Environmental Assessment and Review Framework

September 2013

MFF 0026-AFG: Energy Sector Development Investment Program – Tranche 5

Prepared by Fichtner GmbH for Da Afghanistan Breshna Sherkat of the Government of Afghanistan for onward submission to the Asian Development Bank.

LIST OF ACRONYMS

ADB	Asian Development Bank
AP	Affected persons
DABS	Da Afghanistan Breshna Sherkat
EA	Environmental Act
EA	executing agency
EARF	environmental assessment and review framework
EIA	environmental Impact assessment
EMA	external monitoring agency
EMP	environmental monitoring plan
ESU	Environment and Social Unit
FI	financial intermediary
IEE	initial environmental examination
IUCN	International Union for Conservation of Nature
MEW	Ministry of Energy and Water
MFF	Multitranche Financing Facility
NEPA	National Environmental Protection Agency
NGO	non-government organization
NOC	no-objection certificate
PMU	Project Management Unit
RRP	Report and Recommendation of the President
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development

TABLE OF CONTENTS

Environmental Assessment and Review Framework

I. INTRODUCTION

1. The Islamic Republic of Afghanistan (Afghanistan), with Da Afghanistan Breshna Sherkat (DABS) as the executing agency (EA), has requested the financial assistance of the Asian Development Bank (ADB) to implement the Energy Sector Development Investment Program (the Program). Finance is provided through a multitranche financing facility (MFF) comprising discrete subprojects to be implemented sequentially over 5 years indicatively under several tranches. The Program includes physical and non-physical subprojects.

2. The subprojects under the Tranche-1 of the Program include: (i) NEPS 220kV transmission line (Kunduz - Taluqan) including construction of a 67 km double circuit 220kv transmission line linking Taluqan to Kunduz, (ii) NEPS distribution network in Kunduz and Baghlan, development and rehabilitation of 20kV and low voltage networks for 59,000 households and 3,500 small businesses in Kunduz and Baghlan cities, (iii) Rehabilitation of Shiberghan gas wells, rehabilitation of dilapidated gas wells in Sheberghan to enable extraction of domestic gas to power future gas fired power generation in Jawzjan province, and (iv) operation and maintenance of North East Power System (NEPS) 220 kV.

3. The subproject under the Tranche-2 includes (i) construction of approximately 30 km of double circuit 220 kV transmission line from existing Chimtala substation to the new Kabul Southwest substation, (ii) Construction of new Kabul Southwest substation (220/110/20 kV), (iii) Development of a distribution network in South West Kabul comprising 65 km of medium voltage (MV - 20 kV) lines and 500 km of low voltage (LV – 0.4 kV) lines, and (iv) Supply of 100 distribution transformers for the Kabul distribution network.

4. Physical component of the Tranche-3 includes: (i) rehabilitation and upgrading of hydropower plant with 4.8 MW installation capacity, (ii) replacement of 30 km of 3.3 kV distribution lines to 20 kV line, and (iii) replacement and new installation of end-user meters.

5. Physical component of the Tranche-4 is (i) commissioning of 108 km 500 kV transmission line from AFG/TKM border to Andkhoy to Sheberghan, (ii) commissioning of 142 km 220 line from Sheberghan to Mazar-e-Sharif, (iii) commissioning of 220/20 kV substations at Andkhoy and Sheberghan and expansion of 220 kV substation at Mazar-e- Sharif, (iv) commissioning of 220/20 kV substations at Pul-e-Alam and Gardez, and (v) commissioning of 10,000 new power connections at Pul-e-Alam and 10,000 new power connections in Gardez city

6. A Tranche-5 is foreseen. This is envisioned to be a Pul-e-Khumri high voltage substation.

7. This Environment Assessment and Review Framework (EARF) was prepared by DABS to guide the preparation of Environmental Impact Assessment (Initial Environmental Examination (IEE) in the case of Category B projects) for subprojects under the Program in a fashion fitting the requirements of Afghan legislation and the ADB's safeguard policies. This EARF outlines provisions, procedures, and institutional requirements for preparing/implementing IEE for Category B subprojects.

II. REVIEW OF LEGAL FRAMEWORK

8. The subprojects of the MFF will be screened, classified, and assessed based on the ADB Safeguard Policy Statement (SPS) (2009) and ADB Operations Manual (2010) as well as Government of Afghanistan's Administrative Guidelines for Preparation of Environmental Impact Assessments, March 2007 (Version Draft - 2), as part of the Afghan Environment Act 2005, and be reviewed and approved by ADB.

National Legal Framework

9. Following national environmental regulations, guidelines and policies apply in Afghanistan:

- Environmental Law, 2006, Islamic Republic of Afghanistan;
- Administrative Guidelines for the Preparation of Environmental Impact Assessments, March 2007 (Draft -2): National Environmental Protection Agency (NEPA), Islamic Republic of Afghanistan; and
- Environmental Impact Assessment Policy – "An Integrated Approach to Environmental Impact Assessment in Afghanistan", August 2006, National
- Finalization of environmental assessment and control regulation.
- Development of wildlife law.
- Noise pollution regulation.
- Convention and protection of migratory birds.
- Development of forest laws and its enforcement.
- Development of a regulation and guideline to implement this forest law.
- Protected areas regulation.
- Species trade regulation.
- Hunting regulation.
- Community based forestry and rangeland policy and strategy.
- Air quality regulation.

10. During 2009 numerous policies including a national pollution control policies, national waste management policies and standards including air quality, pollution control and vehicle emission standard were developed and translated. Now all these policies are enforced.

11. The National Environmental Protection Agency (NEPA) has overall responsibility to address policy and legal issues as well as environmental management in the country in coordination with other related departments. NEPA reports directly to the Office of the President. NEPA in coordination with other government officers and external agencies is in the process of drafting environmental regulations and guidelines for the environmental management in the country.

National Environmental Assessment Regulations

12. The Government's regulation on environmental impact assessment is based on the Environmental Act of Islamic Republic of Afghanistan (Gazette No. 912), dated 23 Jadi, 1384 (25 January, 2007). The National Environmental Protection Agency (NEPA), as an independent institutional entity, is responsible for coordinating and monitoring conservation and rehabilitation of the environment, and for implementing this act. Article 16 and 17 of Chapter 3 of the Environmental Act describes the process of preparing a preliminary assessment, an environmental impact statement and a comprehensive mitigation plan to be conducted by the proponent of each project. Article 21 mentions public consultation is

required for all the projects. Article 18 describes the approval procedure of environmental impact assessment. The NEPA will appoint an EIA Board of Experts to review, assess and consider applications and documents submitted by the proponent. Acting on the advice of the EIA Board of Experts, NEPA shall either grant or refuse to a grant permit in respect of the project. A permit granted will lapse in the event that the proponent fails to implement the project within three years of the date of which the permit was granted. Article 19 describes the appeal procedure. Any person may, within thirty (30) days of the granting or refusal of a permit, appeal the decision to the Director-General of the NEPA. The Director-General shall review the appeal application and thereafter make an appropriate decision. Should the appellant wish to appeal the Director-General's final decision, the matter shall be referred to the relevant court.

ADB Requirements

13. The following ADB guidelines are applicable:

- Safeguard Policy Statement (SPS), June 2009, effective since January 2010;
- Operations Manual (OM) with relevant Bank Policies (BP), March 2010.
- Public Communications Policy: Disclosure and Exchange of Information, 2011

14. The objectives of ADB's environmental safeguards are to:

(i) avoid adverse impacts of projects on the environment and affected people, where possible;
(ii) minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible;
(iii) help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

15. ADB's SPS (2009) sets out the policy objectives, scope and triggers, and principles for three key safeguard areas: the environment, indigenous peoples, and involuntary resettlement.

16. Considering potential environmental impacts of the future subprojects, with specifics below in this Framework detailing the relevant ADB and Afghanistan requirements and regulations, the following criteria will be adopted for selection of the future subprojects:

(i) The subprojects shall only involve activities that follow all the government regulations.
(ii) The subproject should not involve activities located in or near the core zone or, as much as possible, the buffer zone of designated wild-life sanctuaries, national parks, and other protected areas.
(iii) The subproject should as much as possible not involve activities located within or in the vicinity of ecologically sensitive areas as recognized by the Government, or any area that is internationally significant (such as protected wetland designated by the Ramsar Convention).
(iv) The subproject should as much as possible not include any stretch that passes through any cultural heritage designated by the Government or by international agencies such as UNESCO.
(v) The subproject should avoid or at least minimize creating resettlement needs and fully compensate APs for all losses.
(vi) According to ADB SPS 2009 activities listed in ADBs Prohibited Investment Activities List (Annex 1) will not be financed.

17. Based on ADB's SPS 2009, subprojects for this MFF are subject to the following requirements:

(i) Screening and categorization of subprojects have to be conducted at the earliest stage of subprojects preparation when sufficient information is available for this purpose. Requirement for environmental assessment of each subproject depends on its potential impacts. Based on these potential impacts, a subproject will be classified in accordance with the Government's environmental legislation and ADB's SPS as follows:

Any subproject categorized as category A under ADB's SPS (2009) is excluded from financing;

a. Category "A" for environment means that the subproject has significant adverse environmental impacts that are irreversible, diverse, or unprecedented;
b. Examples of the projects to be considered for Category A include those that (a) pass through or is located less than 100 meter from any designated wild-life sanctuaries, national parks, other sanctuaries, botanical garden or area of internationally significance (e.g. protected wetland designated by the Wetland Convention), or (b) passes through any cultural heritage designated by UNESCO
c. requires a complex mitigation measure, which needs to be prepared through an in-depth assessment of the impacts and detail study to prepare mitigation measures;
d. involves establishment of by-pass or new alignment, passing through any ecologically sensitive areas (hilly mountainous, forested area, wetlands, nearby estuarine, or other important ecological function areas).

(ii) Other subprojects with physical investments that do not fall under the above classification are classified as Category "B" for environment subprojects. For each category "B" subproject, an Initial Environmental Examination (IEE) including EMP is required.

(iii) IEE preparation includes assessment of all impacts and risks associated with the construction of transmission lines and substations including ancillary facilities as access roads, (temporary) bridges, construction camps etc. It also includes areas and communities that are directly or indirectly affected by the project components. Environmental impacts and risks will also be analyzed for all relevant stages of the project cycle, including preconstruction, construction, operations, decommissioning, and post-closure activities such as rehabilitation or restoration.

(iv) As the transmission line sub projects may have impacts on resettlement and vulnerable people a resettlement plan will be prepared that is commensurate with the extent and degree of the impacts. The degree of impacts shall be determined by (i) the scope of physical and economic displacement, and (ii) the vulnerability of the affected persons.

(v) The impact on indigenous people of transmission lines will need to be assessed for each subproject by evaluating (i) the magnitude of the impact on Indigenous Peoples' customary rights of use and access to land and natural resources; socioeconomic status; cultural and communal integrity; health, education, livelihood systems, and social security status; or indigenous knowledge; and (ii) the vulnerability of the affected Indigenous Peoples. If affected persons are assessed as vulnerable they shall receive special support.

(vi) The environmental assessment of subprojects shall take into account the difficult conflict setting in Afghanistan and include de-mining and other security issues.

(vii) The implementation of EMP shall be ensured by DABS-PMO and where relevant by the Construction Contractor during the construction phase and by the operator (DABS) during the operation phase.

(viii) Monitoring of the EMP implementation shall be done by an internationally experienced EHS Auditor within the Project Implementation Consultants contract.

III. ANTICIPATED ENVIRONMENTAL AND SOCIAL IMPACTS OF SUBPROJECTS

18. In the context of Afghanistan subprojects related to electricity transmission are generally located or traverse either one (or both) of two types of landscapes according to which distinct set of impacts is to be anticipated. One type of landscape is a flat semi-arid to desert steppe with only seasonal rivers which is very sparsely populated and only partly usable for agriculture (Type 1). The other types of landscape are mountainous regions, with steep and sometimes forested slopes, and fertile river valleys, in which the population is concentrated in small villages (Type 2).

19. In Type 1 landscape, impacts are generally lower, as the line will not cross important forest areas and erosion will be less important than in steep mountain slopes. Wind erosion (sand deflation) should be mitigated. Settlements can mostly be bypassed. However, some LAR issues may occur and need to be fully compensated. In the flat terrain, construction does not involve difficult access roads, blasting of rocks and general difficulties of tower erection and stringing. However, river crossings (damages of river beds and water pollution) as well as the possibility of cultural sites shall be carefully assessed. Agriculture and grazing practices shall be allowed under the line, whereas permanent settlements shall not be allowed in the line corridor for safety reasons (EMF).

20. In Type 2 landscape (mountainous areas) impacts are more pronounced due to the difficulties of construction and reduced possibilities to avoid impacts by shifting the line routing. There are more forested areas and Protected Areas, which need to be avoided. High mountain passes and steep slopes require construction of longer and more difficult access roads that are not easily restored to previous conditions. Anti-erosion measures, as well as avalanche protection will be necessary. Seasonal changes in water level of rivers as well as the possibility of flash floods needs to be considered. Bird deflectors at conductors are important if the line routing crosses important bird migration corridors. On the other hand, due to steep slopes, over-spanning of valleys will be possible. This would enable settlements to remain in ROW if the distances below the conductors are considerable (more than 7m according to EMF limit values, see below) and thus reduce resettlement impacts.

21. Common for both types of landscape in Afghanistan is that presently they form the background for a long term conflict setting. Security issues are prevalent, the necessity of land mine assessment and possibly de-mining as well as social conflicts need to be taken into account.

22. Subprojects of the present MFF are related to electrical power infrastructure rehabilitation, transmission and distribution.

23. Impacts of the construction of high voltage transmission lines and converter stations / substations can be separated in permanent and temporary impacts. Main potential impact areas are:

- Project Siting / Line Routing (Crossing or adjacent to Cultural Heritage Site, Protected Area, Wetland, Forest Land, Special Area for protecting biodiversity etc.)

- Clearing of all vegetation in Right of Way (ROW) higher than 1 m (during land survey) i.e. cutting of trees / forests in ROW (avoidance of chemical and slash and burn practices)
- Resettlement Impacts (Removal of houses from ROW)
- Impacts on Indigenous communities or vulnerable groups.
- Land Acquisition and damage of agricultural land at tower foundations, substation sites, access roads
- Construction of access roads
- Damages to agriculture during construction of towers and stringing procedure
- Disturbance of Flora and Fauna (no herbicides shall be used, no hunting, no slash & burn during land survey, construction and maintenance of ROW)
- Soil and Erosion (i.e. steep slopes in mountain areas, sand deflation in arid areas)
- Water pollution (i.e. oil from vehicles)
- Noise (construction noise, traffic)
- Health and Safety Issues (i.e. Sanitation, Electrocution risks, Accidents etc.)
- Liquid and Solid Waste
- Greenhouse Gases (GHG) (i.e. SF6)
- Electric and Magnetic Fields (EMF)
- Hazardous Substances (i.e. PCB from Switchyards and Transformers)
- Land Mines and other security issues
- Social conflicts (due to influx of workers)

Definition of ROW and EMF

24. The Right of Way (RoW) corridor should be 60 m for a single circuit 500kV line and 40m for a single circuit 220kV line. Complete clearing would be required in the centre strip of 25 m respectively 15 m in dense forest allowing for stringing of conductor.

25. Outside this narrow stringing corridor but still inside the RoW all vegetation above 3m height needs to be cleared including possible tall danger trees near the RoW corridor. In the mostly semi-arid or desert landscape of Afghanistan ROW clearing can be limited to a minimum.

26. As a precautionary measure, other projects have adopted an internationally accepted standard ROW width of 60 m along their high voltage transmission lines (500 kV); for comparison 40 m (220 kV). All habitation and structures are excluded from the ROW to ensure safety of people and animals from EMFs as well as from direct electric shocks and “flashover”. No permanent human presence shall be allowed within the ROW.

27. In the frequency range up to 1 kHz, the general public reference levels for electric fields are one-half of the values set for occupational exposure. The value of 10 kV m-1 for 50-Hz or 8.3 kV m-1 for a 60-Hz occupational exposure includes a sufficient safety margin to prevent stimulation effects from contact current under all possible conditions. Half of this value was chosen for the general public reference levels i.e. 5 kV m-1 for 50 Hz or 4.2 kV m-1 for 60 Hz, to prevent adverse indirect effects for more than 90% of exposed individuals.

28. Relevant international guidelines are:

- IFC Environmental, Health, and Safety Guidelines for Electric Power Transmission and Distribution, April 2007
- ICNIRP Guidelines for Limiting Exposure to time-varying Electric, Magnetic, and Electromagnetic Fields (UP TO 300 GHz) (International Commission on Non-Ionizing Radiation Protection);

- CIGRE 1998: High Voltage Overhead Lines – Environmental Concerns, Procedures, Impacts & Mitigation.

29. From similar projects it can be stated that the relevant internationally accepted limit values for the public will not be exceeded if the minimum safety distance of 8 m to the nearest conductor is kept as recommended. Regular EMF Measurements are recommended.

IV. PUBLIC CONSULTATION, DISCLOSURE AND GRIEVANCE REDRESS MECHANISM

30. According to ADB SPS 2009 meaningful consultation is 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.

31. For all subprojects DABS will provide relevant environmental information in a timely manner, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. For illiterate people, other suitable communication methods will be used. Intensive public consultation shall be made during the final line routing (land survey) that precedes construction, especially during the preparation of LARP.

32. DABS will ensure that ADB be given access to undertake environmental due diligence for all subprojects. However, DABS has the main responsibility for undertaking environmental due diligence and monitoring the implementation of environmental mitigation measures for all subprojects. The due diligence report as well as monitoring reports on implementation of the environmental management plan needs to be documented systematically and be available to the public, if requested.

33. Information to Affected People and other Stakeholders. DABS and ADB agree that in accordance with the ADB's SPS, ADB shall post on its website the following documents submitted by DABS:

(i) a draft environmental assessment and review framework, before appraisal;
(ii) the final initial environmental examination (IEE), upon receipt by ADB;
(iii) a new or updated EIA or IEE, and a corrective action plan, if any, prepared during project implementation;
(iv) environmental monitoring reports, upon receipt by ADB.

34. DABS will ensure that public consultations, particularly with project affected persons, are undertaken adequately during the IEE preparation process for the future subprojects.

35. Grievance Redress Mechanism. DABS will need to establish and maintain a grievance redress mechanism to receive and facilitate resolution of affected peoples' concerns and grievances about the borrower's/client's social and environmental performance at project level. Grievance redress mechanism (GRM) will be implemented by DABS in cooperation with all provinces and other relevant local administrations concerned with subprojects. A grievance committee for each subproject shall include representatives of the

Implementing Agency / Executing Agency, the Construction Contractor, the Local Administration, NEPA and Civil Society Organisation (CSO). The GRM will be open to all project affected people, regardless of the nature of their complaint and should be gender responsive, culturally appropriate, and readily accessible to all segments of the affected people at no costs and without retribution.

V. ENVIRONMENTAL MANAGEMENT PLAN

36. ADB safeguards require that the borrower prepare an environmental management plan (EMP) that addresses the potential impacts and risks identified by the environmental assessment. The EMP will include the proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Additionally, the contractor will prepare site specific EMPs.

37. A tentative Environmental Management Plan (EMP) has been prepared based on ADB Guidelines as presented in the Annex 3. The EMP will be updated as subprojects are identified and new tranches are prepared. The basis for preparation of the EMP is as follows:

(i) To define the environmental management principles and guidelines for the design, construction and operational phases of the subprojects.
(ii) To describe practical mitigation measures that must be implemented at all subproject sites to prevent or mitigate negative environmental impacts.
(iii) To establish the roles and responsibilities of all parties involved in the implementation of environmental controls.

38. Main areas for mitigation according to different project phases are:

- **Pre–construction**: updating of EMP during detailed design phase and inclusion of environmental clauses in bid and contract document, avoiding resettlement via deviations / by-passes of the line routing around settlements, respects of safety distances to airports (3 km), roads (7.5 m), river crossings (7m) distance to conductors, 50m of towers)
- **Construction:** avoidance of slash and burn and chemical site clearance, removal of houses from 60m ROW (5500kV) and 40m ROW (220 kV) resettlement and full compensation, siting of work sites and workers camps, noise, waste disposal, traffic management, workers safety, protection of physical cultural resources, handling of SF6 (if applicable); handling of hazardous substances, implementation of grievance mechanism etc.
- **Operation:** Operation and Maintenance (O&M) practice and environmental effects including soil erosion, re-plantation of all unused work areas, control of soil contamination, surface water and EMFs

39. Detailed budgets for environmental monitoring during construction phase will be prepared for each subproject by the PIC. The budget will be included in the overall cost estimates for subprojects. DABS will keep advance provisional budget in its annual plan for environmental management during operation phase. The environmental performance of contractors (implementation of Operations Manual, EMP and EHS guidelines will be monitored with an independent EHS Audit.

40. ADB will carry out the following monitoring actions to supervise project implementation:

(i) conduct periodic site visits for projects with adverse environmental or social impacts;
(ii) conduct supervision missions with detailed review by ADB's safeguard specialists/officers or consultants for projects with significant adverse social or environmental impacts;
(iii) review the periodic monitoring reports submitted by borrowers/clients to ensure that adverse impacts and risks are mitigated as planned and as agreed with ADB;
(iv) work with borrowers/clients to rectify to the extent possible any failures to comply with their safeguard commitments, as covenanted in the legal agreements, and exercise remedies to re-establish compliance as appropriate; and
(v) prepare a project completion report that assesses whether the objective and desired outcomes of the safeguard plans have been achieved, taking into account the baseline conditions and the results of monitoring.

41. An independent, internationally experienced consultant should monitor implementation of EMP and conduct an EHS Audit in regular intervals.

VI. INSTITUTIONAL ARRANGEMENT AND RESPONSIBILITIES

Institutional Arrangement

42. The environmental assessment and review procedure described in this EARF involves distinct processes, dynamics and different agencies. The agencies involved in the planning and implementation of resettlement and rehabilitation program are DABS as the EA and the Provincial and District governments. The PMO with the support of the management consultant and the implementation consultant will co-ordinate all activities related to the preparation, implementation and monitoring of the environmental management. All activities will be coordinated with the relevant local government agencies and community *shura* in which the subprojects will be implemented.

43. The National Environmental Protection Agency (NEPA), as an independent institutional entity, is responsible for coordinating and monitoring conservation and rehabilitation of the environment. NEPA will appoint an EIA Board of Experts to review, assess and consider applications and documents submitted by the proponent. Acting on the advice of the EIA Board of Experts, NEPA shall either grant or refuse to grant a permit. A permit granted will lapse in the event that the proponent fails to implement the Project within three years of the date of which the permit was granted. NEPA should also be consulted if complicated issues arise during construction and operation stages.

44. DABS, the Executing Agency manages the project through the Project Management Office (PMO) with responsibilities for environmental safeguard compliance defined below. Subprojects will be implemented by selected Construction Contractors (CC) as turnkey contracts in several lots (i.e. for transmission line components, substations and local distribution) to be determined for each subproject.

45. The CC implements the EMP during the construction phase.

46. The PMO further hires a Project Implementation Consultant (PIC). CC and PIC are hired in an international bidding process.

47. The responsibilities of PIC include the task of EMP monitoring (in coordination with NEPA) and contracting an internationally experienced EHS Auditor.

48. Quarterly project progress reports and semi-annual reports on social and environmental compliance and implementation of the Environmental Management Plan (EMP) are submitted to NEPA in Afghanistan and to ADB;

49. DABS, through its environmental department (ED) implements the EMP during the operation phase, as PMO and PIC will not be available during operation phase. NEPA monitors implementation of the EMP during the operation phase. Semi-annual reports on social and environmental compliance and implementation of the Environmental Management Plan (EMP) are submitted to NEPA in Afghanistan.

PMO's Responsibilities for Environmental Safeguard Compliance

50. The Project management office (PMO) will comprise an executive committee, an integrating working group, a project management organization in the DABS (DABS – CEO) and a PIU in Kunduz and Taloqan.

51. The PMO (note: PMU is converted to PMO) will be responsible for the overall technical supervision and execution of the project.

52. The staffing of PMO will include expertise in project management, electrical transmission engineering, institution and finance environment, socioeconomic, land acquisition and resettlement aspect.

53. The mitigation measures that are incorporated into the design will the verified by the PMO before providing technical approvals.

54. DABS will be responsible for the following:

(i) Prepare an environmental screening checklist and categorize the subprojects;
(ii) Based on the environmental categorization of the subprojects, prepare the terms of reference to conduct an initial environmental examination (IEE);
(iii) Hire an environmental consultant to prepare an IEE report, including an EMP, for public disclosure;
(iv) Undertake an initial review of the IEE;
(v) Submit the IEE report and the review form to ADB as part of the approval of subproject and for public disclosure via ADB's website as required by ADB's policy;
(vi) Obtain Government permits, clearances and Non-Objection Certificate (s) (NOC), as necessary;
(vii) Ensure that all regulatory clearances are obtained before starting civil works for the subproject;
(viii) Submit to ADB all the required clearances/certificates obtained from the relevant Government authorities;
(ix) Ensure that the required mitigation measures during construction are included in the bidding document;
(x) Ensure that contractors have access to the IEE and EMP report of the subproject;
(xi) Require contractor to prepare / regularly update site specific EMP (SEMP),
(xii) Require contractor to incorporate environmental performance and corrective actions in quarterly project progress reports.
(xiii) Ensure that an environmental management plan, including all proposed mitigation measures and monitoring programs, are properly implemented;
(xiv) Monitor the implementation of environmental management plan and present it in the environmental monitoring report;
(xv) If unanticipated environmental impacts occur during project implementation, DABS will:

a. assesses the significance of such unanticipated impacts;
b. evaluate the options available to address them; and
c. prepare or update the IEE;

(xvi) In case a subproject needs to have its scope changed or its environmental classification reconfirmed, review it to determine whether a supplementary IEE study is required. If it is required, prepare the terms of reference for undertaking a supplementary IEE and hire an environment consultant to carry out the study;

(xvii) Ensure that all environmental assessment documentation, including the environmental due diligence and monitoring reports are properly and systematically kept as part of an DABS project-specific record;

(xviii) Submit the quarterly project progress reports and semi-annual reports on social and environmental compliance and implementing the Environmental Management Plan (EMP), as relevant, to the NEPA in Afghanistan and to ADB;

(xix) Ensure that adequate public consultation be undertaken with affected groups and local NGOs

(xx) Make available all information and generally facilitate the task of the EHS auditor to be selected in an international bidding process within the Project Implementation Consultant Contract to carry out the EHS construction audit and monitoring of implementation of the EMP.

ADB's Responsibilities

55. ADB is responsible for screening sub-projects to specify ADB's safeguard requirements; undertaking due diligence; and reviewing the borrower's/client's social and environmental assessments and plans to ensure that safeguard measures are in place to avoid, wherever possible, and minimize, mitigate, and compensate for adverse social and environmental impacts in compliance with ADB's safeguard policy principles; determining the feasibility of ADB financing; helping the borrower/client in building capacity to deliver the safeguards; and monitoring and supervising the borrower's/client's social and environmental performance throughout the project cycle. ADB discloses safeguard plans and frameworks, including social and environmental assessments and monitoring reports, on its website.

56. If a borrower/client fails to comply with legal agreements on safeguard requirements, including those described in the safeguard plans and frameworks, ADB will seek corrective measures and work with the borrower/client to bring it back into compliance. If the borrower/client fails to re-establish compliance, then ADB may exercise legal remedies, including suspension, cancellation, or acceleration of maturity, that are available under ADB legal agreements. Before resorting to such measures, ADB uses other available means to rectify the situation satisfactory to all parties to the legal agreements, including initiating dialogue with the parties concerned to achieve compliance with legal agreements.

ANNEX 1: ASIAN DEVELOPMENT BANK PROHIBITED INVESTMENT ACTIVITIES LIST

The following do not qualify for Asian Development Bank (ADB) financing:[1]

(i) production or activities involving harmful or exploitative forms of forced labor[2] or child labor;[3]

(ii) production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase outs or bans, such as (a) pharmaceuticals,[4] pesticides, and herbicides,[5] (b) ozone-depleting substances, [6] (c) polychlorinated biphenyls [7] and other hazardous chemicals,[8](d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,[9] and (e) transboundary trade in waste or waste products;[10]

(iii) production of or trade in weapons and munitions, including paramilitary materials;

(iv) production of or trade in alcoholic beverages, excluding beer and wine;[11]

(v) production of or trade in tobacco;

(vi) gambling, casinos, and equivalent enterprises;

(vii) production of or trade in radioactive materials,[12] including nuclear reactors and components thereof;[13]

(viii) production of, trade in, or use of unbounded asbestos fibers;

(ix) commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests; and

(x) marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

---

[1] ADB. 2009. Safeguard Policy Statement. Manila.

[2] Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.

[3] Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention." www.ilo.org.

[4] A list of pharmaceutical products subject to phase outs or bans is available at http://www.who.int.

[5] A list of pesticides and herbicides subject to phase outs or bans is available at http://www.pic.int.

[6] A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized

ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at http://www.unep.org/ozone/montreal.shtml.

[7] A group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

[8] A list of hazardous chemicals is available at http://www.pic.int.

[9] A list is available at http://www.cites.org.

[10] As defined by the Basel Convention; see http://www.basel.int.

[11] This does not apply to project sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a project sponsor's primary operations.

[12] This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which Asian Development Bank considers the radioactive source to be trivial and adequately shielded.

[13] This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

ANNEX 2: OUTLINE OF AN ENVIRONMENTAL ASSESSMENT REPORT (SPS 2009)

This outline is part of the Safeguard Requirements 1. An environmental assessment report is required for all environment category A and B projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks. A typical EIA report contains the following major elements, and an IEE may have a narrower scope depending on the nature of the project. The substantive aspects of this outline will guide the preparation of environmental impact assessment reports, although not necessarily in the order shown.

A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

B. Policy, Legal, and Administrative Framework

This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

C. Description of the Project

This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project’s layout and components, the project site, and the project's area of influence.

D. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

E. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media [Appendix 2, para. 6]), and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary,and cumulative impacts as appropriate.

F. Analysis of Alternatives

This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements.

It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

G. Information Disclosure, Consultation, and Participation

This section:

(i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders;

(ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and

(iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

H. Grievance Redress Mechanism

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

I. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

(i) Mitigation:

(a) identifies and summarizes anticipated significant adverse environmental impacts and risks;

(b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and

(c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.

(ii) Monitoring:

(a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and

(b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(iii) Implementation arrangements:

(a) specifies the implementation schedule showing phasing and coordination with overall project implementation;

(b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and

c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

(iv) Performance indicators:

describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

J. Conclusion and Recommendation

This section provides the conclusions drawn from the assessment and provides recommendations.

ANNEX 3: EXAMPLE EMP MITIGATION MEASURES (HIGH VOLTAGE TRANSMISSION LINES)

Mitigation Measures

Mitigation Measures for the Design Phase

Table 0-1: Environmental Mitigation Plan for the Design Phase

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
Line Routing	• Resettlement • Damage of Physical Cultural Sites	• The new TL will follow existing infrastructure as closely as possible e.g. roads, existing OHL)). • Towers are not placed on hilltops • Towers shall not be erected too close to rivers and creeks and fragile river banks shall not be damaged. • Selection of a transmission line corridor that bypasses settlements so that only minimum resettlement actions/ relocation of households are required. • Protection of cultural and religious relics and graveyards.	• IC	• ncluded in PIC Contract	• During final routing
Line Routing	• Agriculture and Land use	• Prior information of APs that plantations in ROW are likely to be affected during the design phase / land survey. • Limitation of cutting vegetation and crops where feasible. • Agriculture shall remain possible in ROW • Compensation for all damages caused during land survey • See LARPF / LARP to be established for subprojects (if applicable))	• PIC	• Included in PIC Contract	• Before and during design phase / land survey
Substations	• Land acquisition and resettlement • Surface	• Substations to be designed in order to minimize resettlement and land acquisition issues • Sealing of surface to be minimized • Planning of sufficient sanitary structures for	• IC	• ncluded in PIC	• During final routing

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
	sealing • Pollution through effluents	employees • Fire-Safety equipment to be planned for substations • Construction of oil separators for maintenance of vehicles • see LARPF		Contract	
Access Roads	• Land Acquisition • Damage of Physical Cultural Sites	• Minimization of the number and length of access roads. • Careful selection of location of access roads. • Implementation of chance find procedure if crossing historical sites and graveyards • Use of existing roads/ tracks wherever possible. • On hill slopes and other potentially erosion prone areas, appropriate vegetation which checks soil erosion will be planted. • Other erosion prevention measures (barriers, steel-nets etc.) in high mountain areas, mountain road sides • Design consideration will include protection using retaining structures such as gabions.	• D ABS-PMO and PIC	• nclud ed in PIC Contract	• D uring final routing
Protected Areas	• Crossing of Protected Areas, wetlands and other sensitive ecosystems	• Avoid crossing sensitive ecosystems and Protected Areas	• P IC, DABS PMO	• nclud ed in PIC Contract	• D uring final routing
Health and Safety	• Natural disasters	• Infrastructure needs to be constructed respecting earthquake safety standards suited for the seismic risk level in the Investigation area	• DABS-PMO	• Inclu ded in PIC Contract	• During design
Health and Safety	• Impact of Electric and Magnetic	• A minimum safety distance of 8m (500kV) and 7 m (220 kV) from a house to the closest conductor has to be respected. From other similar projects it can be reasonably assumed that in this distance the limit	• PIC / DABS-PMO	• Inclu ded in PIC Contract	• During final land survey

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
	Fields	values for electric and magnetic fields for the public are not exceeded. • Maximize distance between TL and human settlements.			

Mitigation Measures for the Construction Phase

Table 0-2: Environmental Mitigation Plan for Construction Phase

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
Soil and Erosion	• Erosion and pollution of soil • Sand deflation	• Minimization of removing topsoil at tower sites. • Loss of topsoil will be avoided by stripping and storing topsoil prior to construction (where appropriate i.e. on productive lands) • Bringing back the topsoil to its original place after having finished erection of the tower. • Installation of drainage systems • Replanting of grass at tower sites, river banks, access roads and other work areas that are not needed anymore • Careful selection of locations for access roads. • Sand deflation prevention measures at tower foundations and access roads. • Erosion prevention measures in mountain areas (steep slopes) • Use of existing roads/ tracks wherever possible	• C / DABS-PMO	• ncluded in construction costs	• uring construction
Soil and Erosion	• Soil damage by quarries • Blasting of rocks	• If there is a need to use filling material for access roads or tower foundations existing certified and properly managed quarries shall be used • If quarries are needed, they will be redeveloped as per standard procedure. Rehabilitation will be undertaken immediately after excavation to prevent soil erosion. • Redevelopment will include replacing stockpiled soil cover, replanting grass, shrubs, and trees, and installing sediment runoff control devices.	• C	• ncluded in construction costs	• uring construction
Air Quality	• Emissions from	• Limitations of size, weight or axle loads of vehicles	• CC	• Inclu	• During

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
	vehicles • Emissions through burning of waste • Dust emissions	using particularly difficult roads. • Reduction of speed and limited movement of vehicles. • Optimized transportation management to avoid needless truck trips. • Routine service and regular maintenance of vehicles and machines to reduce engine emissions. • Burning of rubbish on site must be strictly forbidden. • Construction equipment shall be maintained to a good standard and idling of engines discouraged. • Machinery causing excessive pollution (visible smoke) shall be banned from construction sites. • Despite its dust reduction potential, access roads shall only be sprayed in exceptional cases due to scarcity of water		ded in construction costs	construction period
Climate Change	• Emission of GHG	• No new installation of switchgears containing SF6	• EPC Contractor	• Included in construction costs	• During construction
Surface Water	• Pollution of Surface water	• All liquid materials and lubricants shall be stored in closed containers or barrels. • Construction material as bags of cement etc. shall be stored in containers in order to avoid rinsing out. • Temporary sewage treatment facilities shall be provided for the construction site and the workers' camps. • Avoidance of soil run-off. All necessary measures will be taken to prevent impeding cross drainage at rivers/ streams and canals or existing irrigation and drainage systems. • Construction materials containing fine particles, e.g. limestone will be stored in an enclosure such that	• CC	• Included in construction costs	• During construction period

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
		sediment laden water does not drain into the soil. • Construction of towers in distance from river banks (min 50 m is recommended) • Avoidance of water pollution at temporary bridges at river crossings. where new access roads are to be constructed, they should not disturb the natural drainage patterns of the areas • Vegetation stripping should occur in parallel with progress of construction in order to minimize erosion and run off. • Prohibiting construction and maintenance vehicles from driving in water ways • Dismantling of bridges that are not needed after construction.			
Groundwater	• Pollution of Groundwater	• Regular maintenance of all vehicles and machines used on site is mandatory. Maintenance activities of the vehicles shall be performed in regular service stations. • Maintenance and re-fuelling of the construction equipment shall be done only on sealed and enclosed areas (careful handling and maintenance, especially of the fuel tanks). • On site storage of fuel, engine oil and lubricants in locked tanks and on sealed and shadow roofed areas. • All wastes generated through the use of fuel, engine oil and lubricants like drums and containers shall be collected and disposed of properly. • Staff training to increase awareness of waste minimization and appropriate waste disposal.	• CC	• Included in construction costs	• During construction period
Flora and Fauna	• Destruction / disturbance of	• Respect of minimal ground clearance (8 m for 500 kV lines, 7 m for 220 kV lines)	• CC / DABS-	• Included in	• During final land

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
	Flora and Fauna	• Skilful selective clearing towards tower location to further reduce vegetation clearing. • Minimizing and marking of the extent of lay down areas and the routing of new access roads in order to minimize impacts on vegetation and habitats. • Minimization of number and length of access tracks. • A tree cutting and planting scheme will be prepared during the design phase. During the construction phase appropriate training will be provided to the workers and penalty will be imposed for the contractor for cutting down trees for firewood • Rehabilitation of access roads not needed anymore after having finished the construction. • Instruction of the employees not to disturb animals; hunting shall be prohibited in general. • All contraction and maintenance activities in any natural habitat along the route should be conducted in accordance with best environmental practices to cause minimum disturbance to any habitat • Placing markers on the top wire to make the wires more visible to birds in areas with a high collision potential	PMO	construction costs	survey and construction phase
Waste Production	• Environmental pollution through waste	• Development of a Waste Management Plan within the HSE Management Plan considering following principles: (i) waste management hierarchy of avoidance-minimisation-reuse-treatment-disposal; (ii) segregation of waste; (iii) minimisation of construction waste by good technical planning; (iv) training of staff. • Implementation of a Waste Management System. • Provision of construction sites and workers' camps with functional sanitary equipment.	• CC	• Included in construction costs	• Prior start of construction and during construction phase

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
		• Training of workers regarding proper waste and waste water handling according to environmental management requirements. • Solid waste and garbage will be collected in bins and disposed of daily, according to a brief and basic waste management plan prepared by the contractor and approved by DABS-PMO, prior to commencement of civil works. • There will be no site- specific landfills established by the contractors. All solid waste will be collected and removed from the work camps and disposed of in local waste disposal sites • Any spoil generated by the construction activity should be disposed at an approved location. • Littering should be prevented by providing adequate number of containers which shall be emptied regularly. • After completion of construction the site shall be properly cleaned and properly rehabilitated or re-vegetated.			
Liquid Waste	• Sewage production at construction sites and workers' camps	• Prior to work initiating the contractor will present a simple sewerage management plan to DABS-PMO for approval • Sewerage to be discharged into soak pits or municipal sewers and construction camps to be located away from rivers. • Septic tanks must be provided at each construction campsite • All work sites to be equipped with latrines. All toilet facilities will be located at least 300 m from water sources or existing residence.	• CC	• Included in construction costs	• During construction period
Liquid Waste	• Environmental	• Toxic, harmful and inflammable chemicals (paints,	• CC	• Inclu	• During

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
	pollution by toxic, harmful and inflammable chemicals	fuel, lubricants, oil and explosives) shall be stored in designated sites. • Vehicle maintenance and re-fuelling will be confined to areas in construction sites designed to contain spilled lubricants and fuels. • Spill waste will be disposed of at approved disposal sites, according to NEPA requirements.		ded in construction costs	construction period
Waste Production	• Environmental pollution by PCB	• All products used for the TL shall be PCB free. It is highly recommended not to re-use any of the old PCB contaminated material.	• CC / DABS-PMO	• Included in construction costs	• Before starting construction and during construction
Health and Safety	• General Health and Safety impacts	• Development of an EHS Policy for the construction phase. • Development of an EHS Management Plan for construction (shall include a Waste Management Plan). • Installation of an EHS Management System (EHS-MS) during the construction phase. • Clean work environment including good drainage around campsites will be provided to avoid creation of stagnant water bodies • Provide adequate sanitation and waste disposal facilities at campsites • Provide education to the workforce on prevention of communicable diseases, protective measures and disease control • Provide construction personnel with required self-protection devices such as safety helmets, belts, air plugs and other protection devices. • General operational and community safety measures for blasting activities to be detailed in construction	• CC	• Included in construction costs	• Prior start of construction

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
		EHS management plan.			
Health and Safety	• Work accidents	• Installation of warning signs “Danger of Electrocution” at towers, substations etc. • All construction workers shall be fitted with personal protection equipment (PPE). • Alcohol and drugs shall be strictly forbidden at the construction site.	• CC	• Included in construction costs	• During construction
Health and Safety	• Noise emissions	• Optimization of transportation management to avoid needless truck drives; avoidance of truck movements in residential areas at least during night-time. • Reduction of speed of trucks crossing residential areas. • Utilization of low sound power mechanical equipment like bulldozer, air compressor, concrete pumps, excavator, concrete mixer etc. whenever possible. • Regular maintenance and service of building machinery and other during construction works. • Shut down or throttling down of noisy machinery to a minimum. • Utilization of ear protection devices by the workers if they are exposed to high noise levels (included in the construction site HSE Management Plan). • All equipments shall fulfil noise control requirements of the project. • Special attention shall be given to regular maintenance of construction equipments for their best working condition. • Construction activities will be scheduled to avoid school and late night hours. • When construction takes place within 500 m from villages or within 150 m from sensitive areas such as health. centres, construction will be stopped from	• CC	• Included in construction costs	• Before starting construction and during construction period

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
		21:00 to 06:00 hours. This will reduce night-time noise levels. • Work hours should be decided in consultation with local community and should avoid prayer times. • Blasting will be carried out only with the permission of NEPA. • Noise protection regarding blasting activities to be detailed in construction EHS management plan • Work should be restricted to specific hours within some of settlements and 150 m from sensitive receptor s (schools , hospitals , and places of religious importance).			
Health and Safety	• Injuries and death by explosion of mines	• Provide special assessment of mine clearance by Mine Action Coordination Centre of Afghanistan MACCA / UNMACA before any physical works	• CC / DABS-PMO	• Included in construction costs	• Before starting construction
Health and Safety	• Operational and Community Health and Safety Risks • Transmission of diseases	• Development of Operational Health and Safety (OHS) and Community Health and Safety (CHS) Plans • Provision of HIV/AIDS protection equipment for workers. • Implementation of health and safety workshops for construction workers. • Put in place sufficient sanitation facilities for workers. • Implementation of health and safety workshops for construction workers. • Accommodation of workers in adjacent towns has the first priority. In the case that construction camps are necessary these will be located in accordance with relevant municipal authorities.	• CC	• Included in construction costs	• Before starting construction and during construction period
Land	• Resettlement	• see LARPF Document	• CC /	• Inclu	• Before

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
Acquisition and Land Use			DABS-PMO	ded in construction costs	Construction
Gender Aspects and Vulnerable People	• Gender disparities • Sexual harassment	• see LARPF Document • Implementation of a special livelihood program for vulnerable APs	• CC / DABS-PMO	• Included in construction costs	• During construction
Local Workforce	• General Health and Safety risks • Social conflicts due to influx of workers	• Measures to prevent and sanction irregular behaviour of the workers • Training of workers on Health and Safety measures in workers camps • Conflict mitigation / mediation training	• CC	• Included in construction costs	• At the beginning of construction
Infrastructure and Traffic	• Traffic disturbance • Minimization of power cuts	• Ensure that traffic is not disturbed by construction through proper traffic management and signalization. • Respect of minimal ground clearance (9 m for 500 kV lines, 8 m for 220 kV lines). • Ensure power supply for the population during construction. If necessary, power cuts will be done only at day time with duration reduced to an absolute minimum.	• CC	• Included in construction costs	• During construction
Physical Cultural Resources	• Damage and destruction of cultural sites	• Identification of cultural sites and sensitive areas for unknown historical sites • No construction of access road near historical sites. • By-passing or over-spanning of historical sites and graveyards. • Training of the construction workers to stop earth or foundation works immediately if there are any signs for historical or cultural sites. • Report of chance finds immediately to the Ministry of Culture, Implementation of chance find procedure.	• CC / DABS-PMO	• Included in construction costs	• During detailed land survey and during construction process

Mitigation Measures for Operation and Decommissioning Phases

Table 0-3: Environmental Mitigation Plan for Operation and Decommissioning Phase

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
Soil and Water Resources	• Soil and water pollution	• Fitting transformers at substations with oil pits connected to a drainage system. • Provision of separate storage tanks for further treatment of the oily wastewater.	• DABS	• Included in operational costs	• Before operation
Landscape and Visual Impacts	• Permanent visual impact on the landscape	• Planting trees/ bushes around the new substations.	• DABS	• Included in operational costs	• Before operation
Flora	• Damage to flora and fauna through toxic substances	• For ROW clearing measures no herbicides will be used. • No slash & burn clearing	• DABS	• Included in operational costs	• During operation
Fauna	• Disturbance of animals during maintenance works	• Disturbance of animals shall be minimized during maintenance work by e.g. respecting breeding seasons.	• DABS	• Included in operational costs	• During operation
Waste Production	• Environmental pollution by solid and liquid wastes	• Development of a Waste Management Plan for the substations. • Waste water generated from staff quarters will be discharged into septic tanks. • Reduction of waste quantity. • Recycling as much as possible. • Proper dumping of remaining waste. • Adequate site drainage shall be performed. • Regular sewage treatment.	• DABS	• Included in operational costs	• Before/ during operation

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
Health and Safety	• Natural disasters	• Implementation of Emergency Response Plan	• DABS	• Included in design costs	• During design/ construction /operation
	• Noise emissions	• Using state-of the art conductors. • EHS Management System/ Plan shall be developed and implemented during operation of the substations to prevent health and safety risks from noise emissions.	• DABS	• Included in operational costs	• During design/ operation
	• Electric and Magnetic fields	• Training for workers and resident population with regard to EMF	• DABS	• Included in training costs	• During operation
	• Electrocution risks for maintenance workers and local people	• Installation of warning signs at towers and substations • Installation of explanatory boards at towers that individual connection is not possible at the TL • Training of substation workers • Implementation of Operational Health and Safety (OHS) and Community Health and Safety (CHS) Plans • Awareness raising activity among population and especially maintenance workers	• DABS	• Included in maintenance/ operational costs	• During construction/ operation
	• Possible transformer fires	• Proper maintenance of the substations. • Installation of fire walls between the transformers. • Installation of a sprinkler system. • Provision of a fire water collection system for the new switchyards. This system shall be separated from the waste water collection and treatment system of the substations. • Provision of mobile fire extinguishers, checked regularly.	• DABS	• Included in design/ operational costs	• During construction/ operation

Issue	Potential Impact	Mitigation Measure	Implementing Agency	Costs in $	Date for Implementation
		• Adequate training of the staff how to handle a SS fire			
Land Use	• Restrictions of land use	• Land within the ROW can further be used for agriculture and grazing. • Compensations for damaged crops during maintenance. • No herbicides will be used for ROW clearing • Compensation for crop damages during maintenance	• DABS	• Included in operational costs	• During operation
Impacts during Decommissio-ning Phase	• Visual impact on the landscape • Efficient resource use	• Complete dismantling of the transmission line after the life-span of minimum 50 years. • Complete dismantling of the substations after termination of operation. • Recycling of metal parts and selling as scrap metal. • Waste management procedures and disposal according to national and international standards	• DABS	• Included in operational costs	• During decommissioning

Table 0-4: Monitoring Plan for Design Phase and Construction Phase

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
Line Routing	• Compliance with ADB SPS, • Minimization of resettlement needs, • Avoidance of cultural sites, • Compensation payments (see LARPF), • Access road design, • Design of river crossings	• Control of design if environmental and social impacts during line routing have been avoided, • Control of design if resettlement requirements have been minimized, • Control if tower locations are chosen with minimum local environmental impact • Control if construction activities are restricted to as small an area as possible (incl. access roads).	• Entire line corridor	• Visual control (Field visit) of final line routing including selected deviations by independent expert	• One time, before start of physical works	• Included in EHS Audit	• EHS Consultant	• During design phase, before the start of physical works

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
Soil and Erosion	• Construction standards of access roads, • Temporary bridges, • Re-planting activities	• Control of low impact construction standards • Visual control of river crossings • Visual control of re-planting activities	• Entire line corridor	• Visual control of record keeping of length built and length rehabilitated/ decommissioned after Project completion.	• Periodically during construction	• Included in EHS Audit	• EHS Consultant	• During construction
Landscape and Visual Aspects	• Complete dismantling of the old transmission line from Sheberghan to Mazar. • Recycling of metal and ceramic parts	• Visual inspection of line corridor, • Records of recycling and disposal procedures	• Line corridor Shebergan-Mazar	• Visual control, control of records	• Once at the end of construction period	• Included in EHS Audit	• EHS Consultant	• Before start of operation
Land Acquisition and Resettlement	• Compensation payments, • Resettlement actions (see LARPF)	• Visual control and photo-documentation of resettlement activities and re-installation including GPS data (See LARPF).	• Entire line corridor and substation sites	• Visual control, records, survey	• After final design	• See LARPF document	• LARP consultant	• Before construction

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
Air Pollution	• Construction standards	• Monitoring of good construction standards; • Monitoring of correct implementation of construction manual, especially related to vehicle use and maintenance	• Work areas	• Visual control	• Periodically during construction	• Included in construction cost/ EHS Audit	• EHS Consultant / PIC	• During construction
Pollution of Surface Water	• Good construction principles at river crossings • Location of towers no closer than 50 m to flooding areas • No pollution sources near rivers	• Visual control of downstream water quality (turbidity), • Regular measurements of up-/ downstream basic parameters, • Plan for detailed analysis (e.g. for hydrocarbons) if pollution/	• Line sections with river crossings, substation sites	• Visual Control, Measurements and Analysis of basic surface water parameters (ph, COD, BOD, oil grease etc.) , sampling upstream and downstream of river crossings and substation sites	• Periodically during construction	• Included in construction cost/ EHS Audit	• EHS Consultant / PIC	• During Construction

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
		spills are suspected. • Visual control that any temporary bridges are properly constructed, do not cause deterioration of river bed and are dismantled after completion • Control of Implementation of EMP measures						
Pollution of Groundwater	• Appropriate sewage treatment of workers' camps • Appropriate groundwater protection measures	• Visual inspection of pollution sources • Visual control of oil absorbers at SS and good construction practices during stringing, tower	• Substations, tower sites, work camps	• Visual control, water analysis in wells	• Periodically during construction	• Included in EHS Audit	• EHS Consultant / PIC	• During construction

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
		construction and substation construction • Analysis and measurements of basic groundwater parameters.						
Flora and Fauna	• Respect of minimal ground clearance (8 m for 500 kV lines, 7 m for 220 kV lines) in design • Extent of lay down areas and routing of new access roads • Implementation of Avifauna protection measures	• Monitoring of final design, including specifications of tower locations and height of towers, location and length of access roads, • Monitoring of tree cutting, enforcement of prohibition, • Monitoring of implementation of bird flappers/ markers	• Entire line ROW	• Regular visual inspection during construction Complete line survey after construction	• Periodically during construction General survey after construction	• Included in EHS Audit	• EHS Consultant / PIC	• During construction

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
Waste Production	• Economic land use, • Proper topsoil management, • Erosion control and post construction	• Visual control of economic land use, proper topsoil management, erosion control and post construction site restoration. • Review of final design and field check for design compliance.	• All work areas	• Design compliance, Visual control	• One time before start of works, yearly during construction, at end of construction phase	• Included in EHS Audit	• EHS Consultant / PIC	• Before, during and after construction
Liquid Waste	• Implementation of Sewerage Management Plan • Septic tanks at each construction campsite • Measures to prevent spills of liquid wastes (i.e oil change of construction vehicles)	• Visual control of construction sites and workers camps, especially sanitary facilities, Waste Management Plan and Sewerage Management Plan facilities	• Work camp sites; Substations Lay-down Areas	• Design compliance, Visual control	• Regular monitoring during construction process; EHS Audit	• Included in EHS Audit	• EHS Consultant / PIC	• During construction

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
Health and Safety	• Compliance with EHS Management Plan (Work Safety / Sanitation, Noise)	• Construction Site/ EHS Audit. • Monitoring of noise level, protective equipment, workers camp sanitation, safe handling of hazardous materials (explosives at quarries etc.) and electrical accidents prevention, prevention of work accidents etc. during construction	• All work areas, Workers camps, Substation sites	• Visual Control of EHS Management Plan implementation	• Yearly during construction	• Included in EHS Audit	• EHS Consultant / PIC	• During construction
Health and Safety	• Clearance of all work areas from mines	• Clearance Report of Mine Action Coordination Centre of AFG (MACCA)	• All work areas	• Clearance status	• One time before start of works	• Included EHS Audit	• EHS Consultant / PIC	• During design phase, before the start of physical works
Local Workforce	• Monitoring of Training of	• Monitoring of measures	• Workers camps,	• Site visits and interviews	• Yearly during	• Included in EHS Audit	• EHS Consultant /	• During construction

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
	workers on Health and Safety measures in workers' camps • Conflict mitigation / mediation training	to prevent and sanction irregular behaviour of the workers • Monitoring of Implementation of Construction Manual • Grievance Mechanism / related to conflicts and complaints	construction sites	No. of trainings conducted, content, participants Grievance Mechanism Settlement records	construction, during EHS Audit visits		PIC	
Infrastructure and Traffic Safety	• Traffic Safety Plan included in EHS Plan • Implementation of measures to enhance traffic safety, road signs • Implementation of warning signs to reduce electrical dangers	• Short term impact during construction, no specific monitoring necessary.	• Entire line corridor	• Visual Control	• Quarterly during construction	• Included in EHS Audit	• EHS Consultant / PIC	• During construction
Physical Cultural Resources	• Implementation of chance find procedure	• Photo-documentation of key sites close to alignment	• All work areas	• Visual Control, Records	• Yearly during construction	• Included in EHS Audit	• EHS Consultant / PIC	• Before, during and after construction

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring and Reporting Responsibility	Date for Implementation
		before start and after completion of construction, • Visual control that sensitive areas are fenced off and secured against unintended damage during construction.						
Grievance Mechanism	• Implementation of an accessible grievance mechanism for APs to address complaints at the local level	• Social survey by independent expert to find out if grievances have been settled.	• Community level in all provinces	• Survey	• 3 times during construction process	• Included in EHS Audit	• EHS Consultant / PIC	• During Construction

Table 0-5: Monitoring Plan for the Operation and Decommissioning Phase

Issue / Potential Impact	Parameters to be monitored	Monitoring Action	Location	Measurements	Frequency	Costs in $	Monitoring Responsibility	Date for Implementation
Soil and Water Resources	• Removal of temporary infrastructure • Replanting of unneeded access roads, lay down areas, and other work sites • Fitting transformers with oil pits connected to a drainage system. • Provision of separate storage tanks for further treatment of oily wastewater at SS	• Visual control of downstream water quality (turbidity), • Regular measurements of upstream / downstream basic water parameters, • Plan for detailed analysis (e.g. for hydrocarbons) if pollution / spills are suspected i.e. at substations. • Visual control that any temporary bridges are properly constructed, do not cause deterioration of river bed and are dismantled after completion.	• All work areas	• Visual inspection	• Once after construction	• Included in operation cost	• NEPA	• After construction
Landscape and Visual Impacts	• Complete dismantling of the old TL and SS without function. • Planting trees/ bushes around the new substations	• Visual Inspection • Control of planning and implementation of re-plantation sites and activities	• All work areas	• Visual inspection	• Once after construction	• Included in operation cost	• DABS Environment Department (ED)	• After construction

Flora	• No use of herbicides for ROW clearing	• Supervision of maintenance procedures	• Entire ROW	• Periodical Inspection	• Yearly during operation	• Included in operation cost	• DABS Environment Department / NEPA	• During operation
Fauna	• Disturbance of animals during maintenance work • Prohibition of hunting	• Supervision of maintenance procedures	• Entire ROW	• Periodical Inspection	• Yearly during operation	• Included in operation cost	• DABS ED / NEPA	• During operation
Waste Production	• Development of a Substation Waste Management Plan • Reduction of waste quantity, recycling as much as possible. • Proper dumping of remaining waste. • Regular sewage treatment. • Run off	• Monitoring of Waste Management Plan and control of implementation	• Sub station Sites	• Periodical Inspection	• Yearly during operation	• Included in operation cost	• DABS ED/ NEPA	• During operation
Health and Safety	• EHS Management System/ Plan development and implementation during Substation operation	• Monitoring of Implementation of EHS Management Plan	• Sub station Sites, Maintenance locations	• Periodical Inspection, Regular EHS Audits	• Yearly during operation	• Included in operation cost	• NEPA / DABSED EHS Auditor	• During operation

Health and Safety	• Electric and Magnetic fields	• Regular EMF measurements (after purchase of EMF meters and related training for handlers) • Control of encroachment of safety zone	• Sub station Sites	• Regular measurements under full load	• Yearly during operation	• Included in operation and training cost	• DABS ED	• During operation
Land Use ROW clearing and maintenance	• Further agricultural land use in the ROW, • Use rights and use practices • Compensation payment for damaged crops during maintenance. • No use of herbicides for ROW clearing	• Monitoring of land use possibilities, compensation payments, grievance mechanism	• Entire line ROW	• Periodical Survey	• Yearly during operation	• Included in operation cost	• DABS ED	• During operation

Impacts during Decommissioning Phase	• Complete dismantling of the transmission line after the life-span of minimum 50 years. • Recycling of metal parts and selling as scrap metal. • Waste management procedures and disposal according to national and international standards	• Visual control that all project related infrastructure is deconstructed, metal parts are recycled, wastes disposed and hazardous materials treated according to national and international best practice	• Entire line ROW, all substation sites	• Visual control, review of records	• One time after life span of the project (50 years)	• Provision for decommissioning included in operation costs	• DABS	• After life span of the project

دفتر مرکزی شرکت برشنا،
کابل
Da Afghanistan Breshna Sherkat
Headquarters in Kabul

Ref: 460

Date: 31 August 2013

Mr. Rune Stroem,
Director Energy Division,
Central and West Asia Department,
Asian Development Bank,
Manila. – Philippines
Tel (632) 632-6457

Sub: MFF 0026-AFG: Energy Sector Development Investment Program - Project 5 (500 kV Dashte Alwan Substation Project)

Dear Mr. Stroem,

DABS endorses the following documents related to social safeguards prepared for the subject Project:

1. Land Acquisition and Resettlement Framework (LARF)
2. Draft Land Acquisition and Resettlement Plan (LARP)
3. Environment Assessment Review Framework (EARF)
4. Initial Environment Examination (IEE)

We also attach the mentioned documents in softcopy for your review and approval.

Thanking you,

Yours Sincerely,

Abdul Razique Samadi
CEO, DABS

CC

Dr. Waheedullah Popalzai- PMO Director, DABS
Mr. Alex Culver – FICHTNER Team Leader