

# INTEGRATED SAFEGUARDS DATA SHEET

## CONCEPT STAGE

Report No.: ISDSC16748

**Date ISDS Prepared/Updated:** 22-Mar-2016

**Date ISDS Approved/Disclosed:** 31-Mar-2016

### I. BASIC INFORMATION

#### A. Basic Project Data

<b>Country:</b>	Pakistan	<b>Project ID:</b>	P154987
<b>Project Name:</b>	National Transmission Modernization I Project (P154987)		
<b>Task Team Leader(s):</b>	Anh Nguyet Pham, Anjum Ahmad		
<b>Estimated Appraisal Date:</b>	10-Oct-2016	<b>Estimated Board Date:</b>	15-Mar-2017
<b>Managing Unit:</b>	GEE06	<b>Lending Instrument:</b>	Investment Project Financing
<b>Sector(s):</b>	Transmission and Distribution of Electricity (100%)		
<b>Theme(s):</b>	Infrastructure services for private sector development (90%), Other public sector governance (10%)		
<b>Financing (In USD Million)</b>			
<b>Total Project Cost:</b>	493.00	<b>Total Bank Financing:</b>	425.00
<b>Financing Gap:</b>	0.00		
<b>Financing Source</b>			<b>Amount</b>
Borrower			68.00
International Bank for Reconstruction and Development			425.00
Total			493.00
<b>Environmental Category:</b>	B - Partial Assessment		
<b>Is this a Repeater project?</b>	No		

#### B. Project Objectives

The proposed Project Development Objective (PDO) is to increase the availability, reliability and efficiency of selected segments of the national transmission system in Pakistan.

#### C. Project Description

1. The proposed project would invest in high-priority transmission infrastructure, information communication technology (ICT) and technical assistance (TA). Infrastructure investments would be

either transmission lines, transmission substations or a combination of the two. The project will create new assets or rehabilitate existing parts of the system. The subprojects would be selected based on system planning conducted by NTDC that identifies the highest priority improvements. The ICT investment would support better corporate and operations management, while the TA would enable NTDC to implement the project. The project is envisaged to consist of three components as described below.

- Component A: Upgrading and Expanding of the Transmission Network (estimated cost \$448 million, of which \$380 million IBRD loan and \$68 million NTDC counterpart funds). The component would include (a) upgrading, expanding and rehabilitating of selected existing 500 and 220 kV power substations and associated lines; and (b) constructing of new 500 and 220 kV substations and transmission lines. If NTDC decides to start operating at 765kV, currently under consideration, subprojects at that voltage will also be eligible.
- Component B: Deployment of Enterprise Resource Planning (ERP) for NTDC (estimated cost \$25 million, all IBRD loan). The component includes implementation of the information and communication (ICT) infrastructure modernization phase for NTDC, followed by development and deployment of an ERP system aimed at strengthening the company's management capabilities through the use of an integrated ICT system to facilitate its financial, human resources management, inventory and asset management, and metering data management. The component includes the procurement of software licenses, hardware and consulting services for implementation support, change management and ICT capacity building and strategic sourcing to ensure the sustainability of the ERP system.
- Component C: Project Management, Technical Assistance, and Capacity Building (estimated cost \$20 million, all IBRD loan). The component includes (a) a project implementation support consultant; and (b) capacity building program for NTDC to plan, invest and operate the upgraded national transmission grid.

2. Detailed cost estimates for each component and financing arrangement will be finalized during project preparation.

3. Component A is based on a framework approach to allow flexibility. The proposed subprojects will be prepared and implemented in two groups. Group I includes all the subprojects that are given highest priority, have completed feasibility studies and required safeguards documentation. Subprojects in Group I will be appraised during preparation and the bidding documents for goods and works will be ready by the time of negotiations. Group II consists of the remaining potential subprojects the need of which are identified in the NTDC Least Cost Development Plan (LCDP) but not the exact locations and details. Each proposal for a subproject brought forward for financing includes the feasibility study, economic analysis, safeguards plans, prepared in accordance with the Project's safeguards frameworks. Financing for each subproject will be made available when the proposal complies with the eligibility criteria, on first come first approved basis until all funds allocated to the component has been committed. This will ensure flexibility, allowing the use of cost savings or shifting of funds between subprojects and creating incentive for timely implementation.

4. Subprojects under Group II are preliminarily identified with NTDC but subject to change and require more precise identification and definition. Changing priorities mean that some subprojects may be dropped and others substituted. Precise siting or alignments are not likely to be finalized during preparation. Subprojects in Group II would be selected based on key parameters or eligibility criteria. A resettlement policy framework (RPF), and an environment and social management framework (ESMF) providing guidance for preparation of safeguards plans for subprojects in Group

II will be prepared satisfactory to the Bank, consulted upon with interested stakeholders and disclosed before appraisal. A sample of Eligibility Criteria for subprojects is provided below; this would be discussed and finalized during preparation:

- Sub-project is consistent with the LCDP;
- Sub-project will contribute to the PDO;
- Technical design of the sub-projects meet Pakistan Technical Standards and feasibility requirements;
- Subproject has at least EIRR of 12%, calculated using a methodology acceptable to the Bank;
- Subproject safeguard instruments (such as environmental and social impact assessment (ESIA) and resettlement action plan (RAP)) prepared in accordance with ESMF and RPF satisfactory to the Bank, consulted upon with stakeholders and disclosed;
- All necessary clearances/approvals for implementing the sub-project, including environmental licenses have been given by the relevant Pakistani authorities;
- Procurement and implementation plans, satisfactory to the Bank have been prepared and approved.

5. Component B will also be sequenced. The first phase will establish a robust ICT infrastructure across NTDC and a pilot implementation of the ERP system. This will include implementing a robust corporate data center, a disaster recovery center, Wide Area Network (WAN) and Local Area Networks (LAN) linking all NTDC corporate facilities and staff nationwide. Phase I will be appraised by the Bank and has the bidding documents for goods and works ready by the time of negotiations. The second phase, which focuses on the expansion and rollout of the ERP nationwide in NTDC, will be prepared during implementation and approved for financing on the basis of eligibility criteria to be discussed and finalized during the project preparation.

#### **D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)**

6. The provisional list of subprojects under Component A suggests that subprojects are scattered in various urban, peri-urban and rural areas in Pakistan. Most of subprojects are located in Punjab Province, while a few subprojects are located in the provinces of Sindh, Khyber Pakhtunkhwa (KP), Balochistan and in the Islamabad Capital Territory. The majority of the sub stations will be located near the load centers, which are urban and peri-urban areas. Component B and C are technical assistance activities which will be carried out within the existing premises of NTDC and can be considered to have no safeguards impacts.

7. In capacity upgrading (augmentation) of existing substations, the key activity is to install additional new 500/220kV or 220/132 kV power transformers, reactors and associated equipment. In rehabilitation of existing substations, existing 500 kV or 220 kV transformers and associated equipment will be replaced with new ones of higher capacity. Rehabilitation also includes conversion of existing substations with open air insulated switchyard (AIS) to more compact and indoor gas insulated substations (GIS). This activity does not require land acquisition and will be implemented within the premises of these substations. Some substations commissioned before 1970s, may contain polychlorinated biphenyls (PCBs). Safe disposal of replaced equipment will require adequate mitigation measures to ensure environmental protection and avoiding contamination of natural resources like water and air. Health, safety and construction related environmental impacts need to be identified in the EMP and adequately implemented. While most of upgrading subprojects do not require land acquisition, some subprojects in Group II may require limited additional pieces of land, which is normally adjacent to the existing substations.

8. New 500 kV and 220 kV substations typically have two to four power transformers and associated equipment at 500, 220 and 130 kV, a control room and ancillary equipment.

The key components in 500 and 220 kV power substation are; (i) switchyard bay, (ii) control building, (iii) residential houses for staff with water supply and sanitation facilities (iv) fencing and landscaping, and (v) short access road. Typically a new substation requires short transmission lines connecting it to the existing transmission network. A new substation requires an enclosed, leveled site free of any vegetation or human habitation (except for substation operators), typically 50-60 acres for a 500 kV substation and 30-40 acres for a 220 kV substation. 750/500/220 kV Islamabad West Substation requires about 150 acres. New substations may also require additional permanent and temporary land acquisition for 500 or 220 kV transmission connections or upgrading or new existing access roads. New subproject sites can be, and normally are, selected flexibly within a certain area to minimize the scale of such structures and impacts on environment or land acquisition. ESIA for each subproject will ensure that adequate environmental management programs are developed and implemented.

9. Site visits and screening undertaken by the task team for Group I subprojects has determined that no natural, or critical habitats, including forests, will be impacted. However, as NTDC can update, replace or propose new subprojects in the second group, these subprojects may be located in areas that have impacts on natural habitats or forest. During preparation, these potentials will be identified and sufficient mitigation measures will be included in the ESMF. Most project activities will take place at the existing sites of the substations or in the vicinity of the existing substations. There is flexibility in the location of new substations and lines. Therefore, impacts on Cultural Resources can be avoided or minimized in design. The ESMF will provide a process for screening out projects with significant impacts, or incorporating a PCR management plan into the EMP or ESIA for minor impacts. All EMPs will contain a chance find procedure.

10. No ne of potential subprojects of Group I are located in areas where indigenous communities live. However, new subprojects in the second group may pass through or be located in the areas home to indigenous people (IP). The preparation will clarify potential impacts on IP and an Indigenous Policy Framework will be prepared if the policy is triggered.

10. Each subproject in Group II will be evaluated against the project safeguard checklist in the ESMF. No subproject will be approved for funding, if any of the following could occur:

- significant degradation or conversion of natural habitats and/or forests in protected areas, proposed protected areas or areas that are considered of special ecological significance.
- temporary or permanent relocation or any other type of impact on physical cultural resources known to be of local, regional or national significance based on national or Provincial lists, proposed national or Provincial lists and/or identified during public consultation with local affected groups.
- any physical cultural resources considered especially important or sensitive particularly to local groups (e.g. gravesites) are located on the site.
- temporary or permanent reduction or degradation to the ecosystem function of, or resources within, a production, conservation or multiple use forest.

### **E. Borrowers Institutional Capacity for Safeguard Policies**

11. NTDC will be the implementing agency for the Project. Currently, NTDC is working with the Bank under the on-going CASA-1000 project and the transmission line to evacuate Dasu HPP, for which a project management unit (PMU) was established and is functioning with support of international consultants. Experience of NTDC investment projects with ADB and JICA in recent

years shows evidences of weak institutional capacity, procurement and financial management challenges and delay in project completion.

12. A dedicated PMU headed by a Project Director will be established. It will be responsible for project preparation and implementation. The PMU would be built on the existing PMU for the transmission connection for Dasu HPP as a single PMU for all WB loans to NTDC. It would be provided with adequate technical, procurement, financial management, environmental and social staff. The PMU would coordinate with various departments of NTDC but would work independently in design and implementation of the project.

13, NTDC has a designated Environment and Social Impact Cell (E&SIC) which is responsible for environmental and social assessment and monitoring on behalf of the organization. The E&SIC oversees preparation of environmental assessments, land acquisition plans, liaises with the relevant EPA's and manages NTDC's E&S legal compliance.

14. Project Implementation Support consultant with adequate experience in environment and social safeguards is being recruited to support NTDC during construction and to prepare subprojects for Group II.

#### **F. Environmental and Social Safeguards Specialists on the Team**

Javaid Afzal (GENDR)

Salma Omar (GSU06)

## **II. SAFEGUARD POLICIES THAT MIGHT APPLY**

<b>Safeguard Policies</b>	<b>Triggered?</b>	<b>Explanation (Optional)</b>
Environmental Assessment OP/BP 4.01	Yes	The proposed project will help in augmenting/ rehabilitating select transmission lines throughout the country and upgrade/construct new substations through NTDC's prioritized investments. These activities may have temporary, reversible and short to medium term environmental impacts and can be adequately mitigated through a well-planned environmental management and mitigation plans. Based on the proposed activities and likely environmental impacts, which are generally construction related, the project has been rated as category B. For appraisal, ESIA and EMP will be prepared for known sites and an ESMF will be prepared to guide Group II subprojects during project implementation.
Natural Habitats OP/BP 4.04	TBD	No subproject under Group I impacts or passes through any natural or critical habitat. Some of the new transmission lines in Group II may pass through natural or critical habitat. This will be screened during preparation and if there is a potential for natural habitats to be affected, then the policy will be triggered and the ESMF will include screening

		checklists and suitable mitigation methods. Projects with significant potential impacts can be screened out.
Forests OP/BP 4.36	TBD	No subproject under Group I impacts or passes through forests. Some of the new transmission lines in Group II may pass through forests. This will be screened during preparation and if there is a potential that forests will be adversely impacted, then the policy will be triggered and the ESMF will include screening checklists and suitable mitigation methods. Projects with significant potential impacts can be screened out.
Pest Management OP 4.09	No	NNTDC does not use chemicals or pesticides for vegetation removal or land clearing under the transmission lines.
Physical Cultural Resources OP/BP 4.11	Yes	Because project activities will take place at the existing sites of the substations, there will be no impacts on Physical Cultural Resources from Group I subprojects. There is flexibility in the location of new substations and lines. Therefore, impacts on Cultural Resources can be avoided or minimised in design for new subprojects under Group II. The ESMF will provide a process for screening out projects with significant impacts, or incorporating a PCR management plan into the EMP or ESIA for minor impacts. All EMP will contain a chance find procedure.
Indigenous Peoples OP/BP 4.10	TBD	No subprojects in Group I are located in areas where IP live. Screening of subprojects of Group II will confirm the likely impacts on IP. If there is the potential that IP could be adversely affected the policy will be triggered and an Indigenous People's Framework will be prepared for appraisal.
Involuntary Resettlement OP/BP 4.12	Yes	Subprojects involving new substations will have low-intensity impacts involving some temporary or permanent loss of land to substations, transmission tower foundations, and line stringing.
Safety of Dams OP/BP 4.37	No	The project does not involve any works in, on, or around any dam so this policy is not triggered.
Projects on International Waterways OP/BP 7.50	No	The project does not involve any works on any of the river/international waterways as defined in the Bank policy.
Projects in Disputed Areas OP/BP 7.60	No	The project is not located in disputed areas as defined in the Bank's policy.

### III. SAFEGUARD PREPARATION PLAN

<sup>1</sup> Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.

- A. Tentative target date for preparing the PAD Stage ISDS:** 17-Jun-2016
- B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing<sup>1</sup> should be specified in the PAD-stage ISDS:**
- Environmental and Social Impact Assessment and Environment Management Plans for Group I subprojects: March --April 2016
- Environment and Social Management Framework: March-April 2016
- Resettlement Planning Framework: March-April 2016
- Indigenous People's Framework (if required): March-April 2016

#### IV. APPROVALS

Task Team Leader(s):	Name: Anh Nguyet Pham, Anjum Ahmad	
<b><i>Approved By:</i></b>		
Safeguards Advisor:	Name: Maged Mahmoud Hamed (SA)	Date: 23-Mar-2016
Practice Manager/ Manager:	Name: Julia Bucknall (PMGR)	Date: 31-Mar-2016