of Category A projects. These impacts are generally site specific and addressed through carefully designed mitigating measures.

Category C: Projects having minimal or no adverse environmental impacts. No EIA or environmental review is required for such projects:

Transmission lines' projects fall under category B, having limited impact, which are minimized through mitigation/management measures therefore require only an environmental review.

PRESCRIPTIVE FRAMEWORK FOR ENVIRONMENT

The prescriptive framework involves applicable legislations, relevant polices and the implementing agencies. The prescriptive framework also covers international treaties and convention signed and ratified by India.

OTHER LEGISLATIONS

(A) POLLUTION PREVENTION AND CONTROL (Air and Water)

HPPTCL by the very nature of its operations is not involved with activities that are grossly polluting in nature. Even then its approach is to aim for "Zero Pollution" in its projects, irrespective of a compliance requirement. HPPTCL shall follow the rules and notification under the relevant Acts and Rules there under prescribing for prevention and control of pollution.

(B) CONSERVATION OF NATURAL RESOURCES

HPPTCL is fully conscious of the need to conserve the natural resources and hence, it shall avoid ecologically sensitive areas, eco-sensitive zones, dense forests, Reserve Forests, WLS/sanctuaries, National Parks, and Biosphere Reserves as far as possible. In case traversing forestland is unavoidable, clearance from the forest authorities shall be obtained under the Forest (Conservation) Act, 1980 and under all other relevant laws and regulations relating thereto. Main Acts that have bearing on the working of HPPTCL are - India Forest Act, 1927; FCA, 1980; Wildlife (Protection) Act, 1972.

RELEVANT POLICIES

The policy framework is contained in the following:

- National Environment policy, 2006
- HP Hydropower Policy 2007
- National Conservation Strategy and Policy Statement on Environment and Development, 1992.
- Policy Statement for Abatement of Pollution, 1992

- Wildlife Conservation Strategy, 2002
- National Forest Policy, 1988

In addition, India is party to several International Treaties and Convention relating to environment. HPPTCL is fully conscious of the above-mentioned policy framework, including trans-boundary issues, and it shall abide by the relevant requirements in its operations.

HEALTH AND SAFETY REQUIREMENTS

HPPTCL shall maintain safety as a priority, apart from various labour laws dealing with workers' health and safety, such as the Workmen's Compensation Act. HPPTCL shall frame guidelines for worker's safety as its personnel are exposed to live EHV apparatus and transmission lines.

EXPOSURE TO ELECTROMAGNETIC FIELDS (EMF)

There have been some concerns about the possibility of an increased risk of cancer from exposure to electro magnetic radiation from overhead transmission lines. However, a review by the World Health Organization (WHO) concluded as below.

“From the current scientific literature there is no convincing evidence that exposure to radiation field shortens the life span of humans or induces or promotes cancer.” The impact of EMF is also dependent on the duration of exposure and therefore no significant adverse impact is envisaged.

MANDATORY REQUIRMENTS - SOCIAL

The MoRD (Ministry of Rural Development), GoI, notified the National Rehabilitation and Resettlement Policy in October, 2007. It is applicable to all development projects involving displacement of 400 or more families en masse in plain areas or 200 or more families en masse in hilly area.

The NRRP in the strict sense is not attracted by the transmission projects; as these do not involve displacement of a large member of families.

1. RIGHT OF WAY AND COMPENSATION UNDER ELECTRICITY LAWS:

If RoW is required through agriculture land, Section 68 (5 & 6) of the Electricity Act, 2003 provides the basis for compensation to be paid for any damage.

HPPTCL shall follow these legal provisions and the CEA guidelines.

3. PROVISIONS UNDER THE LAND ACQUISITION ACT, 1894 FOR SUB-STATIONS

Due to precaution exercised by HPPTCL in selecting sites, no physical displacement of PAFs is likely to take place and there is no likelihood of any significant loss of livelihoods. However, if in the highly unlikely event of inevitability of such an impact, compensation and grant shall be paid as per provisions under HPPTCL's Resettlement, Relief, Rehabilitation and Compensation Policy.

4. THE INDIAN TELEGRAPH ACT (ITA) 1885

The clause 10 (b) of the Indian Telegraph Act (ITA) 1885 vests the power to place and maintain telegraph lines and posts in any immovable property without 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. This practice is being followed by PGCIL for construction of transmission lines in the country. HPPTCL shall compensate for the damages caused to the property/crops/orchard etc during the execution of Transmission line project as also during

maintenance, if required, and the rights of the ownership of the property shall remain with the titleholder.

5. INDIAN TREASURE TROVE ACT, 1878 AS AMENDED IN 1949

The Act provides for procedures to be followed in case of finding of any treasure, archeological artifacts etc during excavation. Possibilities of such discoveries are quite remote due to limited and shallow excavation. However, in case of such findings, HPPTCL will follow the laid down procedure in section-4 of the Act.

6. PROVISIONS OF THE PANCHAYATS (EXTENSION TO THE SCHEDULED AREA) Act, 1996.

The Act provides for extension of the provisions of Part IX of the constitution relating to the Panchayats to the Scheduled Areas. As per the provisions of the Act, the concerned Gram Sabhas or Panchayats shall be consulted before making the acquisition of land in a Scheduled Area for any development project and before resettling or rehabilitating the affected persons.

HPPTCL shall avoid such area to the extent possible, where unavoidable, it shall consult the concerned Gram Sabha/Panchayat.

7. THE RIGHT TO INFORMATION ACT, 2005

The Act provides for setting out the practical regime of right to information for citizens to secure access to information under the control of public authorities, chiefly in order to promote transparency and accountability in the working of every public authority.

HPPTCL is a designated Public Authority, hence, it shall follow the provisions of this Act as applicable. The process of obtaining information and details of designated officials is posted on the HPPTCL website.

FUNDING AGENCIES' REQUIREMENTS - SOCIAL

As per the requirements of international and multilateral funding agencies, projects can be classified into various categories based on severity of their impact on the society and local inhabitants. The ADB's social safeguarding policy statement classifies projects in three main categories as mentioned below.

Category – A: where resettlement is significant and involves physical displacement of more than 200 persons, which require a detailed resettlement plan.

Category-B: where resettlement is not that significant and requires a short resettlement plan.

Category-C: where no resettlement of people is foreseen and neither requires resettlement plan nor a resettlement framework.

HPPTCL does not foresee the physical displacement to be an issue with transmission projects because land below transmission line is not acquired and only small pieces of land are required for tower base and substations. However, all affected persons/families shall be provided compensation and rehabilitation assistance along with other measures so as to adequately mitigate the adverse impacts on all affected families.

RELEVANT POLICIES

- National Resettlement & Rehabilitation Policy, 2007 (Ministry of Rural Development, DoLR).
- State government's policy guidelines issued from time to time.

IMPLICATIONS FOR HPPTCL

HPPTCL shall abide by all the laws, rules and regulations as may be applicable in individual cases. However, a broader analysis of general implications for it is summarized as under.

ENVIRONMENTAL

Presently clearance under the Forest (Conservation) Act, 1980 is the only mandatory requirement under a national law. The Environment (Protection) Act, 1986, as such, is not applicable to transmission projects. However, compliance of EPA, 1986 amendments regarding Batteries (Management and Handling) Rules, 2001 and Hazardous Wastes (Management and Handling) Amendment rules, 2003 on used oil during operational stage have been made mandatory. HPPTCL commits itself to follow the mandatory and prescriptive requirements.

SOCIAL

Current mandatory requirements are the provisions under the Land Acquisition Act, 1894 and NRRP, 2007. The prescriptive requirements are state laws, draft policies and the existing frame work regulating health & safety. HPPTCL has adopted the entitlement framework for its projects based on the national policy and other progressive trends. As regards health and safety of its workers, HPPTCL shall apply the best international practices and standards.

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AIDS	Acquired Immunodeficiency Syndrome
BoD	Board of Directors (of HPPTCL)
CA	Compensatory Afforestation
CEA	Central Electricity Act
CEA	Central Electricity Authority
CFC	Chlorofluorocarbons
CPSU	Central Public Sector Undertaking
CTU	Central Transmission Utility
DFO	Divisional Forest Officer
DoLR	Department of Land Reforms
EA	Environmental Assessment
EAMP	Environmental Assessment and Management Plan
EHV	Extra High Voltage
EIA	Environment Impact Assessment
EMF	Electro Magnetic Field
EMP	Environmental Management Plan
EPA	Environment Protection Act
ESMC	Environmental Social Management Cell
ESMD	Environmental Social Management Department
ESMT	Environment and Social Management Team
ESPP	Environmental and Social Policy Procedures
ESSP	Environment and Social Safeguards Policy
FA	Funding Agency
FCA	Forest Conservation Act
FR	Feasibility Report
GHG	Green House Gases
GIS	Gas Insulated Switchgear
GIS/GPS	Geographical Information System/Global Positioning System
GoHP	Government of Himachal Pradesh
GoI	Government of India
GRM	Grievance Redressal Mechanism
HIV	Human Immunodeficiency Virus
HLP	Half Life Period
HPERC	Himachal Pradesh Electricity Regulatory Commission
HPPCL	Himachal Pradesh Power Corporation Limited
HPPTCL	H.P. Power Transmission Corporation Limited
HPSEBL	Himachal Pradesh State Electricity Board Limited
IFA	Indian Forest Act
IPP	Independent Power Producer
ISO	International Standard Organization

ITA	Indian Telegraphs Act, 1885
KV	Kilo Volts
LAA	Land Acquisition Assessment/ Land Acquisition Act
LADA	Local Area Development Authority
LPA	Land Preservation Act/Himachal Pradesh Land Preservation Act, 1978
MoEF	Ministry of Environment & Forests
MoP	Ministry of Power
MoRD	Ministry of Rural Development
NO	Nodal Officer
NP	National Park
NRRP	National Resettlement & Rehabilitation Policy
NTFP	Non Timber Forest Produce
ODS	Ozone Depleting Substances
OM	Operation Manual
OSS	Organizational Support System
PAF	Project Affected Family
PAP	Project Affected Person
PESA	Panchayats (Extension to the Scheduled Area) Act, 1996
PGCIL	Power Grid Corporation of India Limited
PSU	Public Sector Undertaking
R&R	Resettlement and Rehabilitation
RAP	Rehabilitation Action Plan
REB	Regional Electricity Board
RoW	Right of Way
SA	Social Assessment
SAMP	Social Assessment and Management Plan
SEB	State Electricity Board
SF ₆	Sulfur hexafluoride
STU	State Transmission Utility
WB	World Bank
WHO	World Health Organization
WLPA	Wild Life (Protection) Act; Wild Life Protected Area
WLS	Wild Life Sanctuary