Initial Environmental Assessment Report

Project Number: 49214-002
July 2017

IND: Solar Transmission Sector Project
Annexures 10–12

Prepared by Power Grid Corporation of India Ltd. for the Asian Development Bank.
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ANNEXURE – 10

ESTIMATED BUDGET
Budget Estimate

Total line length - 359 km (206+153) approx.
Total tower locations - 990 nos. approx.

A. Compensation

1. Forest
   - Total Forest Involvement - Nil
   - Forest Compensation- (@ 20 lakhs/ha.) - Nil

2. Crop & Trees
   - Line length in Private /Revenue land - 359 km.
   - Crop/tree compensation- (@5lakhs/km) - Rs. 1795.00 lakh

3. Land Compensation for Tower Base & RoW corridor
   (Considering line corridor of 346 km in 'agricultural land in rural setting' with compensation@15 lakhs/acre & 13 km in Urban/Semi-urban land near Cities/Towns with compensation @ 25 Lakhs/ acre)
   - Rs. 9564.28 lakh

4. EMP Mitigation*
   - Rs 15.00 lakh

Sub Total (A) = Rs. 11,374.28 lakh

B. Implementation Monitoring & Audit

i) Man-power involved for EMP implementation & Monitoring in entire route of Transmission lines (Rs.10,000/- x 359 km)
   - Rs. 35.90 lakh

ii) Independent Audit (LS)** if needed
   - Rs. 10.00 lakh

Sub Total (B) = Rs. 45.90 lakh

Grand Total (A+B) = Rs. 11420.18 lakh

* Most of the EMP related cost included in Contractor scope and is part of overall bidding cost. However, provision for Rs. 15.00 lakhs has been made to meet future contingency, if any

ANNEXURE – 11

FORMAT FOR ENVIRONMENT SAFEGUARD MONITORING REPORT
Environmental Safeguard Monitoring Report

Reporting Period {From Month, Year to Month, Year}
Date {Month, Year}

Title of the Project

Prepared by the {Executing Agency} for the Asian Development Bank

This environmental safeguard monitoring report is a document of the borrower and made publicly available in accordance with ADB’s Public Communications Policy 2011 and the Safeguard Policy Statement 2009. The views expressed herein do not necessarily represent those of ADB’s Board of Directors, Management, or staff.
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1.0 Introduction
   1.1 Brief Project Description
   1.2 Project Progress Status and Implementation Schedule

2.0 Compliance to Applicable Statutory Requirements/National Regulations

3.0 Compliance to Environmental Covenants from the ADB Loan Agreement
   3.1 Schedule 5 Environment (prepare a matrix to show how compliance was achieved)

4.0 Compliance to Environmental Management Plan
   (Refer to the EMP of the Project)

5.0 Safeguards Monitoring Results and Unanticipated Impacts
   (Refer to the Environmental Monitoring Plan and document any exceedence to environmental standards (if any), or any unanticipated impact not included in the EMP and any correction action/measures taken)

6.0 Implementation of Grievance Redress Mechanism and Complaints Received from Stakeholders
   (Summary of any complaint/grievance and the status of action taken)

7.0 Conclusion

8.0 Recommendations(if applicable)
ANNEXURE – 12

ACTION PLAN FOR SAFEGUARDS
ACTION PLAN FOR SAFEGUARDS

1. Based on the above Equivalence and Acceptability Assessments, ADB and POWERGRID agreed to implement the following Action Plan for bringing POWERGRID project implementation into full equivalence with SPS policy principles and attaining fully effective implementation of the ESPP and other components of its environmental and social management system.

2. POWERGRID has been updating its ESPP periodically to reflect changes in legal, policy and international best practices. POWERGRID agreed to update the ESPP as needed whenever there are policy and legislative changes related to environment and social safeguards. To ensure equivalence with the SPS, ADB proposes that covenants be included in the loan agreement for all ADB-financed projects to undertake the following equivalence and acceptability actions.

A. Equivalence Actions

3. As described above, ADB and POWERGRID agreed to incorporate the following requirements:

1. Environment

<table>
<thead>
<tr>
<th>Action Plan</th>
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</thead>
<tbody>
<tr>
<td>a) Assess potential cumulative impacts of power transmission projects and include in the environmental assessment process, where appropriate.</td>
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<tr>
<td>b) Provide data for any Government strategic environmental assessments that are relevant to POWERGRID business and operations.</td>
</tr>
<tr>
<td>c) Include cost estimates for project-specific environmental management measures into the Environmental Assessment Management Plan (EAMP) (nee. Environment Management Plan (EMP), refer ESPP Appendix- XXX-A).</td>
</tr>
<tr>
<td>d) Disclose revisions and updates of the Initial Environmental Assessment Report if any, on the POWERGRID website, and provide relevant environmental information to affected people and other stakeholders, in a timely manner and in a form and language understandable to the affected people.</td>
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2. Involuntary Resettlement

<table>
<thead>
<tr>
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<tr>
<td>a) Monitor each of the three methods of obtaining land (voluntary donation, negotiated purchase, involuntary acquisition). For negotiated purchase the monitoring is to include an assessment of the transparency of the process, confirmation that the agreed price was paid and confirmation by the seller that they were satisfied with the process. For involuntary acquisition the existing monitoring requirements are maintained.</td>
</tr>
<tr>
<td>b) Disclose annual monitoring reports for individual projects in a timely manner and in Hindi and English to the affected people.</td>
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3. Indigenous Peoples

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>a. Design (i) socio-economic benefit and, (ii) capacity development for Indigenous Peoples so that they are culturally appropriate, and gender and intergenerationally inclusive.</td>
</tr>
</tbody>
</table>

1 Environment Assessment Management Plan (EAMP) & “Environment Management Plan (EMP)” are synonyms and hence EAMP should be read as “EMP” in this document.
b. Disclose (i) draft and final Tribal People Development Plan; and (ii) monitoring reports in a timely manner and in a form of language understandable to the affected Indigenous Peoples.
c. Obtain consent from Indigenous Peoples in the case of commercial development of natural resources within tribal lands.

B. Acceptability Actions

4. ADB and POWERGRID agreed to implement the following practices in all projects supported by ADB under POWERGRID’s ESPP in lieu of ADB safeguards.

1. Environment

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<tr>
<td>a) Assign environmental specialist(s) (staff or consultants) to each project for project implementation and monitoring during construction.</td>
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<tr>
<td>b) Undertake stakeholder consultations with representation of women.</td>
</tr>
<tr>
<td>c) Document disclosure and availability of project information in a timely manner and in a form and languages understandable to affected people.</td>
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<tr>
<td>d) Document where EAMP requirements were not met and status of associated corrective actions in site visit reports by environmental specialists.</td>
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2. Involuntary Resettlement

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<tr>
<td>a) Develop procedures on monitoring livelihood impacts of land acquisition.</td>
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<td>b) Use recording and tracking systems in the Grievance Redress Mechanism.</td>
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<tr>
<td>c) Conduct meaningful consultation with affected people.</td>
</tr>
<tr>
<td>d) Disclose monitoring reports, in a timely manner and in Hindi and English to the affected people.</td>
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</table>

3. Indigenous Peoples

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<tr>
<td>Provisions for acceptability actions with respect to safeguards of Indigenous Peoples are not applicable at this stage. While ESPP requires that a project affecting Indigenous Peoples prepare and implement a TPDP, there are currently no POWERGRID projects triggering Indigenous Peoples safeguards under implementation that are mature enough to assess.</td>
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2 Meaningful consultation defines as a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.
MAP – 1

ALTERNATIVE ROUTES OF HIRIYUR-MYSORE 400kV D/C LINE
MAP – 2

ALTERNATIVES ROUTE ALIGNMENT OF TUMKUR(PAVAGADA)-DEVENHALLY(KPTCL) 400KV (QUAD) D/C LINE
FIGURE – 1

400 KV LINE DEPICTING ACTUAL POSITION ALONG WITH ROW AND EXTENT OF DAMAGE
Fig. -1

Actual 400 KV Transmission Line
FIGURE – 1a

400 KV TOWER BASE SHOWING IMPACT ON AGRICULTURAL LAND AND CROP
Fig.-1a

Tower Base showing extent of impact on agricultural land and Crop.
FIGURE – 2

TYPICAL PLAN OF TRANSMISSION LINE TOWER FOOTINGS SHOWING ACTUAL GROUND POSITION AND EXTENT OF IMPACT
INDICATIVE MEASURES

X & Y = 10-15 METERS
a = 300- 450 mm
FIGURE – 2a

SCHEMATIC DIAGRAM INDICATING AREA OF INFLUENCE/IMPACT OF 400KV TRANSMISSION LINE
EXHIBIT – 1

SCHEMATIC MAP SHOWING PROPOSED SUBPROJECTS
Transmission System associated with Solar Parks in Tumkur Ph-II (Part-A)
EXHIBIT – 2

ORGANISATIONAL SUPPORT STRUCTURE FOR EMP & ESPP IMPLEMENTATION
ORGANISATIONAL SUPPORT STRUCTURE FOR ESPP IMPLEMENTATION & MONITORING

Chairman & Managing Director

Company Secretary

Chief vigilance officer

CORPORATE LEVEL

Director (Finance)

Director (Operation)

Director (Projects)

Director (Personnel)

Executive Director (ESMD, CSR & LA)

REGIONAL LEVEL

Executive Director (Regional)

AGM/DGM (PESM)

SITE LEVEL

DGM (Env & Soc)

Env. Officer (Regional)

Soc. Officer (Regional)

Ch. Mgr (Soc)

Dy. Mgr.

Sr. Engg.

Sr. Soc. Officer

Chief Mgr./Mgr

T/L (Sites)

Chief Mgr./Mgr

S/S (Sites)

ENVIRONMENT AND SOCIAL SPECIALIST BEING PLACED ON CONTRACT IF NEEDED.