Initial Environmental Examination – Subproject 2

December 2013

Viet Nam: Ha Noi and Ho Chi Minh City Power Grid Development Sector Project

(EVN HANOI: Noi Bai Airport 110 kV Substation and Transmission Line)

Prepared by Ha Noi Power Corporation for the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 11 December 2013)

Currency Unit	–	Dong D
D1.00	=	$0.000047
$1.00	=	D20,948

ABBREVIATIONS

ADB:	Asian Development Bank
AH:	Affected Household
AP:	Affected people
BOD:	Biochemical Oxygen Demand
COD:	Chemical Oxygen Demand
CTF:	Clean Technology Fund
DARD:	Department of Agriculture and Rural Development
DoNRE:	Department of Natural Resources and Environment
DCST:	Department of Culture Sport and Tourism
DoLISA:	Department of Labour Invalids and Social Assistance
EA:	Executing Agency
EIA:	Environment Impact Assessment
EMP:	Environment Management Plan
EO:	Environmental Officer
ESU:	Environmental and Social Unit
EVN:	Electricity of Viet Nam
EVH HANOI:	Ha Noi Power Corporation
EVNHCMC:	Ho Chi Minh City Power Corporation
GHG:	Greenhouse gas
GRM:	Grievance Redress Mechanism
HN:	Ha Noi
IA:	Implementation Agency
IEE:	Initial Environmental Examination
MoLISA	Ministry of Labour Invalids and Social Assistance
MoNRE:	Ministry of Natural Resources and Environment
NPA:	National Protected Area
PCB:	Polychlorinated biphenyls
PCR:	Physical Cultural Resources

PIC:	Project Implementation Consultant
PPC:	Provincial Peoples Committee
REA:	Rapid Environment Assessment
ROW:	Right-of-way
PPMB:	Power Project Management Board
TSS:	Total Suspended Solids
UXO:	Unexploded Ordnance

WEIGHTS AND MEASURES

km:	kilometre
kg:	kilogram
kV:	kilovolt
ha:	hectare
mm:	millimetre
MV:	medium voltage

NOTE

In this report, "$" refers to US dollars.

I. EXECUTIVE SUMMARY

1. The Project, financed through Asian Development Bank's (ADB) sector loan modality, will strengthen the capacity and reliability of power infrastructure in Ha Noi and Ho Chi Minh City through the rehabilitation and development of 110 kV and 220 kV transmission system and associated substations to supply their medium voltage (MV) distribution system. The project also strengthen the institutional capacities of Hanoi Power Corporation (EVN HANOI) and Ho Chi Minh City Power Corporation (EVNHCMC), which are responsible for the power supply in their respective areas. Additionally, the project includes a smart grid component financed by the Clean Technology Fund (CTF).

2. The Initial Environmental Examination (IEE) presented herein addresses the Noi Bai 110 kV Substation and Transmission Line subprojects in Ha Noi which represents two of the eight core subprojects that were identified by Electricity of Viet Nam (EVN) for Ha Noi and Ho Chi Minh City. The consolidated subproject consists of construction of a new 110 kV substation at Noi Bai airport and a new 2,708 m overhead lines (OHL) and 2,295 m underground cable (UGC) 110 kV transmission line from the substation to the existing Van Tri 110/220 kV substation north of Ha Noi. The IEEs of the other core subprojects have been prepared under separate covers.

A. Subproject Summary

3. The new Noi Bai Airport 2 x 25 MVA 110/22 kV Substation[1] will be built on 0.36 ha presently used for rice cultivation of Phu Cuong commune, Soc Son district, Hanoi (under agreement of Phu Cuong commune and Soc Son district People's Committees). The 60 m x 60 m site has existing rice fields on the north and west borders; on the south border an existing concrete road leads to the air traffic radar tower of Noi Bai Airport; and on the east side a concrete road leads to Phu Cuong commune.

4. New Noi Bai Airport 110 kV Substation will be supplied by a double circuit 5.003 km part overhead (2,708 m of E09ACSR 240/32 conductor) and part underground (2,295 m of XLPE-1,200 mm^2 cable) 110 kV transmission line emanating from Van Tri 220 kV substation. From a 110 kV E10 bay at Van Tri 220/110 kV substation, the initial overhead route passes paddy fields and then goes underground to pass under a railway line; then under the pavement of Bac Thang Long - Noi Bai road, internal road of Quang Minh Industrial Park, road at the south of housing area and Quang Minh exhibition. It then reverts to an overhead line, passing paddy fields and terminates at 110 kV gantry tower of new Noi Bai 110 kV substation. The route passes through Nam Hong and Bac Hong communes, Dong Anh, Quang Minh town of Me Linh, Phu Cuong commune, Soc Son district of Hanoi.

[1] Adapted from Draft Final Report

B. Potential Impacts and Mitigation

5. The IEE of the 110 kV substation and transmission line indicates that the potential environmental impacts of the subproject will primarily occur during the construction phase of the subproject components. The common construction-related disturbances such as noise, dust, erosion, sedimentation, solid and liquid waste pollution, worker camp issues, reduced access, increased vehicle and boat traffic and traffic disruptions, damage to existing roads traversed by the transmission line, increased risk of worker and public injury can be managed with standard construction practices and management guidelines (e.g., IFC/World Bank 2007). There are no rare or endangered wildlife, critical habitat, or protected areas in the subproject sites which consist of agriculture land and built-up urban areas.

6. Some residential and agriculture land will be permanently and temporarily lost due to the subproject. The lost land and compensation is addressed in detail in the Resettlement Plan (RP) prepared separately.

7. The new 110 kV substation will be built entirely on paddy fields just east of the airport. The overhead (OHL) section of the 110 kV line from the new substation will traverse paddy fields, a highway, a railway, and a small irrigation canal before joining the UGC segment. The UGC will be trenched through a short section of paddy field, under a highway and the alongside the boundary of an industrial park before surfacing to OHL across a lowland area to connect with an existing substation east of the entire subproject site.

8. There are no perceived negative induced, or cumulative environmental impacts of the subproject. The objective of providing needed additional electrical power to northern Ha Noi supports the overall goal of urban and socioeconomic development in the city-province.

9. The Environmental Management Plan (EMP) prepared for the subproject provides a comprehensive impacts mitigation plan and environmental monitoring plan to minimize and manage the potential impacts of the subproject. The EMP also prescribes an Emergency Response Plan for the construction sites and identifies the need for capacity development and training of the IA/ESU in environmental management and assessment as focused on the implementation of the EMP.

C. Conclusions

10. The IEE concludes that the feasibility design of the 110 kV Noi Bai subproject combined with available information on affected environments is sufficient to identify the scope of potential environmental impacts of the subproject. Providing that significant changes to the subproject description do not occur at the detailed design phase, and that new sensitive environmental or cultural resources are not determined, further detailed environmental impact assessment (EIA) of the subproject is not required.

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II. INTRODUCTION

A. Background to IEE

11. The Ha Noi and Ho Chi Minh City Power Grid Development Sector Project aims to strengthen the capacity and reliability of the power infrastructure in Ha Noi and Ho Chi Minh City, Viet Nam through the rehabilitation and development of the 220 kilovolt (kV) and 110 kV high-voltage power transmission systems and associated substations to supply their medium voltage (MV) distribution system. The Project also aims to strengthen the institutional capacities of Ha Noi Power Corporation (EVN HANOI) and Ho Chi Minh City Power Corporation (EVNHCMC) that are responsible for the power supply in their respective areas. Additionally, the project includes a smart grid component financed by the Clean Technology Fund (CTF).

12. The Project will be implemented as a sector loan under ADB's Operation Manual Section D3 – Sector Lending. It consists of eight core subprojects (Table 1) which were selected by EVN HANOI and EVNHCMC being representative of the non-core projects to be further identified and prepared during project implementation.

Table 1. Core Subprojects forming the Sector Project in Ho Chi Minh and Ha Noi[2]

Ha Noi
EVN HANOI
• Construction of new Noi Bai Airport 110 kV Substation and associated 110 kV transmission line from existing Van Tri 220/110 kV Substation
• Upgrading Phuong Liet 110 kV Substation
• Renovation Son Tay 110 kV Substation
• Improving and upgrading Tran Hung Dao 110 kV Substation
Ho Chi Minh City
EVNHCMC
• Construction of new 220 kV District 8 Substation
• Upgrading of existing 110kV to 220 kV transmission line Nam Sai Gon (Binh Chanh) Substation to new District 8 Substation
• Construction of new 110 kV Tham Luong Substation

[2] Adapted from Project Inception Report 10/13

- Construction of 110 kV underground cable connecting to new Tham Luong Substation

B. Consolidation of IEEs

13. During the Project inception mission the eight core subprojects sites were visited, subproject documentation was reviewed, and meetings were held with EVN HANOI and EVNHCMC. The inception phase identified the need to consolidate the core subprojects in order to maximize the coherence and overall usefulness of the Initial Environmental Examinations (IEE) of the core subprojects. The original 8 core subprojects were consolidated into the following 4 core subprojects:

EVN HANOI:

1) New Noi Bai 110 kV Substation with above and underground transmission line
2) Rehabilitation/upgrade of Son Tay, Phuong Liet, and Tran Hung Dao 110 kV Substations

EVNHCMC:

1) New District 8 220 kV Substation and upgraded 220kV transmission line
2) New Tham Luong 110 kV Substation and underground transmission line

14. The IEE presented herein addresses the new Noi Bai 110 kV Substation and transmission line at Ha Noi airport. The IEEs for the other 3 consolidated core subprojects are found under separate cover.

C. Assessment Context

15. The Project was assigned Environmental Category B pursuant to the ADB's Safeguard Policy[3] and recent good practice sourcebook guidance[4]. A category B project will have potential adverse impacts that are less adverse than the impacts of category A project, are site-specific, largely reversible, and can be mitigated with an environmental management plan[5]. The IEE was prepared for the consolidated Noi Bai core subproject in the feasibility design stage using available data and information on sensitive ecological and cultural receptors that exist for the subproject site.

16. Unlike the existing Tran Hung Dao, Phuong Liet or Tay Son Substations that will either be upgraded or rehabilitated, the Noi Bai Substation and transmission line is entirely new, and therefore, will create a new environmental impact footprint of substation and transmission line in the environment.

[3] ADB, 2009. Safeguard Policy Statement, ADB Policy Paper.
[4] ADB, 2012, Environmental Safeguards, A Good Practice Sourcebook, Draft.
[5] Footnote 2, pg 19.

17. The detailed design for the Noi Bai subproject will follow subproject approval. The Environmental Management Plan (EMP) that has been prepared for the subproject (Section X) will need to be updated where necessary to meet the final detailed designs of the Noi Bai substation and transmission line subproject.

III. POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK

18. The Noi Bai Substation and Transmission Line subproject will be implemented according to the directives set down for use of Official Development Assistance (ODA) by GoV Decree No. 131/2006/ND-CP which was promulgated November 9, 2006, and in accordance with the provisions of for the parent sector project.

A. Viet Nam Regulatory Framework for Environmental Assessment

19. The Viet Nam Law on Environmental Protection (LEP 2005) prescribes the requirements for environmental assessment (EA) for development and domestic project interventions that affect the natural and social environments. Government Decree 29/2011/ND-CP on strategic environmental assessment (SEA), environmental impact assessment (EIA), and environmental protection commitment (EPC) in conjunction with Circular 26/2011/TT-BTNMT on stipulation of specific articles of Decree 29 both elaborate the EA requirements specified by the LEP (2005). Decree 29 and Circular 26 are implemented in conjunction with Decree 80/2006/ND-CP, and Decree 21/2008/ND-CP (see below).

20. The updated screening criteria of Decree 29 distinguish projects that require an Environmental Impact Assessment (EIA) from projects requiring the simpler Environmental Protection Commitment (EPC). The difference between the two processes reflects the level of assessment, and final review and appraisal that is required. At the time of writing Decree 29 requires that an EIA be prepared for the Noi Bai substation and transmission line subproject.

B. Applicable Environmental Laws, Policy, Environmental Standards, Guidelines

21. The following are key directives for environmental assessment and protection in Viet Nam:

- Law on Environmental Protection No. 52/2005/QH11, in effect on June 12, 2005;
- Law on Water Resources No 08/1998/QH10.
- Biodiversity Law 20/2008/QH12 dated 13th November 2008
- Cultural Heritage Law 28/2001/QH10 dated 29th June 2001
- Land law No.13/2003/QH11 dated 26th November 2003

- Decree No. 29/2011/ND-CP, dated April 18, 2011, on Regulating Strategic Environmental Assessment, Environmental Impact Assessment and Environmental Protection Commitment.

- Circular No. 26/2011/TT-BTNMT dated on 08/12/2011 by the Ministry of Natural Resources and Environment on Guidance for Strategic Environmental Assessment, Environmental Impact Assessment, and Environmental Protection Commitment.

- Decree No.12/2009/ND-CP which replaces Decree No. 16/2005/ND-CP and Decree No. 112/2006/ND-CP on Investment Management on Construction Projects.

- Decree No.21/2008/NĐ-CP dated on 28/02/2008 about Amendment and Addition of Some Articles in Decree No.80/2006/NĐ-CP dated on 09/8/2006 by the Government.

- Decree No.59/2007/NĐ-CP dated on 09/4/2007 by the Government about Solid Waste Management.

- Decree No. 117/2009/ND-CP Regulation on sanctioning administrative violations in environmental protection, issued: 31/12/2009

- Decree No. 04/2009/ND-CP, Incentives and support for environment protection activities, issued: 14/01/2009.

- Decree 110/2002/ND-CP, supplementing some Articles of Decree 06/1995 on Labour Code of Occupational Safety and Health

- Decree 06/1995, Elaborating Provisions of Labour Code on Occupational Safety and Health.

- Decree No.140/2006/NĐ-CP dated on 22/11/2006 by the Government which regulates Environmental Protection, Designing, Approval and Implementation of Development Strategies, Plans, Programs and Projects.

- Decree No.80/2006/NĐ-CP dated on 09/8/2006 about Guiding for the Implementation of Some Articles in the Law on Environmental Protection (2005).

- Decree No.149/2004/NĐ-CP dated on 27/7/2004 about Issuing Permits for Water Resource Exploration, Exploitation and Utilization and Permits for Discharge to Water Bodies.

- Decision No.16/2008/QĐ-BTNMT dated on 31/12/2008 by the Ministry of Natural Resources and Environment about Promulgation of the National Technical Regulations for the Environment.

- Decision No.18/2007/QĐ-BTNMT dated on 05/11/2007 about Promulgation of Statistic Indicator System for the Field of Natural Resources and Environment.

- Decision No.23/2006/QĐ-BTNMT dated on 26/12/2006 about Promulgation of the List of Hazardous Waste.

- Decision No.27/2004/QĐ - BXD dated on 09-11-2004 by the Minister of Ministry of Construction on the promulgation of TCXDVN 320:2004 "Landfill for hazardous waste – Design standards"

- Decision No.22/2006/QĐ-BTNMT dated on 18/12/2006 about Obligations to Apply Vietnamese Standards for the Environment.

- Decision No.233/2006/QĐ-TTg dated on 18/10/2006 about approving the National Program on Labor Protection, Safety and Sanitation up to 2010.

- Decision No.1222/QĐ-BTNMT dated on 20/09/2006 about Organization of Reception and Progressing Recommendations from Individuals, Organizations and Enterprises on Aspects which are managed by Ministry of Natural Resources and Environment.

- Decision No.35/2002/QD-BKHCNMT dated on 25/6/2002 about Promulgation of Series of Vietnamese Standards for the Environment.

- Decision No.60/2002/QĐ-BKHCNMT dated on 07/8/2002 about Promulgation of the Guidance for Disposal of Hazardous Wastes.

- Decision No.3733/2002/QĐ-BYT issued by Ministry of Healthcare dated on 10/10/2002 About the Application of 21 Labour Health and Safety Standards

- Decision No.155/1999/QĐ-TTg dated on 16/7/1999 by the Government on Promulgation of the Management Mechanism for Hazardous Waste.

- Decision No.505 BYT/QĐ, dated on 13/4/1992 by the Ministry of Healthcare on the Regulation for Allowed Concentrations.

- Circular No. 16/2009/BTNMT and No. 25/2009/BTNMT on Promulgation of Vietnamese National Standards.

- Circular No.10/2007/TT-BTNMT dated on 22/10/2007 about Guidance for Assurance and Control of the Quality of Environmental Monitoring.

- Circular No.12/2006/TT-BTNMT dated on 26/12/2006 by the Ministry of Natural Resources and Environment on Guidance for Practice Conditions, Procedures for Application, Registration, Endorsement and Issuing the Code for Hazardous Waste Management.

Environmental Standards and Regulations

Water quality:

- QCVN 01:2008/BYT – National technical regulations on quality of drinking water
- QCVN 08:2008/BTNMT – National technical regulations on quality of surface water
- QCVN 09:2008/BTNMT – National technical regulations on quality of groundwater
- QCVN 10:2008/BTNMT – National technical regulations on quality of about coastal water
- QCVN 14:2008/BTNMT – National technical regulations on quality of domestic wastewater
- QCVN 24:2008/BTNMT– Industrial wastewater discharge standards
- QCVN 02:2009/BYT - National standard of domestic water supply
- TCVN 5502:2003 – Supplied water – Requirements for quality
- TCVN 6773:2000 – Water quality – Water quality for irrigational purposes
- TCVN 6774:2000 – Water quality – Water quality for aquaculture protection
- TCVN 7222:2002 – Water quality for concentrated domestic WWTP
- TCVN / QCVN - Standard methods for analyzing environmental quality

Air Quality:

- QCVN 05:2008 – Standards for ambient air quality

- QCVN 06:2008 – Maximum allowable concentration of hazardous substances in the ambient air
- TCVN 6438:2001 – Maximum permitted emission limits of exhausted gases from vehicles

Solid Waste Management:

- TCVN 6696:2009 – Solid waste – Sanitary landfill. General requirements for environmental protection.
- QCVN 07:2009– National technical regulations for classification of hazardous wastes
- QCVN 25:2009 – National technical regulations for wastewater of solid waste sites
- QCVN 15:2008/BTNMT: - National regulation on allowable pesticide residues in soil
- QCVN 03:2008/BTNMT: - National regulation heavy metals concentrations in soil

Vibration and Noise:

- QCVN 26:2010/BTNMT: national technical standard for noise
- TCVN 6962: 2001 Allowable vibration level for public and residential areas
- TCVN 6962:2001: - Allowable vibration and shock from construction activities

International Guidelines

- World Bank Group, 2007. Environmental Health and Safety Guidelines, Wash. DC.
- AWWA Standard Methods for Measurement and Analysis Environmental Quality

Specific regulations for resettlement and compensation

- Decree No. 197/2004/ND-CP dated 03/12/2004, on comprensation support,and resettlement
- Circular 14/2009/TT-BTNMT dated 01/10/2009, on detailed regulations on compensation, support and resettlement.

Directives of the Electrical Power Industry in Viet Nam

- Electricity Law, No. 28/2004/QH11, Issued: 03/12/2004
- Government Decree, No. 81/2009/NĐ-CP, on the safety protection of high-voltage power grids, Issued 17/08/2005
- MIT Circular, No. 03/2010/TT-BCT, on safety protection of high-voltage power grid works, Date issued: 22/01/2010

International Environmental Management Conventions

22. Viet Nam is signatory to the following relevant international conventions:

- 2009, Stockholm Convention on Protection of Human Health and the Environment from Persistent Organic Chemicals [including PCBs]
- 1971, Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar)
- 1982, Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Paris

- 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage October 1987]
- 1973, Convention on International Trade in Endangered Species Wild Fauna and Flora
- 1985 FAO International Code of Conduct on the Distribution and Use of Pesticides
- 1985 Vienna Convention for the Protection of the Ozone Layer
- 1987 Montreal Protocol on Substances that Deplete the Ozone Layer
- 1992, Copenhagen Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen
- 1989, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
- 1992, United Nations Framework Convention on Climate Change
- 1992, Convention on Biological Diversity

C. ADB Safeguard Policy

23. The ADB Safeguard Policy Statement (ADB SPS, 2009) along with the recent good safeguard practice sourcebook clarify the rationale, scope and content of an EA and supported by technical guidelines (e.g., Environmental Assessment Guidelines 2003). Projects are initially screened to determine the level of assessment that is required according to the following three environmental categories (A, B, or C).

24. Category A is assigned to projects that normally cause significant or major environmental impacts that are irreversible, diverse or unprecedented such as hydroelectric dams (an Environmental Impact Assessment is required). Category B projects have potential adverse impacts that are less adverse than those of category A, are site-specific, largely reversible, and for which mitigation measures can be designed more readily than for category A projects (an Initial Environmental Examination is required). Category C projects are likely to have minimal or no negative environmental impacts. An environmental assessment for Category C projects is not required but environmental implications need to be reviewed. The Rapid Environmental Assessment (REA) checklist of the subproject is presented in Appendix A.

IV. DESCRIPTION OF SUBPROJECT

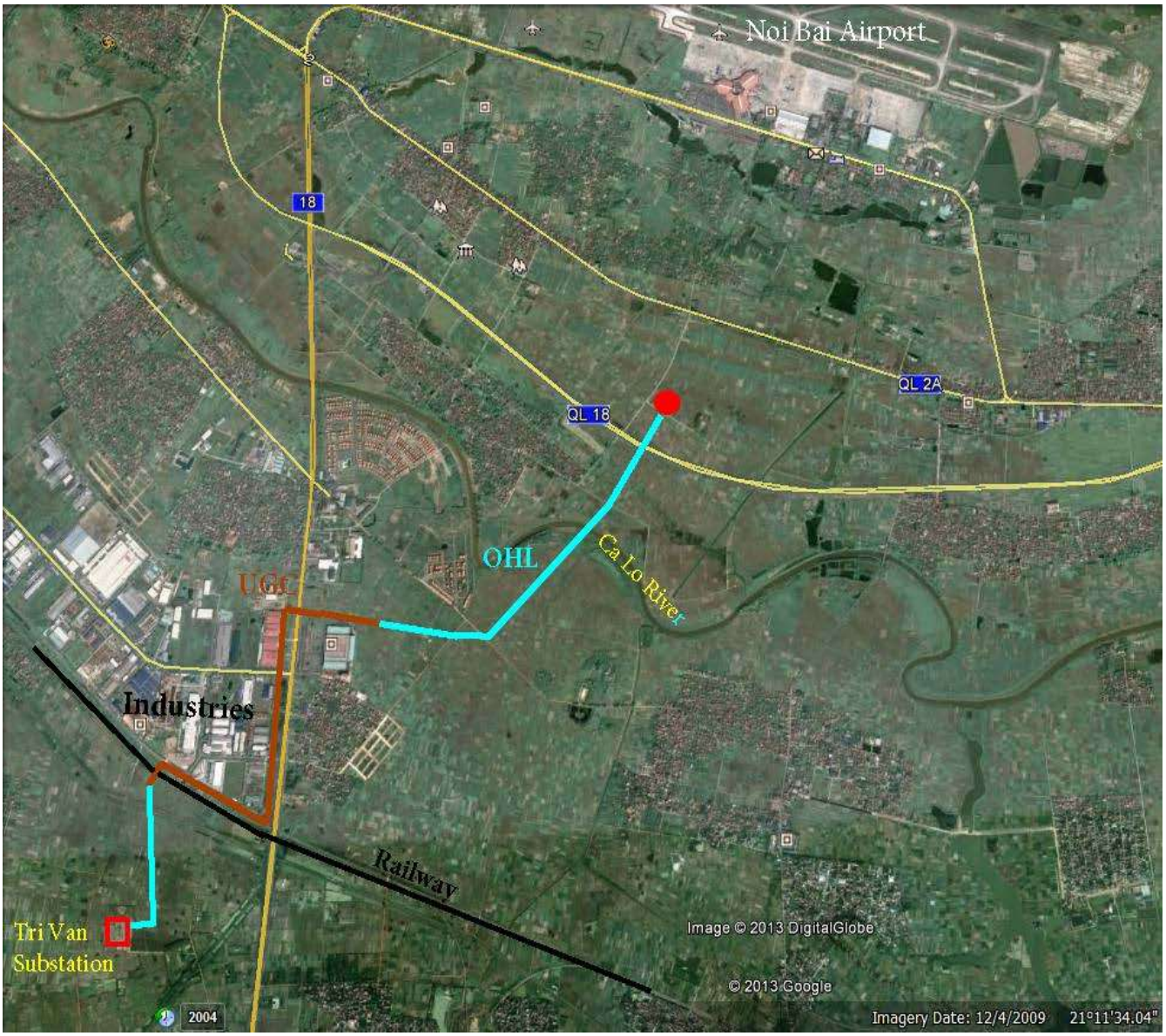
25. The Noi Bai airport core subproject consists of two main components defined by: 1) new the 110kV Substation; 2) the new 110kV overhead line (OHL) and underground cable (UGC) transmission line. The description of the subproject is adapted from the Draft Final Report and provided below. The location of the new Noi Bai 110 kV Substation and Transmission line is shown in Figure 1.

A. New 110 kV Noi Bai Airport Substation

1. Existing situation

26. The Noi Bai airport is expanding with the ongoing construction of the new international terminal which is due to be completed in 2015. The expansion of the airport plus the associated expansion of commercial enterprise that will occur to support the airport will require more power than the local substations can provide. Thus, the new substation and connecting transmission line are required urgently.

Figure 1. Noi Bai 110 kV Substation and OHL (blue) and UGC (brown) transmission line



2. Subproject Features

27. The new Noi Bai Airport substation features[6] will be dedicated exclusively to supply power only to the Noi Bai Airport. EVN HANOI is responsible in building the 110 kV SS only while the cables on feeders 22 kV is the responsibility of the main construction contractor of the airport terminal 2. The substation will be located on 0.36 ha in Phu Cuong commune, Soc Son district, of Ha Noi. Main features of the substation include:

1. New 10/22/10 kV substation with capacity 2x25 MVA; and
2. New 110 kV above and below ground 5 km transmission line.

28. Key activities and components of the subproject are summarized below:

1. Construction of a 110 kV underground and above ground (OHL) cable supplying power to the substation. Cable starts at E10 bay of Van Tri 110/220 kV substation and extends to 110 kV gantry tower of new Noi Bai Airport 110 kV substation.

2. The length of transmission is 5,003 m including OHL (2,708 m) and UGC (2,295 m) cables.

3. The number of circuits is 02.

4. Conductor is E09ACSR 240/32, and underground cable: XLPE-1,200 mm

5. Voltage level is 110/22/11 kV, 110 kV at the HV side, 22 kV at MV side (11 kV coil used as equalizing coil).

6. Capacity is 02 transformers of 25 MVA (according to approved technical scheme).

V. DESCRIPTION OF AFFECTED ENVIRONMENT

29. The environmental baseline information was obtained primarily from Ha Noi Statistical Yearbooks, state of the environment reports (SoER) prepared by Ha Noi DoNRE, reports from PECC1, and supplemented from the literature including other environmental assessments conducted for the same area. The description of affected environment focuses on natural features and land use.

[6] Adapted from Draft Final Report

A. Physical Environment

1. Climate

30. Hanoi experiences the typical climate of northern Vietnam, where summers are hot and humid, and winters are, by national standards, relatively cold and dry. Summers, lasting from May to September, are hot and humid, receiving the majority of the annual 1,680 millimetres (66.1 in) of rainfall. The winters, lasting from November to March, are relatively mild, dry (in the first half) or humid (in the second half), while spring (April) can bring light rains. Autumn (October) is the best time of year in term of weather. Humidity and rainfall are quite large, averaging 114 days/year.

a. Temperature

31. Extreme temperatures have ranged from 2.7 °C (36.9 °F) to 40.4°C (105 °F). The average temperature is about 24°C (Table 2)

Table 2. Average air temperature in months in Ha Noi (Lang station)

Month Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Average**
2008	15.12	13.8	21.4	24.7	27.5	28.6	29.4	29.0	28.3	26.5	21.4	18.4	**23.7**
2009	16.0	22.5	20.9	24.7	27.1	30.3	29.5	29.9	29.1	26.8	21.9	19.9	**24.9**
2010	18.1	20.9	21.9	23.5	28.7	30.9	30.7	28.6	28.7	25.7	22.1	19.4	**24.9**
2011	12.8	17.7	17.1	23.8	27.2	29.5	29.9	28.9	27.6	24.5	23.8	17.4	**23.4**

(Source:Hanoi Statistical Yearbook 2011)

b. Sunlight hours

32. Average number of sunlight hours in a year is of 1055 - 1300 hours or more. The city is usually cloudy and foggy in the winter time with average monthly sunshine hours for February are only 1.8 h/day. Table 3 shows the average number of sunlight hours observed in Lang meteorological station during years 2008-2011

Table 3. Average number of sunlight hours in Ha Noi (Lang station)

Month Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Average**
2008	59.1	26.3	67.6	73.0	137.7	115.2	150.1	123.5	123.0	83.3	145.2	110.0	**1215**
2009	103.9	74.7	50.9	84.5	143.1	160.8	142.5	171.6	132.1	122.1	135.4	77.1	**1398.7**

2010	32.8	93.6	50.7	48.3	130.8	159.2	180.1	120.8	145.0	102.3	103.1	78.6	**1245.3**
2011	37	38.5	15.2	56.0	141.2	126.1	149.9	150.1	102.4	72.6	104.6	95.0	**1055.3**

(Source:Hanoi Statistical Yearbook 2011)

c. Humidity and Rainfall

33. Hanoi features a warm humid subtropical climate with plentiful precipitation**.** The average humidity varies from 77% to 79% from 2008 and 2011 (Table 4). Total annual average rainfall in Hanoi is from 1800 mm to 2000 mm. Table 5 shows the average rainfall observed in Lang meteorological station during years 2008-2011

Table 4. Average humidity in months in Ha Noi (Lang station)

Month Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Average (%)**
2008	80	72	82	84	79	81	79	83	80	80	76	75	**79**
2009	72	84	82	82	81	74	79	78	76	75	66	74	**77**
2010	81	80	78	85	81	74	74	82	79	70	71	77	**78**
2011	71	83	81	80	76	80	78	81	81	79	77	68	**78**

(Source:Hanoi Statistical Yearbook 2011)

Table 5. Rainfall in months in Ha Noi (Lang station)

Month Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Average**
2008	26.6	13.9	20.2	121.6	184.0	234.3	423.5	304.5	199.4	469.0	258.7	11.4	**2267.1**
2009	4.9	8.0	49.1	74.3	229.0	242.4	550.5	215.7	154.6	78.8	1.2	3.6	**1612.1**
2010	80.9	8.1	5.8	55.6	149.7	175.4	280.4	274.4	171.8	24.9	0.6	11.6	**1239.2**
2011	9.3	17.5	105.9	42.0	149.0	388.3	255.3	313.2	247.3	177.6	31.8	51.5	**1788.7**

(Source: Hanoi Statistical Yearbook 2011)

d. Wind velocity

34. In subproject area, prevailing wind direction is north-east wind in winter, prevailing wind direction is southeast wind in summer. The Average wind speed in months in Ha Noi is shown in Table 6.

Table 6. Average wind speed in months in Ha Noi

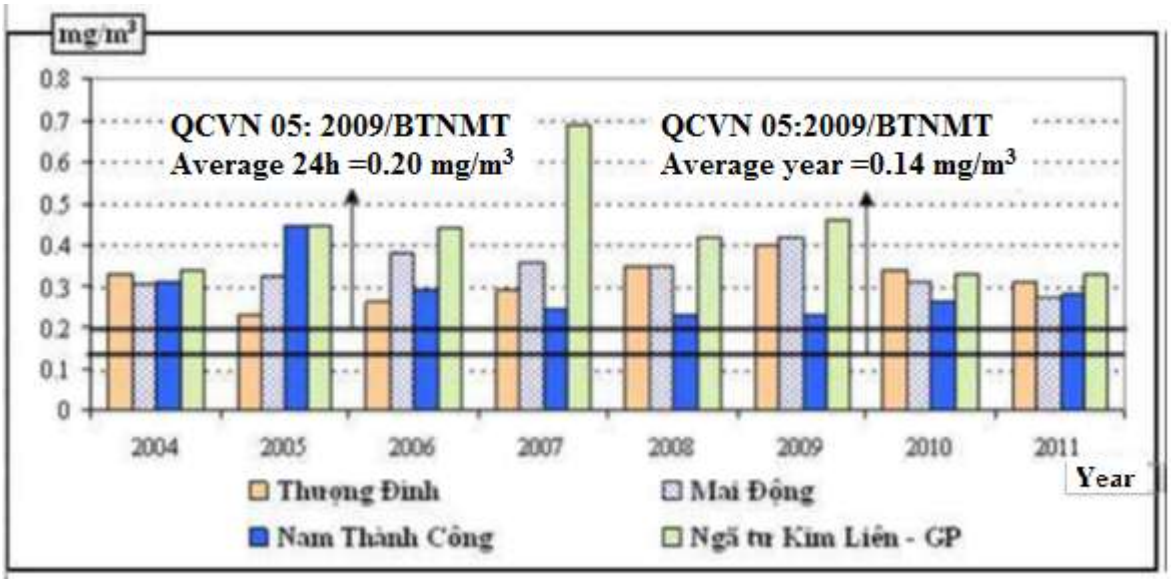
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Average**
(m/s)	1.9	2.1	2.0	2.1	2.2	1.8	1.8	1.6	1.6	1.7	1.7	1.7	1.9

(Source:Vietnam building Code 02:2009/BXD)

2. Air quality

35. According to a report on the environmental status of the 2011 Hanoi Department of Natural Resources and Environment in Hanoi, the status of air pollution in Hanoi is at a "red alert". The concentration of suspended dust in the urban districts exceeds air quality standards by 5-6 times, sometimes 10 times. Average in public places in the capital, dust concentrations exceed permitted levels 2-4 times. Environmental monitoring results from 2004 - 2011 for the TSP dust values in Hanoi are shown in Table 7.

Table 7. TSP dust values in Hanoi from 2004 – 2011



(Source: VEPA, 2012)

3. Topography geology and soils

a. Topography.

36. The majority of the Hanoi area is located in the Red River delta with an average elevation of 15m to 20m above sea level. The hilly areas are in the north and northwest of Soc Son district of the southern edge of Tam Dao Mountains with elevations from 20m to over 400m. The highest peak is 462m- Chan Chim peak. The topography of Hanoi lowers from north to south and from west to east. The main topographic form of Hanoi is a plain enriched by the alluvial river with high alluvial terraces; among them are low lying areas with lakes. Particularly the high terraces are only in Soc Son district in northern and eastern of Dong Anh district. In addition, in Hanoi are mountainous terrains and hills concentrated in Soc Son mountain area.

110kV underground cable (UGC) and overhead line (OHL)

26. The 110kV UGC and OHL for power supply to 110kV substation of Noi Bai International Airport starts at 110 kV bay of Van Tri 220kV substation, and terminates at 110kV gantry tower of Noi Bai International Airport 110kV substation. The route, with length of 5003 m, consists of OHL (2708m) and underground cables (2295m) which passes the territory of Nam Hong and Bac Hong communes, Dong Anh, Quang Minh town of Me Linh, Phu Cuong commune, Soc Son district of Hanoi. The overhead line passes paddy fields. The underground cable goes under the pavement of Bac Thang Long - Noi Bai road, internal road of Quang Minh Industrial Park, road at the south of housing area and Quang Minh exhibition.

110kV Noi Bai Airport substation

26. The 110kV Noi Bai Airport Substation will be built on land for rice cultivation of Phu Cuong commune, Soc Son district, Hanoi (under agreement of Phu Cuong commune and Soc Son district People's Committees). The topography of the area is relatively flat with elevation ranging from 0.1m to 0.5m.

b. Geology.

The results of exploration drilling around the subproject area show the following:

<u>OHL and UGC transmission line:</u>

a) Class (KQ): Clay silt, yellowish grey, brownish grey, reddish brown, organic water, mixed component

b) Class 1: Clay – Clay silt, yellowish grey, reddish brown, bluish grey,

c) Class 2: Clay silt, bluish grey, darkish grey,

4) Class 3: Medium sand, medium sand with cobble, brownish grey, yellowish grey, medium dense.

5) Class 4: Sand silt, brownish grey, darkish grey**.**

Substation site:

a) Class (KQ): Clay silt, yellowish grey, brownish grey, reddish brown, organic water, mixed component; depth from 0.4m to 0.6m.

b) Class 1: Clay – Clay silt, yellowish grey, reddish brown, bluish grey, depth from 3.3m to 3.6m.

c) Class 3: Medium sand, medium sand with cobble, brownish grey, medium dense.

c. Soil

37. Most of surface area of the Red River Delta (RRD) which includes Hanoi is covered by sediment formation. The youngest formation with around 3000 years of age is mainly original from lacustrine and shallow-sea sediment. In Hanoi area, their highest thickness reaches around 30 m; the sediment formations are predominated by soft soils. Ha Noi has 18 major soil types include 36 769 ha of alluvial soil accounting for 56%, 16 819 ha of degraded land accounting for 26%, the other soils is 12.019ha accounting for 18%.

4. Surface water / groundwater resources

38. Surface water sources are from 19 large and small rivers with water surface area of 32.6 km2 and 3,600 ha of ponds, lakes, marshes. Surface water reserves is 571.3 m^2 / s (49.36 million m^3), reservoir capacity is 10.66 million m^3.

39. Currently the main source of water supply is groundwater, which extracted from the borehole system. Today groundwater is also being depleted and polluted.

40. According to the Hanoi Environment and Natural Resources Department, the total volume of groundwater extracted in Ha Noi is 700,000 m^3/day from over 170,000 wells. The extracted in 2020 is expected to reach 1.4 million m^3/day.

41. Surface water quality in Hanoi is severely polluted. The rivers and lakes within the city are very dirty and polluted by the current wastewater drainage of the city. Existing groundwater sources are also degraded in both quantity and quality. Monitoring results of the Water Resources Monitoring and Forecast Center (MONRE) also confirmed that depth of the water table in Ha Noi is increasing, meaning that groundwater is being depleted. In many places the groundwater quality does not meet standards. Concentrations of many water quality parameters such as ammonia, arsenic, and organic matter are higher than the allowable limit. If this situation lasts the useable groundwater in Hanoi will be depleted.

B. Biological Environment

1. Vegetation and Land Use

42. Ha Noi has 23,510 ha of forest land (former Hanoi: 6,740ha and former Ha Tay: 16,770 ha), which makes up 6.9% of its natural area, of which 3,922ha is natural forest and 19,568ha is planted forest. Its natural preserves are composed of Ba Vi National Park, Chua Huong Natural Forest (My Duc District). Forest in Ha Noi is a vital resource for keeping the ecological environment balance and preventing hill land from eroding. In addition, forest creates landscapes for tourist activities and resort buildup.

43. Vegetation and land use systems occurring within the RoW is shown in Table 8. The majority of the RoW is rice paddy, which occupy 3.8 km of the RoW, while the next most common feature is industrial parks which occupy 0.99 km of the RoW. The width of ROW is 15 m.

Table 8. Vegetation and Land Use within RoW of transmission line and substation

No	Section	Length (m)	Area* (m^2)	Paddy lúa (m^2)	River	Road	Residential area	Industrial parks	Commercial area
	Transmission line								
1	ĐĐ-G1	108	1620	108					
2	G1-C5	530	7950	530					
	Underground Cable	2295	11475	1255		50		990	
	Transmission line								
1	C6-G2	387	5805	387					
	G2-G3	150	2250	150					
	G3-G4	66	990	66					
	G4-G5	862	12930	762	100				
	G5-ĐC	605	9075	550		55			
TOTAL		**5003**	**52095**	**3808**	**100**	**105**		**990**	
	Substation								
1.		60x60	3600	3600					

*Area is calculated by Distance x safety zone along the line for 110kV and 220 kV

2. Wildlife

44. The subproject area is both rural and urban with clouded residential area. No significant wildlife occurs any longer within the area. There are no climbing animals that could interfere with the transmission line. A check of websites e.g. Birdlife International does not identify any bird migration routes through Vietnam. The Asian Flyway does not pass through Vietnam and instead heads south through the Philippines.

3. Conservation Areas

45. There are no conservation areas within the proximity of the substation and transmission line.

C. Socio-economic condition

1. Population

46. The transmission line and substation is situated within Ha Noi City and includes 3 districts with 3 communes and 1 town. The population within the immediate subproject area (as defined by communes through which the transmission line passes) is 35,813 persons with 63% of the population being rural based and the remaining 37% as being urban based. Population statistics for the RoW route is located as shown in Table 9. There are no ethnic minority groups in the area.

Table 9. Population distribution within the subproject area

Location			Rural Communes	Urban Town	Population (no)
Province	**District/**	**Commune/ Town**			
Ha Noi City	Soc Son	Phu Cuong	13,509		13,509
	Me Linh	Quang Minh		21,338	21,338
	Dong Anh	Nam Hong	10,658		10,658
	Dong Anh	Bac Hong	11,646		11,646
TOTAL			**35,813**	**21,338**	**57,151**
%			**63%**	**37%**	**100%**

Source: Statistical Data from 2010 Census

2. Local Economy

47. In 2008, gross domestic product (GDP) of the city (the expanded city) rose 10%, of which industrial additional value is up 11.7%, service 10.78%, agro-forestry-fishery 2.68%. Its economic structure in 2008 is as follows: service making up 52.17%, industry-construction 41.28%, agriculture-forestry-fishery 6.55%.

48. In 2012, Hanoi economy continued to grow, giving increasingly important position for the country and an economic impetus for the northern key economic area. Product value and revenue of Hanoi accounted for approximately 10% GDP of the country and nearly 20% of the total national budget, respectively and increased 2 times compared with 2008.

49. In 2012, the value of the product per capita increased by 1.33 times, total social investment capital increased 1.87 times, exports increased by an average of 10.5 times compared with 2008. The social security aspects are particular concern, especially policy for the poor. In the period 2008 - 2012, the poverty rate decreased 1.5-2 times per year, and in 2013

the poverty rate is estimated 2.35%. The socio-economic situation of 4 communes and wards in the subproject areas is summarized below.

a. Bac Hong commune, Dong Anh district

50. This community which is located in the north west of Dong Anh Dist. is surrounded by five communities: Nam Hong, Van Noi, Nguyen Khe (belong to Dong Anh Dist.), Phu Cuong, and Quang Minh Town, belong to Me Linh Dist., about 25km from center of Hanoi capital, total natural land area is 709.95 ha, in which agriculture land is 429.44 ha. The population is 11,646 people, with 65% involved in for agriculture and related activities and 35% for services, industrial, construction, etc. There are also some industries such as produce wood furniture, sewing, and mechanical engineering works.

b. Nam Hong commune, Dong Anh district

51. This area is 1719 ha in which agricultural land occupies 859.5 ha; industry land 498.39 ha; and the other activities 361.11 ha. Population is 10,658 people, with 110 poor households. Industry account for 30% of total revenues.

c. Phu Cuong commune, Soc Son district

52. This area is 899.13 ha in which agricultural land occupies 277.5 ha. It has 3 villages and one administrative area. Population is 13,509 people with income per capita being 24.5 million VND/year. Phu Cuong commune has 3140 households in which agricultural households is 1771, the other is non-agricultural. There are 91 poor households.

d. Quang Minh town-Melinh District

53. The area is 889.6ha, in which agricultural land is 225.5ha and industry land is 664.1ha. Industry account for 20% of revenues, the remaining is from services.
Population is 21,338 people. Commune has 2536 rich households, 4050 middle-income households and 246 poor households. Income per capita is 2,250,000 million VND/month.

3. Social Infrastructure

a. Public Health and Sanitation.

54. The location of the transmission line close to Hanoi City means that all communities have good access to medical services. Local medical facilities include healthcare stations at the commune level which includes first aid and medical assistance for minor illnesses and maternal services. Medical emergencies are referred to district hospitals while more complex surgery is carried out in the main hospitals in Ha Noi City. Services and trained medical staff are increasing.

55. Ha Noi is the largest Vietnamese heath center. According to the figures from Vietnam Statistics Agency in 2007, former Ha Noi had 232 health stations, 26 clinics, 19 hospitals, 4,448 patient beds, 1,705 doctors under the Ministry of Health. Former Ha Tay had 322 heath stations, 17 clinics, 16 hospitals, 4,500 patient beds, and 986 doctors. Its health system is more and more developed; many health centers in districts were upscaled to increase health care services for patients from other provinces. Coupled with the state-run health system, Ha Noi has private

hospitals and clinics. In 2008, Ha Noi had 8 private hospitals with some 300 patient beds. Ha Noi is to have more 8-10 private hospitals by 2010 when total patient beds amount to some 2,500.

56. Hanoi is one of two provinces where the number of people infected with HIV is highest, after Ho Chi Minh City. Information from the Center for HIV / AIDS, Hanoi Department of Health showed that, according Statistics to mid-2013, around Hanoi are about 24,000 people who are infected by HIV (in which 3,800 people died of AIDS). All 29 districts in the city have reported detection of the infection; 536 of the total 577 communes, wards and townships (92.8%) have reported data from HIV infection. The number of people infected with HIV are mainly concentrated in urban districts, such as Dong Da, Hoan Kiem, Hai Ba Trung, Ba Dinh. By contrast, in the outlying districts Ha Noi such as Thach That, Thanh Oai, Quoc Oai, people infected is low. In Hanoi area, nearly 2,000 HIV infected persons are not Hanoi citizens. The sanitation situation in the subproject areas are presented below.

***Bac Hong Commune, Dong Anh district*:**
100% of households use electricity from substations which is used to pump water from drilled wells. Garbage is collected by local people.

***Nam Hong commune, Dong Anh district*:**
100 % of households use drilled wells. Garbage is collected by local people.

Phu Cuong commune, Soc son district:
Households use water from Ha Noi clean water company and drilled wells. Garbage is collected and disposed by Tan Cuong environmental co-operative.

Quang Minh town, Me Linh district:
100% of households use water from drilled wells. Garbage is collected by environmental town unit.

b. Education

57. Ha Noi has hundreds of leading institutes, more than 50 universities and colleges that are training important laborers and supplying some 80,000 graduates to the laborer market. In addition, it supplies skilled and advanced workers for enterprises to scale up their business.

58. Infrastructure and literacy is high in the area due to good access to primary and secondary schools, while technical and tertiary education is available in numerous colleges within Ha Noi City. The number of schools in the subproject area in presented in Table 10.

Table 10. The number of schools in the subproject area

District	***Commune/ward***	***Nursery school***	***Elementary school***	***Middle school***	***High school***
Dong Anh district	Bac Hong commune,	1	1	1	0
Dong Anh	Nam Hong	1	1	1	2

district	commune,				
Soc Son district	Phu Cuong commune,	1	1	1	0
Me Linh district	Quang Minh town	1	2	1	0

c. Communications

59. Ha Noi is the biggest communications center in the country. Its communications network satisfies swift communication information demand nationwide and worldwide. Infrastructure for transport, communications and electricity are being constantly improved so that people's standard of living and access to services has improved appreciably. All households in the subproject area have TV and telephone. All communes or wards have their own mass communication facilities. The post office locations are a short distance for all people.

d. Water and electricity and transport

60. Ha Noi has a synchronous and developed transport system. Noi Bai International Airport is 40 km away from its center.

Water supply:

61. Currently 96-97% of Ha Noi's urban dwellers are supplied with 120 liters/ person/day.

Power supply**:**

62. Ha Noi currently has 7 electric stations and 200kV and 500kV lines, 23 10-kV electric downloading stations. Levels of 35, 10, and 6kV are gradual shrunk, and levels of 22kV/ 0.4kV are saved. A 22kV line in urban and neighboring areas is designed.

63. The road network is reasonably well developed throughout the subproject area. A network of provincial, district, commune and village roads also serve the area. The majority of the roads to the central communes have now been upgraded to concrete and asphalt. In *Bac Hong Commune, Dong Anh distric*t the road is concrete. In *Nam Hong commune, Dong Anh district* the road network is 33.5 km, include 29.7 km concrete roads and 3.8 km of brick roads. Electricity is supplied by 11 substations. In Phu Cuong commune, Soc son district the roads are 50.0% concrete. Estimated 100% of households using to power from urban electric network. In *Me Linh district* of Quang Minh town, the road network include 1,350 m dirt roads, 2,950 m of aggregate road, 33,567 m concrete roads, and 2,300 m of brick road.

4. Cultural and Heritage Sites

64. PECC1 compiled a list of cultural and heritage items within the RoW which are shown in Table 3. While there are several temples and other public infrastructure within the vicinity of the transmission line corridor, the RoW has been sited to avoid these structures. There are no distance criteria to justify the acceptability of the location of the RoW with regard to the transmission line. However, based on the subproject scale and activities, it can be confirmed that the subproject activities will not have an impact on those cultural heritage sites. EVN

HANOI confirms that the separation distances are acceptable and as such none of these structures will be affected by the subproject. A list of cultural and heritage sites within the vicinity of the substation is given in Tables 11 and 12.

Table 11. List of Historic Buildings and Public Infrastructure within 500m of RoW

No	Distance from center line (m)		Name of infrastructures	Location
	Left	Right		
1	200		Nam Hong commune cemetery	Commune Nam Hong- Dong Anh- Ha Noi
2		150	Bac Hong commune cemetery	Commune Bac Hong- Dong Anh- Ha Noi
3	400		Dai Bi Pagoda	Quang Minh town – Me Linh – Ha Noi
4		120	Tap Linh Temple	Commune Phu Cuong- Soc Son- Ha Noi

Source: PECC1, 2013

Table 12. List of Historic Buildings and Public Infrastructure within 500m of the substation

Substation	Name of infrastructures	Distance and direction from the substation
1	Air traffic station of Noi Bai airport	150 m on the East

Source: PECC1, 2013

5. UXO Clearance

65. After decades of war UXO is a significant issue in Vietnam. While most UXO has been cleared from agricultural areas the Ha Noi area, GoV military officials consider that there is a high risk of UXO remaining within area proposed for the transmission line RoW. It is a legal requirement that the safety of construction workers is ensured by having specialized army units to clear UXO before construction commences[2]. It is a requirement that surveys be made to identify and clear UXO before construction.

6. Subproject affected people

66. Communities will be affected by loss of land and loss of assets within the RoW. All households that are affected by permanent or temporary losses will be compensated according to the Resettlement Plan (RP). Loss of land includes both permanent and temporary loss of land.

a. Permanent loss

67. According to Resettlement Plan conducted by PECC1 (2013), the permanent loss of land and other impact on local people are as follows:

(i) The 110 kV OHL: In the route corridor, trees under 4m high are allowed to exist and normal cultivation can be done under the line. Therefore, the project only affects rice crops in the positions of tower foundation and compensation for route corridor section which crosses the acacia field near the Ca Lo river with a length of 82m. The size of the tower foundation of 6.6 m x 6.6 m to 11.1 m x11.1m. The total permanent land occupying area along the entire route is 1160 m^2

(ii) 110 kV underground cable: Underground cable is laid mainly in cultivation land, the land under Bac Thang Long - Noi Bai Road project. So, clearance and compensation for plants over the whole route with the width of 5.15 m will be conducted. The total permanent land occupying area along the entire route is 11405m^2.

(iii) 110kV Noi Bai airport substation: 110kV Noi Bai International Airport Substation is located in the rice cultivation land of Phu Cuong Commune - Soc Son district. So, clearance and compensation for plants over the area for building substation will be conducted. The total permanent land occupying area is 3,734m^2 (including 3,600m^2 for building substation and 134m^2 for access road).

(iv) Grave relocation. There are 02 graves in the substation area, 02 graves in underground cable route. Therefore, moving 04 graves should be conducted for building the substation and underground cable route.

(v) There are no houses, no buildings located in the corridor of the line**.**

b. Temporary loss

68. This land includes the loss of land along the RoW which will be cleared of vegetation that exceeds the safety criteria i.e. they must not be higher than 2.0m for 110kv and 3.0m for 110kV systems. Landholders will be compensated for loss of access to crop areas during conductor stringing when vehicle access will be required along the RoW which will destroy crops and interfere with crop practices. During operation, farmers will be able to grow and cultivate crops under the RoW provided these do not exceed the established conductor safety limits. In total, 19421 m^2 of land, that includes 13001 m^2 for OHL construction and 6420 m^2 construction of underground cable, will be temporarily affected.

7. Features of Noi Bai 110 kV and Transmission Line Sites.

69. Figure 1 shows the location of the site for the new 110 kV substation south of Noi Bai airport in rice paddy. The proposed overhead (OHL) section transmission line will extend across rice paddy across the small Ca Lo river to the point where it will go underground. The underground section will continue under the highway, alongside the property of an industrial park, to then go under a railway. North of the railway the transmission line becomes above ground to continue to the existing Tri Van Substation.

70. Supplementing Figure 1 are views of the site for the 110 kV Noi Bai Substation and Transmission Line shown in Figure 2.

Figure 2. Views of Noi Bai 110 kV Substation and Transmission Line

	Fig 2a: Rice paddy site for 110 kV Substation southeast of Noi Bai airport
	Fig 2b: Site where final section of OHL transmission will join end of UGC after passing underneath railway to continue to Van Tri SS located upper left in photo

	Fig 2c: Industrial area alongside which UGC section will be laid just south of railway (b)

VI. INFORMATION DISCLOSURE AND PUBLIC CONSULTATION

A. Information Disclosure

71. Formal disclosure of information on the Noi Bai 110 kV Substation and Transmission Line project that occurred to affected persons and stakeholders during the IEE is meant to form the beginning of continued information disclosure and stakeholder involvement with the subproject as the subproject is implemented. As part of the stakeholder communication strategy, regular information exchange meetings with stakeholders are strongly encouraged throughout implementation of the subproject.

72. The IEE must be easily available to the stakeholders contacted in written and verbal forms and in local language of Vietnamese. At a minimum, the Executive Summary of the IEE should be translated to local language and distributed to all APs. The IEE should be available on the EVN HANOI website, at the EVN HANOI office in Ha Noi, and at the subproject sites. Similarly, all subproject reporting with specific reference to stakeholder consultation minutes, environmental monitoring, and reports on EMP implementation released by the EA/IA should be available at the same offices and websites..

B. Public Consultation

The stakeholder consultation strategy was developed to meet the requirements of meaningful consultation as stipulated by the ADB SPS (2009). The strategy embodied the principles of meaningful engagement, transparency, participation, and inclusiveness to ensure that affected

and marginalized groups such as women, and the poor, were given equal opportunities to participate in the design of the subproject.

1. Identification of Stakeholders

73. Stakeholders were identified and engaged in a participatory manner. Stakeholder communication focused on institutional stakeholders, affected communities, and persons directly affected by proposed subproject interventions. The stakeholders of the subproject include:

- Institutional stakeholders such as: (i) PPC, (ii) DPC; (iii) Project EA, (iv) PECC4, and (v) commune leaders;

- Mass organizations such as Womens Union, and Farmers Union which provided information for the design of the various subproject interventions, and which might participate in implementation of measures and interventions;

- Affected households and businesses living along the transmission line and near the substation site who may be directly and/or adversely affected, and who have an interest in the identification and implementation of measures to avoid or minimize negative impacts; and

- Other institutions or individuals with a vested interest in the outcomes and/or impacts of the subproject.

2. Public consultation meeting

74. Formal community consultation meetings were held to discuss the location and potential environmental and social impacts of the transmission line and substation. Public consultations were held in (i) Phu Cuong commune, Soc Son district town of Quang Minh and Hanoi in October 30, 2013, and (ii) Bac Hong commune, Dong Anh district, Nam Hong commune, Dong Anh district in Hanoi on October 22, 2013.

75. The public meeting consisted of the following three component procedures:

(i) The engineering consultant introduced the subproject including the substation location, the route of underground cable, and the length of the cable that will traverse communes and wards;

(ii) The environmental consultant presented ADB's environmental policy, safety regulations in the Vietnam power sector, anticipated environmental impacts and respective mitigation measures (to be developed in IEE), the grievance redress mechanism for environmental and resettlement problems; and

(iii) The social/resettlement consultants presented: ADB's resettlement plan; impacts due to the acquisition of land and properties; policies of GOV and local authorities, the

Project's policies in compensation for loss as the state acquired land and properties on land.

76. During the meeting, people raised their questions and comments on the environmental issues. The participants of the meetings included Commune leaders, representatives of mass organization such as Womens Union, Farmers union and affected people. A total of 82 people were consulted on the views and concerns of the subproject (Appendix B).

3. Results of Public Consultation

a. Comments from communal authorities

77. The main comments of communal authorities are about:

(i) Impacts and required mitigation measures of transportation of construction materials on road condition, community transport, drains, irrigation canal, etc.
(ii) Impacts and required mitigation measures of the power transmission line passing through cultivated fields to avoid impact on the rice production and harvest.
(iii) The location for tower placements must minimize damage to rice paddy. When digging tower foot constructor needs to make a fence surrounding the pit to prevent children from falling into the pit.
(iv) Lightning protection systems need to be installed firmly with solid grounding system to manage lightning strikes.
(v) Registration of temporary workers with local authority to ensure public security.

The summary of comments/questions from local authorities/people and answers of project owners and consultants company PECC4 are summarized in Table 13.

Table 13. Comments and Issues of Public Stakeholders and Response from PECC4

Location and time	Comments/questions from local authorities	Answers of Project owners and consultants company PECC4	Response of Project
PHU CUONG COMMUNE, SOC SON DISTRICT 18 October 2013	How have the construction activities affected community transport and local peoples?	The impact is not high and negligible.	The Mitigation Plan of EMP prescribes sub-plans to prevent or minimize impacts on community.
	The Project will need to construct a new road to the subproject site (next to the old road corridor) When construction is finished the road needs to be rehabilitated.	The new road construction is planned. The road rehabilitation will be implemented when subproject is implemented.	The EMP also indicates likely need to upgrade access road to new substation site.
	At Hong Ky Commune electric shock [from exposure to transmission or substation] killed buffalo. Need to research the electric field in order not to affect people	The height of tower is 30-37 m to prevent impact of electromagnetic field to surrounding people and animals.	n/a, EMF not a health hazard
	Lightning protection systems need to be installed firmly with solid grounding system to manage lightning strikes	Lightning protection systems are sometimes not effective because these are dismantled by local people. The Government has issued a regulation to fine people who damage lightning protection systems. Before construction of road surveyed, ensure funds exist to strengthen public road services.	Should be addressed at detailed design phase
	The location for tower placements must minimize damage to rice paddy.	The survey have selected the best locations. (Any changes must be approved by local authorities and related agencies)	Tower placements will occur to minimize impact of footprint of entire TL, and to stay away from Ca Lo river.

Location and time	Comments/questions from local authorities	Answers of Project owners and consultants company PECC4	Response of Project
	The construction would affect the daily and production activities of local people and affect drains, irrigation canal agricultural production activities	Will pay attention to roads and canals during construction phase.	As indicated by PECC4 for detailed design phase
	Constructing of service road next to the old road require land compensation for the people. Therefore, better to reinforce existing old road.	Will consider that.	Addressed by RP
QUANG MINH TOWN 18 October 2013	The construction activities are not large. Thus they would not have major impact on the environment. However, construction contractors should inform local people before construction. In the past, many contractors have shown no responsibility for the environment.	Construction units will inform local people before construction.	The contractors will follow the CEMP[7]s that they must develop based on EMP as part of their bid documents.
	Representative population groups agree with the environment mitigation measures proposed by project owner		Public consultations will continue.
	When people submit/voice out complaints, the Contractor should address them immediately.	The constructor should do that.	A hotline will be established to enable community to register complaints or questions throughout construction period.
	There are drain/irrigation systems in the subproject area, when transporting construction materials constructor need		The EMP has specific drainage / flood mitigation sub-plans.

[7] Contractor Environmental Management Plan

Location and time	Comments/questions from local authorities	Answers of Project owners and consultants company PECC4	Response of Project
	to pay attention not to damage drain and culvert.		
	The power transmission lines are passing through cultivated fields, the constructor needs to ensure no impact on the production and harvest of people.	The project owner has a budget to build service road to avoid causing damage to local infrastructure.	The EMPs prescribe careful construction phase activities, including notifying community of construction schedule. Civil works will be conducted to minimize construction impacts on rice paddy
	Can people use land area under transmission line and tower for agricultural production?	People can grow rice or vegetable because the height of transmission line is 10m above the ground.	As indicated by PECC4.
	The construction of underground cables may have impact on culverts for drainage and irrigation systems, and drainage of Noi Bai national road.	Any damage will be repaired after construction. The underground cable section passing national road is drilled by robot, not via an open channel so that it does not affect transportation.	As explained in Subproject Description.
	The construction of underground cables run alongside Quang Minh Industrial Park, thus, it should be contacted.	Will do that.	As per follow-up public/stakeholder consultations in EMP.
	Markers are needed to define safety corridors of electricity grid for local peoples.	No need to have the markers because the line is 10 m higher than ground people can still cultivate at the land plot below the line. There are signals at the places where underground cables are buried.	As indicated.
Bac Hong Commune, Dong	Attention to traffic is required.	Having been informed about the subproject, the subproject area through	As per required follow-up consultations

Location and time	Comments/questions from local authorities	Answers of Project owners and consultants company PECC4	Response of Project
Anh District 22 October 2013		rice fields and crops have little effect when construction excavation - We welcome this follow-up consultation to inform people to know about the subproject	outlined in EMP
	Important to declare and complete the inventory of affected community activities including suboptimal cultivated areas.	Compensation plan has been finished which indicates no complaints.	RP clarifies required compensation.
NAM HONG COMMUNE, DONG ANH DISTRICT 22 October 2013	Agree with the environmental impacts and mitigation measures.		n/a
	When the construction starts the project owner need to contact commune to resolve the land acquisition issues.	Will do that	As per requirements laid out in EMP
	When digging tower foot ensure safety by making the fence to prevent children from falling into the pit.	Will do that	As prescribed by Mitigation plan of EMP
	Do not use overloaded trucks when transporting construction material to prevent damage to the road.	If the road is damaged it will be repaired after construction is finished.	As above
	Make sure the irrigation and drainage systems are protected.	Will do that	As above
	Ensure public security by registering temporary workers to local authority	Will do that	Added to pre-construction phase of Mitigation Plan of EMP

Location and time	Comments/questions from local authorities	Answers of Project owners and consultants company PECC4	Response of Project
	The local roads are weak. Use small trucks to transport materials, and reinforce road before construction.	Each part of tower will be transported to the erection site.	As per EMP
	When installing the wire between towers wiring, need to compensate farmers for damaged crops on the ground	Pulling the wire does not affect the crops below, because the distance between the 36 m high tower is short preventing wire from touching the ground.	See RP for potential compensation
	Contractor needs to restore environment after construction is completed.	Will do that	Restoration of disturbed environments is explicit in EMP
	When defining location of transmission poles, the constructor and project owner need to discuss with commune PC to find the most appropriate placements.	Will do that	As part of the follow-up consultations with affected public and stakeholders as stipulated in EMP.
	Do not affect the production and life of the people in the construction process.	Prior to construction, public meetings with the contractor will be held to thoroughly understand the potential issues of resettlement and environment.	The essence of the EMP is to prevent or minimize all negative effects of the subproject on the people and environment.
Conclusion	Phu Cuong, Bac Hong, Nam Hong Commune People's Committee (CPCs), Quang Minh Town People's Committee and affected households agree and will support the construction of Noi Bai 110kV substation and the 110kV transmission line connecting to Noi Bai 110kV substation.		

VII. POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATIONS

78. The assessment of potential impacts of the subproject is structured by the three development phases of the subproject defined by: *pre-construction*, *construction*, and *post-construction operational phase.* The two major components of the subproject (Substation and Transmission line) addressed in this IEE.

79. In this way, potential impacts of common activities of the three phases can be addressed together thereby minimizing redundant assessments. Potential impacts specific to the subproject component are discussed separately. This structure is carried forward and is also used to structure the EMP for the subproject.

A. Subproject Benefits

80. The primary targeted benefit of the subproject is provision of needed electrical power to the expanding Noi Bai airport of Ha Noi, and to support the rapid peri-urban, commercial, and industrial development that is occurring.

B. Pre-construction Phase

81. At the time of writing, incomplete field data indicate that some residential and agricultural land will be permanently and temporarily lost due to the new substation and OHL and UGC transmission line. The permanent lost of land will occur mostly from the substation while the greatest area of land temporarily lost will occur along the transmission line. The details of the land losses and compensation are found in the draft Resettlement Plan (RP).

a. Updating Environmental Management Plan

82. The subproject EMP will need to be updated during the pre-construction phase to ensure that the EMP fully addresses the potential impacts of the final detailed design of the Noi Bai 110 kV substation and transmission line. This will involve finalization of the mitigation and monitoring plans of the EMP that will manage and measure potential impact areas such erosion, noise, dust and air quality, construction waste and spoil disposal, construction traffic, and worker and public safety at the subproject sites. The updated EMP will be used by the contractors to prepare their contractor environmental management plans (CEMP).

83. Thus, the key impact management measures to be implemented during the pre-construction phase are:

1) Initiation of the RP and land compensation for affected households and businesses;
2) Completion of detailed designs of the subproject; and
3) Updating and initiation of subproject EMP.

C. Construction Phase

84. The potential environmental impacts of the subproject are associated primarily with the construction phase of the two subproject components. The substation and entire transmission

line is not located in a national protected area, and there are no documented rare or endangered wildlife in the area.

1. Potential impacts of the Substation and Transmission Line

85. Short-term construction-related impacts common to the construction of the Noi Bai substation and transmission Line are, for example, reduced and/or blocked public access, disrupted agriculture, noise, dust and air pollution from NOx, SOx, and CO caused by construction truck traffic and heavy equipment use, soil and paddy pollution caused by equipment operation and maintenance, public and worker accidents, increased traffic accidents, erosion and paddy sedimentation, drainage and flooding problems, solid waste and domestic pollution from worker camps, damage to existing roads traversed by the transmission lines, social disease and community problems caused by migrant workers.

a. Mitigation measures

86. Construction management measures to mitigate the potential impacts associated with the construction phase of the Noi Bai substation and transmission line are exemplified below. The mitigation measures are detailed further in the subproject EMP.

1) The entire substation area and corridor for the transmission line must be reviewed, and surveyed for unexploded ordnance (UXO) by the military of Viet Nam prior to construction. If such ordnance is detected, clearing work will need to be commissioned prior to undertaking civil works.
2) Open excavations should be fenced, and trenches covered where public walkways or vehicles must cross.
3) A cultural chance find management sub-plan must be in place in the EMP for cultural artifacts and property.
4) Regular use of wetting agents should be employed at construction sites and along construction roads to minimize dust.
5) All construction vehicles and gas powered equipment should be maintained in proper working order to minimize emissions, and should not be operated at night if possible to minimize noise nuisance.
6) Speed limits should be posted and adhered to by construction vehicles.
7) Where possible construction vehicles should use different roads or dedicated lanes of roads shared by the public.
8) Trees and other vegetation at all construction sites and along road corridors should be protected with minimal removal.
9) Present and past land use should be reviewed to assess whether excavated soils are contaminated spoil. Contaminated spoil should be disposed at a landfill or a location approved by DoNRE.
10) Berms and/or silt curtains should be constructed around all excavation/trench sites and along all rice paddy and surface waters to prevent soil erosion and sedimentation.

11) Local workers should be used as much as possible to prevent or minimize influx of migrant workers, and incidence of social disease and community unrest.

12) Worker camps must have adequate domestic waste collection facilities and sufficient pit latrines that are located away from public areas and surface waters.

13) Dedicated fuel storage areas must be established away from public areas and marked clearly.

14) To minimize the risk of public and worker injury, appropriate GoV regulations on Occupational, Safety, and Community Health must be applied[8], or the IFC/World Bank Environment, Health, and Safety Guidelines (2007) that govern the safe and orderly operation of civil works should be followed.

15) Aggregates (e.g., sand, gravel, rock) that are transported by truck should be covered.

16) Prolonged use of temporary storage piles of fill should be avoided, covered, or wetted regularly to prevent dust and erosion.

17) Sand extraction from any rivers for construction fill should be done at licensed areas only.

18) Storage of bulk fuel should be on covered concrete pads, away from the public and worker camp. Fuel storage areas and tanks must be clearly marked, protected and lighted. Contractors should be required to have an emergency plan to handle fuel and oil spillage.

2. Component-specific potential construction impacts and mitigations

87. The short-term construction-related impacts and required mitigations summarized above will vary between the substation site and transmission line. Listed below are highlighted potential construction-related impacts specific to both subproject components.

a. Noi Bai substation

88. Potential construction-related impacts of the substation are the congestion, blocked access, and increased risk of accidents along the access road to and around the site. The existing narrow road likely will become too small for existing and future construction traffic. The road may need to be widened with dedicated construction lanes, or regular traffic re-routed around the area, thereby, dedicating the entire road to construction traffic. As indicated in the footprint of the substation, agricultural land will become permanently lost.

b. Noi Bai transmission line

89. The installation of the OHL and UGC sections of the 5 km transmission line will directly affect a large swath of land defined by rice paddy and industrial lands with railway and road crossings. Thus, the relatively narrow impact footprint of the new TL crosses a great distance.

[8] e.g. Decree 110/2002/ND-CP, supplementing some Articles of Decree 06/1995 on Labour Code of Occupational Safety and Health, MoLISA

Construction vehicles, materials, and worker access to the corridor can effectively significantly widen the impact footprint to an area that is much larger than the future RoW of the transmission line.

90. Thus, construction of the entire transmission line must minimize the number of access points to the transmission line – ideally from only the two road crossings – in order to minimize lateral expansion of the corridor impact footprint. Access to the corridor should occur along the corridor from the road crossings.

D. Operation Phase

1. Noi Bai Substation

91. The potential impact of the operation of the completed 110 kV Noi Bai substation on the predominately rice paddy land is restricted to worker safety, the potential risk for children of the community gaining access to the property, and disruption in local traffic caused by substation employee traffic.

2. Noi Bai Transmission Line

92. Potential impacts associated with the operation of the OHL and UGC portions of the transmission line are restricted to worker and public safety during routine maintenance activities, and unauthorized public access to the towers, respectively. The risk of negative health effects from electromagnetic field (EMF) radiation from the transmission line are not an issue because the health effects of EMF have not been established by the international medical community.

93. The collective mitigation for potential operation effects is to prevent public access to the substation property and at the transmission towers. This management action would be implemented with effective fencing and clear signages indicating the dangers of the different facilities.

3. Climate Change

94. Regional Global Circulation Modeling project greenhouse-climate change induced changes to the frequency and severity of rainfall events in the subproject area. The design of the Noi Bai substation site includes sufficient infilling to raise the substation to a grade that will be resilient to flooding associated from a 100-year storm. Similarly, the underground section of the transmission line will be designed to withstand long standing water periods from flooding.

VIII. ANALYSIS OF ALTERNATIVES

95. The alternatives to the subproject design focused primarily on cost issues associated with the transmission line with the current placement of the OHL and UGC sections being optimal. However, the entire ROW through the rice paddy and along the industrial area to Van Tri substation appears to have minimized negative environmental impacts. The subproject

alternative of doing nothing and not building the new Noi Bai 110 kV Substation and Transmission line would result in the continued situation of power shortages in the area, which would quickly attain emergency status when the new international airport terminal is commissioned.

IX. GRIEVANCE REDRESS MECHANISM

96. A well-defined grievance redress and resolution mechanism will be established to address affected persons (AP) grievances and complaints regarding environmental issues, land acquisition, compensation and resettlement in a timely and satisfactory manner. All APs will be made fully aware of their rights, and the detailed procedures for filing grievances and an appeal process will be published through an effective public information campaign. The grievance redress mechanism and appeal procedures will also be explained in a project information booklet (PIB) that will be distributed to all APs.

97. APs are entitled to lodge complaints regarding any aspect of affected environments, land acquisition and resettlement requirements such as noise, pollution, entitlements, rates and payment and procedures for resettlement and income restoration programs. APs complaints can be made verbally or in written form. In the case of verbal complaints, the committee on grievance will be responsible to make a written record during the first meeting with the APs.

98. A Grievance Committee with appointed environmental and social issues experience will be organized in local communes comprising of local leaders designated for such tasks. The designated commune officials shall exercise all efforts to settle APs issues at the commune level through appropriate community consultation. All meetings shall be recorded by the grievance committee and copies shall be provided to APs. A copy of the minutes of meetings and actions undertaken shall be provided to the EA/IA[9] and ADB upon request.

99. The procedures for grievance redress are defined below and summarized in Figure 3. The procedure described below should apply easily to both social and environmental issues and be consistent with the legal process for resolution of disputes in Viet Nam.

i) Stage 1: Complaints from APs for the first time shall be lodged verbally or in written form with the village head or commune leader. The complaints shall be discussed with the APs and the designated Head of Grievance Committee or members of the committee. Because initial environmental issues will most likely be construction-related, the EO/contractor and then the ESU/IA need to be notified immediately. It will be the responsibility of the Head of Grievance Committee to resolve the issue within 15 days from the date the complaint is received. All meetings shall be recorded and copies of the minutes of meetings will be provided to APs.

ii) Stage 2: If no understanding or amicable solution can be reached or if no response is received from the grievance committee within 15 days from filing the complaint, the APs can elevate the case to the District Grievance Committee. The District

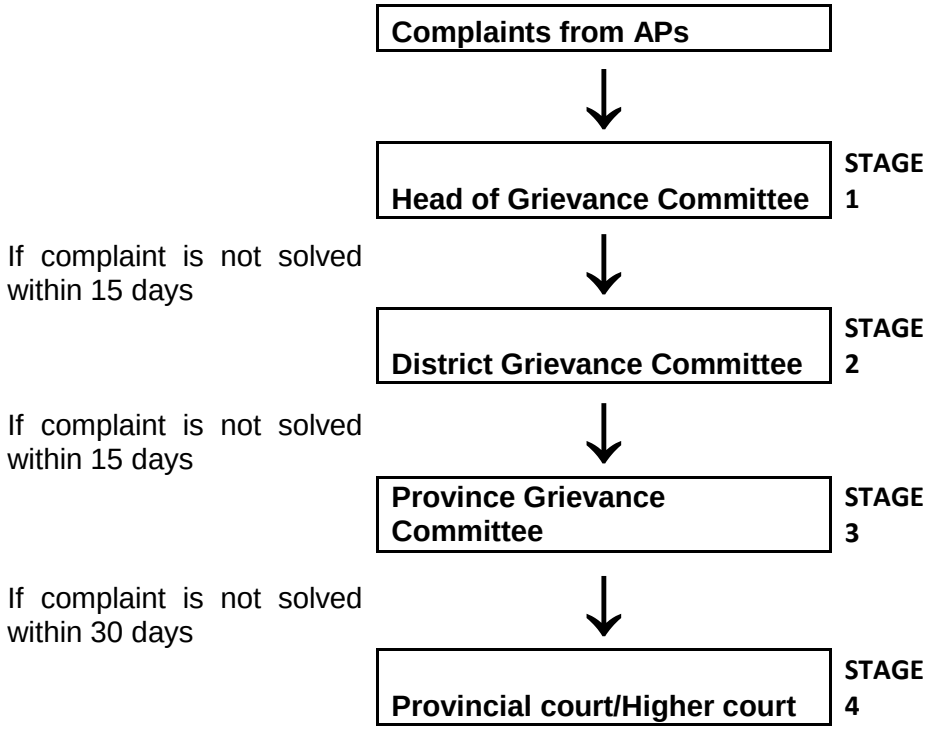
[9] See Section XB below for institutional responsibilities for EMP

Grievance Committee is expected to respond within 15 days upon receiving the APs appeal.

iii) Stage 3: If the AP is not satisfied with the decision of the District Office, or in the absence of any response, the APs can appeal to the Provincial Grievance Committee (PGC). The PGC will review and issue a decision on the appeal within 30 days from the day the complaint is received.

iv) Stage 4: If the AP is still not satisfied with the decision of the PGC or in the absence of any response within the stipulated time, the APs, as a last resort may submit his/her case to the provincial court. The court will address the appeal by written decision and submit copies to the respective entities which include the EA, DGC/PGC and the APs. If however, the AP is still not satisfied the court's decision, the case may be elevated to the provincial court. If however, the decision of the provincial court is still unsatisfactory to the APs, the APs may bring the complaints to the Higher Court.

Figure 3. Summary of Grievance Redress Process



100. The EA and EVN will be responsible for checking the procedures and resolutions of grievances and complaints. The EVN/EA must have expertise and experience in social and environmental issues associated with infrastructure developments. The EVN/EA may

recommend further measures to be taken to redress unresolved grievances. The environmental specialists will provide the necessary training to improve grievance procedures and strategy for the grievance committee members when required.

101. In cases where APs do not have the writing skills or are unable to express their grievances verbally, they are encouraged to seek assistance from the recognized local groups, NGOs, or other family members, village heads or community chiefs to have their grievances recorded in writing, and to have access to documentation, and any survey or valuation of assets, to ensure that where disputes do occur, all the details have been recorded accurately enabling all parties to be treated fairly. Throughout the grievance redress process, the responsible committee will ensure that the concerned APs are provided with copies of complaints and decisions or resolutions reached.

102. If efforts to resolve disputes using the grievance procedures remain unresolved or unsatisfactory, APs have the right to directly discuss their concerns or problems with the ADB Southeast Asia Department through the ADB Viet Nam Resident Mission (VRM). If APs are still not satisfied with the responses of VRM, they can directly contact the ADB Office of the Special Project Facilitator (OSPF).

X. ENVIRONMENTAL MANAGEMENT PLAN

A. Overview of Environmental Management Plan

103. An environmental management plan (EMP has been developed for the implementation of the Noi Bai 110 kV Substation and Transmission Line subproject. The purpose of the EMP is to integrate the results of the IEE into a formal management plan that is implemented in parallel with the subproject to prevent or minimize the potential environmental impacts and issues that were identified by the IEE. The EMP addresses the results of the public consultations on the subproject that were convened as part of the IEE.

104. The EMP, *inter alia*, consists of an Impacts Mitigation Plan, a Monitoring Plan, and an Emergency Response Plan. The EMP also prescribes the institutional responsibilities for the implementation of the EMP. The EMP is a management tool that provides a set of directives and guidelines that the project owner follows to prevent or minimize unnecessary environmental impacts of the subproject.

B. Institutional Arrangements and Responsibilities

105. At the feasibility stage, the primary management framework[10] responsible for the implementation of the EMP for the Noi Bai 110 kV substation and transmission line subproject is summarized as follows. The EVN HANOI is the executing agency (EA). The EA takes overall responsibility for implementing the EMP with executive support from the Power Project Management Board (PPMB), a subsidiary of EVN HANOI and the implementing agency (IA) of the subproject. The IA under the direction of the EA implements the subproject and EMP with an

[10] Adapted from kick-off meeting presentation slides, December 10-13

assigned Environmental and Social Unit (ESU) whose sole responsibility is to implement the EMP.

106. The IA/ESU is supported by the [international] Project Implementation Consultant[11] (PIC). The PIC assists with completion of the detailed subproject designs, updates the EMP to address the detailed subproject designs, and assist with the implementation of the EMP. The PIC also delivers required capacity development and training to the IA/ESU. The ESU oversees and assists the work of the Environmental Officer (EO) of the construction contractor who implements the contractors EMP (CEMP)[12].

107. External support of the ESU for the implementation of the EMP is provided by the international and national environment specialists (ES) of the PIC, and an Environmental Monitoring Consultant (EMC) which is required to conduct the field sampling and laboratory analyses of the environmental monitoring plan (e.g., water quality, air quality) of the EMP that cannot be performed by the contractor or IA/ESU. A summary of indicative responsibilities for implementation of the EMP is provided below.

108. The responsibilities of the EA with support from EVN include:

1. Overall responsibility for implementation of EMP;
2. Provide coordination and supervision for environmental and social safeguards and monitoring for IA/ESU;
3. Liaise with EVN and ADB on the implementation of the EMP; and
4. Coordinate resolution with IA/ESU with issues arising from the implementation of EMP.

109. The responsibilities of the ESU of IA include:

5. Assist PIC with updating the EMP to meet final detailed subproject design;
6. Notify DoNRE to verify GoV approvals of subproject are met;
7. Assist PIC with inclusion of CEMP requirements in contractor bid documents including bid evaluations based on updated EMP;
8. Undertake day-to-day management of EMP implementation activities;
9. Work with EMC on implementation of monitoring plan of EMP;
10. Ensuring compliance with loan covenants and assurances in respect of entire subproject, including EMP (as well as IPPs, GAPs, resettlement plans);
11. Lead follow-up meetings with all affected stakeholders;
12. Prepare and submit quarterly reports on EMP implementation to IA/EA;
13. Oversee implementation of CEMP by contractor;

[11] PIC to be defined
[12] Contractor Environmental Management Plan prepared by contractor as part of bid documents based on EMP

14. Coordinate with ES of PIC for EMP implementation;

15. Undertake regular construction site inspections to ensure contractor implements CEMP properly; and

16. Ensure EO of contractor submits monthly reports on construction mitigations and monitoring.

The responsibilities of the ES (International and National) of the PIC are:

17. Updating the EMP to meet final detailed design of subproject;

18. Provide technical direction and support to ESU/IA for implementation of EMP;

19. Oversee design and delivery of capacity development and training of ESU/IA and EO of contractor(s);

20. Provide advice and support to EMC with their monitoring activities;

21. Review all reports prepared ESU/IA and EMC for EA and ADB; and

22. Review location of any possible contaminated sites near subproject.

The responsibilities of Environmental Officer (EO) of Contractor include:

23. Implement CEMP for construction phase of subproject; and

24. Prepare and submit monthly reports on mitigation and monitoring activities of CEMP any environmental issues at construction sites.

The responsibilities of external Environmental Monitoring Consultant (EMC) include:

25. Implement the environmental sampling required for monitoring plan of EMP that cannot be conducted by the contractor and ESU/IA/EO.

26. Perform required laboratory analyses for monitoring program detailed in EMP; and;

27. Prepare and submit quarterly reports to IA/ESU on monitoring activities.

110. The Department of Natural Resources and Environment (DoNRE) is the provincial agency which oversees environmental management of Ha Noi. The DoNRE with District staff provides direction and support for environmental protection-related matters including application of the Law on Environmental Protection No. 02/99/NA (1999), EIA, and environmental standards.

111. The ADB provides guidance to EA/IA with any issues related to EMP, and reviews biannual reports on EMP activities compiled and submitted by EA.

C. Summary of Potential Impacts of Subproject

The potential impacts of the subproject are summarized in Table 14.

Table 14. Summary of Potential Impacts of Subproject

Pre-construction Phase
• Permanent loss of some residential and agricultural land.
Construction Phase
• Temporary loss of residential and agriculture land along RoW of TL. • Common construction-related civil works disturbances such as dust, noise, reduced and/or blocked public access, disrupted business and recreation, noise, dust and air pollution from NOx, SOx, and CO caused by increased truck traffic and heavy equipment use, soil and surface water pollution caused by equipment operation and maintenance, public and worker accidents, disruption of traffic, increased traffic accidents, damage to existing roads, land erosion and surface water sedimentation, drainage and flooding problems, solid and domestic waste from worker camps, social issues and community problems caused by migrant workers.
Operational Phase
• Risk of worker and public safety at facilities. • Spills of hazardous materials such as transformer oil.

D. Mitigation Plan

112. The impact mitigation measures of the EMP are presented in a comprehensive mitigation plan for the subproject in Table 15. The mitigation plan is structured by the three development phases of the subproject defined by the pre-construction; construction; and post construction operational phase. The mitigation plan addresses the environmental issues and concerns raised at the stakeholder meetings.

113. The mitigation plan combines construction phase impacts common to all subproject components for which single mitigation measures are prescribed. In this way redundant mitigation measures are not re-stated numerous times. However, impacts and required mitigations specific to subproject component are also identified or common mitigations that are particularly important for a subproject component are underscored. The mitigation plan identifies potential impacts, required mitigations, responsible parties, location, timing, and indicative costs.

1. Mitigation subplans

114. The mitigation plan is comprehensive by design because it will need to be updated to meet the final detailed designs of the subproject. The mitigation plan is organized into a series of mitigation sub-plans that address specific potential impact areas of the subproject. The sub-plans will assist the contractors with the development of their CEMPs as part of their bid documents, and ultimately will allow the ESU/IA, PIC, and contractors to focus more or less on the different potential impact areas as they arise with the implementation of the final designs of the subproject. Mitigation sub-plans of the EMP are drafted for example for: a) Construction drainage; b) Erosion; c) Noise and Dust; d) Contaminated Spoil Disposal; e) Solid and Liquid Waste Disposal; f) Construction and Urban Traffic; g) Utility and Power Disruption; h) Worker and Public Safety; i) Tree and Vegetation Removal and Site Restoration; j) Construction Materials Acquisition, Transport, and Storage, and k) Cultural chance finds.

Table 15. Environmental Impact Mitigation Plan

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Pre-Construction, Detailed Design Phase								
Confirmation of required resettlement, relocations, and compensation	No negative environmental impacts	1. Affected persons well informed well ahead of Subproject implementation.	All affected persons in subproject areas	Before subproject implemented	See resettlement plans	See resettlement plan	EA/IA/ESU	Resettlement committees
Disclosure, and engagement of community	No negative impacts	2. Initiate Information Disclosure and Grievance process of IEE	For all construction sites.	Beginning of subproject	Quarterly	No marginal cost[14]	IA/ESU	ESU
GoV approvals	No negative impact	3. Notify DoNRE of subproject initiation to complete EA requirements, and obtain required subproject permits and certificates.	Entire subproject	Before construction	As required	No marginal cost	EA/DoNRE	DoNRE

[13] Costs will need to be updated during detailed design phase.
[14] No marginal cost indicates that costs to implement mitigation are to be built into cost estimates of bids of contractors

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Detailed designs of Subproject,	Minimize negative environmental impacts	4. Work with PIC[15] to complete detailed designs of the Noi Bai 110 kV Substation and Transmission Line. Ensure the following measures are included: a) identification of spill management prevention plans, and emergency response plans for all construction sites; b) no disturbance or damage to culture property and values; c) minimal acquisition of agriculture and forested lands d) locate aggregate borrow pits and rock supply areas away from human settlements with fencing and access barriers; e) none or minimal disruption to village water supplies along access roads, utilities, and electricity with contingency plans for unavoidable disruptions; f) none or minimal disruption to normal pedestrian and vehicle traffic along all road segments with contingency alternate routes; g) for built-up areas include specific plan to notify and provide residents and merchants of construction activities and schedule to minimize disruption to normal commercial and residential activities.	Final siting	Before construction initiated	Once with detailed designs documents	No marginal cost	PIC	EA/IA

[15] PIC is Project Implementation Consultant at detailed design phase to be determined

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Update EMP	Positive environmental impacts	5. Review finalized RoW of TL to confirm absence of valued ecological or cultural resources. 6. Re-clarify with DoNRE that no known rare or endangered species inhabit the Subproject areas 7. Identify any new potential impacts of subproject and include in EMP with special attention to residential areas. 8. Update mitigation measures and monitoring requirements of EMP where necessary to meet detailed designs, and to protect affected environments. 9. Submit updated EMP with new potential impacts to ADB to review. 10. Complete individual management subplans of CEMP for: a) Construction drainage; b) Erosion; c) Noise and Dust; d) Contaminated Spoil Disposal; e) Solid and Liquid Waste Disposal; f) Construction and Urban Traffic; g) Utility and Power Disruption; h) Worker and Public Safety; i) Tree and Vegetation Removal and Site Restoration; j) Construction Materials Acquisition, Transport, and Storage, and k) Cultural chance finds.	All sites	Before construction initiated	Once with detailed designs documents		PIC	IA/ESU
Update EMP	Positive environmental impacts	11. Update information where necessary on water quality and presence of valued aquatic biota in surface waters underneath entire TL and at SS site	Entire TL and at SS site	Before construction initiated	Once with updated EMP	See Monitoring Plan below	PIC	IA/ESU
Confirm approved construction waste disposal sites	No negative impact	12. Notify DoNRE to confirm locations of sites for borrow pits and disposal areas for construction and hazardous waste for Subproject, and obtain required permits. 13. Create registry for local and migrant workers.	Entire Subproject	Before construction	As required	No marginal cost	IA/DoNRE	ESU

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
UXO survey, and removal	Injured worker or public	14. Ensure GoV military is consulted and clears UXO areas where necessary	All construction sites.	Beginning of Subproject	Once	See Monitoring Plan below	EA/IA	IA/GoV
Develop bid documents	No negative environmental impact	15. Ensure updated EMP is included in contractor tender documents, and that tender documents specify requirements of EMP must be budgeted. 16. Specify in bid documents that contractor must have experience with implementing EMPs, or provide staff with training and experience.	All Subproject areas	Before construction begins	Once for all tenders	No marginal cost	PIC	EA/IA
Create awareness of physical cultural resources in area	No negative environmental impact	17. EA to review potential locations of physical resources, and explain possible PCR to contractors and PIC.	All Subproject areas	Before construction begins	Once	No marginal cost	EA/IA	IA/ESU
Obtain and activate permits and licenses	Prevent or minimize impacts	18. Contractors to comply with all statutory requirements set out by GoV for use of construction equipment, and operation construction plants such as concrete batching.	For all construction sites	Beginning of construction	Once	No marginal cost	EA/PIC	ESU and contractors
Capacity development	No negative environmental impact	19. Develop and schedule training plan for IA/ESU/EO to be able to fully implement CEMP, and to manage implementation of mitigation measures by contractors. 20. Create awareness and training plan for contractors whom will implement mitigation measures.	All Subproject areas	Before construction begins	Initially, refresher later if needed	No marginal cost	PIC	PIC
Recruitment of workers	Spread of sexually transmitted disease	21. Use local workers as much as possible thereby reducing number of migrant worker	All work forces.	Throughout construction phase	Worker hiring stages	No marginal cost	EA/IA	Contractor's bid documents

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Construction Phase of 110 kV Noi Bai Substation and Transmission Line								
Initiate EMP and sub-plans,	Prevent or minimize impacts	22. Initiate updated EMP and CEMP including individual management sub-plans for different potential impact areas that are completed in pre-construction phase (see sub-plan guidance below).	For all construction sites	Beginning of construction	Once	No marginal cost	IA/PIC	ESU and contractors
Worker camps	Pollution and social problems	23. Locate worker camps away from human settlements. 24. Ensure adequate housing and waste disposal facilities including pit latrines and garbage cans. 25. A solid waste collection program must be established and implemented that maintains a clean worker camps 26. Locate separate pit latrines for male and female workers away from worker living and eating areas. 27. A clean-out or infill schedule for pit latrines must be established and implemented to ensure working latrines are available at all times. 28. Worker camps must have adequate drainage. 29. Local food should be provided to worker camps. Guns and weapons not allowed in camps. 30. Transient workers should not be allowed to interact with the local community. HIV/AIDS education should be given to workers. 31. Camp areas must be restored to original condition after construction completed.	All worker camps	Throughout construction phase	Monthly	No marginal cost	PIC/IA/ESU	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Training and capacity	Prevent of impacts through education	32. Implement training and awareness plan for IA/ESU//EO and contractors.	IA office, construction sites	Beginning of construction	After each event	No marginal cost	PIC	PIC/ESU

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Implement Construction materials acquisition, transport, and storage sub-plan	Pollution, injury, increased traffic, disrupted access	33. All borrow pits and quarries should be approved by DoNRE. 34. Select pits and quarries in areas with low gradient and as close as possible to construction sites. 35. Required aggregate volumes must be carefully calculated prior to extraction to prevent wastage. 36. Pits and quarries should not be located near surface waters, forested areas, critical habitat for wildlife, or cultural property or values. 37. If aggregate mining from fluvial environments is required small streams and rivers should not be used, and dry alluvial plains preferred. 38. All topsoil and overburden removed should be stockpiled for later restoration. 39. All borrow pits and quarries should have a fence perimeter with signage to keep public away. 40. After use pits and quarries should be dewatered and permanent fences installed with signage to keep public out, and restored as much as possible using original overburden and topsoil. 41. Unstable slope conditions in/adjacent to the quarry or pit caused by the extractions should be rectified with tree planting. 42. Define and schedule how materials are extracted from borrow pits and rock quarries, transported, and handled and stored at sites. 43. Define and schedule how fabricated materials such as steel, wood structures, and scaffolding will transported and handled. 44. All aggregate loads on trucks should be covered. .	For all construction areas.	Throughout construction phase	Monthly	No marginal cost	PIC/IA/ESU	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
DBST [low grade asphalt] production, and application to repair/restore any road works	Air pollution, land and water contamination, and traffic and access problems,	45. Piles of aggregates at sites should be used/or removed promptly, or covered and placed in non- traffic areas 46. Stored paving materials e.g., DBST or asphalt, well away from all human activity and settlements, and cultural (e.g., schools, hospitals), and ecological receptors. Bitumen production and handling areas should be isolated. 47. Contractors must be well trained and experienced with the production, handling, and application of bitumen. 48. All spills should be cleaned immediately and handled as per hazardous waste management plan, and according to GoV regulations. 49. Bitumen should only be spread on top of cable trench not near or in any surface waters, or near any human activities. 50. Bitumen should not be used as a fuel.	For all construction areas.	Throughout construction phase	Monthly	No marginal cost	PIC/ESU	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Implement Spoil management subplan	Contamination of land and surface waters from excavated spoil, and construction waste	51. Uncontaminated spoil to be disposed of in GoV-designated sites, which must never be in or adjacent surface waters. Designated sites must be clearly marked and identified. 52. Spoil must not be disposed of on sloped land, near cultural property or values, ecologically important areas, or on/near any other culturally or ecologically sensitive feature. 53. Where possible spoil should be used at other construction sites, or disposed in spent quarries or borrow pits. 54. A record of type, estimated volume, and source of disposed spoil must be recorded. 55. Contaminated spoil disposal must follow GoV regulations including handling, transport, treatment (if necessary), and disposal. 56. Suspected contaminated soil must be tested, and disposed of in designated sites identified as per GoV regulations. 57. Before treatment or disposal contaminated spoil must be covered with plastic and isolated from all human activity.	All excavation areas	Throughout construction phase	Monthly	See Monitoring Plan for contaminated soil analyses	PIC/ESU and DoNRE	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Implement Solid and liquid construction waste sub-plan	Contamination of land and surface waters from construction waste	58. Management of general solid and liquid waste of construction will follow GoV regulations, and will cover, collection, handling, transport, recycling, and disposal of waste created from construction activities and worker force. 59. Areas of disposal of solid and liquid waste to be determined by GoV. 60. Disposed of waste should be catalogued for type, estimated weigh, and source. 61. Construction sites should have large garbage bins. 62. A schedule of solid and liquid waste pickup and disposal must be established and followed that ensures construction sites are as clean as possible. 63. Solid waste should be separated and recyclables sold to buyers in community. <u>Hazardous Waste</u> 64. Collection, storage, transport, and disposal of hazardous waste such as used oils, gasoline, paint, and other toxics must follow GoV regulations. 65. Wastes should be separated (e.g., hydrocarbons, batteries, paints, organic solvents) 66. Wastes must be stored above ground in closed, well labeled, ventilated plastic bins in good condition well away from construction activity areas, all surface water, water supplies, and cultural and ecological sensitive receptors. 67. All spills must be cleaned up completely with all contaminated soil removed and handled with by contaminated spoil sub-plan.	All construction sites and worker camps	Throughout construction phase	Monthly	No marginal cost	PIC/ESU and DoNRE	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Implement Noise and dust sub-plan	Dust Noise	68. Regularly apply wetting agents to exposed soil and construction roads. 69. Cover or keep moist all stockpiles of construction aggregates, and all truck loads of aggregates. 70. Minimize time that excavations and exposed soil are left open/exposed. Backfill immediately after work completed. 71. As much as possible, restrict working time at substation site between 07:00 and 17:00. 72. Maintain equipment in proper working order 73. Replace unnecessarily noisy vehicles and machinery. 74. Vehicles and machinery to be turned off when not in use. 75. Construct temporary noise barriers around excessively noisy activity areas where possible.	All construction sites.	Fulltime	Monthly	No marginal cost	PIC/ESU	contractor
Implement Utility and power disruption sub-plan	Loss or disruption of utilities and services such as water supply and electricity	76. Develop carefully a plan of days and locations where outages in utilities and services will occur, or are expected. 77. Contact local utilities and services with schedule, and identify possible contingency back-up plans for outages. 78. Contact affected community to inform them of planned outages. 79. Try to schedule all outages during low use time such between 24:00 and 06:00.	All construction sites.	Fulltime	Monthly	No marginal cost	PIC/ESU and Utility company	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Implement Tree and vegetation removal, and site restoration sub-plan	Damage or loss of trees, vegetation, and landscape	80. Contact DoT/DARD for advice on how to minimize damage to trees and vegetation along transmission line 81. Restrict tree and vegetation removal to within RoWs. 82. Within RoWs minimize removals of trees and install protective physical barriers around trees that do not need to be removed. 83. Where possible all RoWs to be re-vegetated and landscaped after construction completed. Consult DoT/DARD to determine the most successful restoration strategy and techniques. Aim to replant three trees for each tree removed. 84. Restore sections of roads damaged by the construction of facilities.	All construction sites.	Beginning and end of Subproject	Monthly	No marginal cost	PIC/ESU	contractor
Implement Erosion control sub-plan	Land erosion	85. Berms, and plastic sheet fencing should be placed around all excavations and earthwork areas. 86. Earthworks should be conducted during dry periods. 87. Maintain a stockpile of topsoil for immediate site restoration following backfilling. 88. Protect exposed or cut slopes with planted vegetation, and have a slope stabilization protocol ready. 89. Re-vegetate all soil exposure areas immediately after work completed.	All construction sites	Throughout construction phase	Monthly	No marginal cost	PIC/ESU	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Implement worker and public safety sub-plan	Public and worker injury, and health	90. Proper fencing, protective barriers, and buffer zones should be provided around all construction sites. 91. Sufficient signage and information disclosure, and site supervisors and night guards should be placed at all sites. 92. Worker and public safety guidelines of MoLISA should be followed. 93. Population near possible blast areas should be notified 24 hrs ahead, and evacuated well before operation. Accepted GoV blast procedures and safety measures implemented. 94. Speed limits suitable for the size and type of construction vehicles, and current traffic patterns should be developed, posted, and enforced on all roads used by construction vehicles. 95. Standing water suitable for disease vector breeding should be filled in. 96. Worker education and awareness seminars for construction hazards should be given at beginning of construction phase, and at ideal frequency of monthly. A construction site safety program should be developed and distributed to workers. 97. Appropriate safety clothing and footwear should be mandatory for all construction workers. 98. Adequate medical services must be on site or nearby all construction sites. 99. Drinking water must be provided at all construction sites. 100. Sufficient lighting be used during necessary night work. 101. All construction sites should be examined daily to ensure unsafe conditions are removed.	All construction sites.	Fulltime	Monthly	No marginal cost	PIC/ESU	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Civil works	Degradation of water quality and aquatic resources	102. Protective coffer dams, berms, plastic sheet fencing, or silt curtains should be placed between all earthworks and surface waters. 103. Erosion channels must be built around aggregate stockpile areas to contain rain-induced erosion. 104. Earthworks should be conducted during dry periods. 105. All construction fluids such as oils, and fuels should be stored and handled well away from surface waters. 106. No waste of any kind is to be thrown in surface waters. 107. No washing or repair of machinery near surface waters. 108. Pit latrines to be located well away from surface waters. 109. No unnecessary earthworks in or adjacent to water courses. 110. No aggregate mining from rivers or lakes. 111. All irrigation canals and channels to be protected the same way as rivers, streams, and lakes	All construction sites	Throughout construction phase	Monthly	No marginal cost	PIC/ESU	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
Civil works	Degradation of terrestrial resources	112. All construction sites should be located away forested or all plantation areas as much as possible. 113. No unnecessary cutting of trees along RoW. 114. All construction fluids such as oils, and fuels should be stored and handled well away from forested and plantation areas. 115. No waste of any kind is to be discarded on land or in forests/plantations.	All construction sites	Throughout construction phase	Monthly	No marginal cost	PIC/ESU	contractor
Implement Construction and urban traffic sub-plan	Traffic disruption, accidents, public injury	116. Schedule construction vehicle activity during light traffic periods. Create adequate traffic detours, and sufficient signage and warning lights. 117. Post speed limits, and create dedicated construction vehicle roads or lanes. 118. Inform community of location of construction traffic areas, and provide them with directions on how to best co-exist with construction vehicles on their roads. 119. Demarcate additional locations where pedestrians can develop road crossings away from construction areas. 120. Increase road and walkway lighting.	All construction sites	Fulltime	Monthly	No marginal cost	PIC/ESU	contractor
Implement Construction Drainage sub-plan	Loss of drainage and flood storage	121. Provide adequate short-term drainage away from construction sites to prevent ponding and flooding. 122. Manage to not allow borrow pits and quarries to fill with water. Pump periodically to land infiltration or nearby water courses. 123. Install temporary storm drains or ditches for	All areas with surface waters	Design and construction phases	Monthly	No marginal cost	PIC/ESU	contractor

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
		construction sites 124. Ensure connections among surface waters (ponds) are maintained or enhanced to sustain existing stormwater storage capacity. 125. Protect surface waters from silt and eroded soil.						
Civil works and Chance finds sub-plan	Damage to cultural property or values, and chance finds	126. As per detailed designs all civil works should be located away from all physical cultural property and values. 127. Chance finds of valued relics and cultural values should be anticipated by contractors. Site supervisors should be on the watch for finds. 128. Upon a chance find all work stops immediately, find left untouched, and EA/IA notified to determine if find is valuable. The Culture division of the DCST notified by telephone if valuable. 129. Work at find site will remain stopped until DCST allows work to continue.	All construction sites	At the start , and throughout construction phase	Monthly	No marginal cost	PIC/ESU	contractor
Post-construction Operation of 110 kV Noi Bai Substation								
Operation of new substation	Increased risk of worker or public injury	130. Occupational health and safety regulations and guidelines of MoLISA should be applied to operations of substation. 131. Ensure substation property is adequately fenced with clearly visable danger warning signs to keep public out. 132. Store and handle transformer fluids and other hazardous materials according to international	At substation	Fulltime	Biannual	O and M	EVNHCM / PPMB	

Subproject Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Location	Timing	Activity Reporting	Estimated Cost[13] (USD)	Responsibility	
							Supervision	Implementation
		procedures and standards						
Post-construction Operation of 110 kV Noi Bai Transmission Line								
Operation of new transmission line		133. Occupational safety and health regulations and guidelines of MoLISA should be applied to operations and maintenance of TL 134. Ensure TL towers are marked with clearly visable danger warning signs to keep public out.	At all TL towers	Fulltime	Biannual	O and M	EVNHCM / PPMB	

E. Monitoring Plan

115. The environmental monitoring plan for the EMP is provided in Table 16. The monitoring plan focuses on all three phases (pre-construction, construction, post-construction operation) of the subproject and consists of environmental indicators, the sampling locations and frequency, method of data collection, responsible parties, and estimated costs. The purpose of the monitoring plan is to determine the effectiveness of the impact mitigations, and to document any unexpected positive or negative environmental impacts of the subproject.

116. The independent environmental monitoring consultant (EMC) identified above will implement the environmental monitoring program. The EMC will be responsible for the sampling of environmental parameters that must be analyzed in a laboratory. The ESU and EO will coordinate with the EMC. The PIC/IU will provide logistical support to the EMC where necessary for the implementation of environmental monitoring plan.

117. The standards for ambient environmental quality (e.g., water and air quality) for Viet Nam listed in section III will guide the monitoring program. The environmental standards provided by the Environmental, Health and Safety Guidelines of the IFC/World Bank (2007) should be followed to supplement standards that are not provided by the GoV.

118. After construction is completed, the potential impacts of the operation of the new Noi Bai 110 kV substation and transmission line will be monitored by EVN HANOI. Monitoring of the success of the minor resettlement in the affected areas will be undertaken as part of the separate RP prepared for the subproject.

F. Performance Monitoring

119. Performance monitoring is required to assess the overall performance of the EMP. A performance monitoring system is normally developed by the EA for the entire subproject. Selected indicators of major components of the environment that will be affected primarily by the construction phase are drawn from the mitigation and monitoring plans and summarized in Table 17.

G. Reporting

120. Regular reporting on the implementation of mitigation measures, and on monitoring activities during construction phase of the subproject is required. Reporting is the responsibility of IA/ESU and should be conducted in conjunction with regular meetings with stakeholders as part of the continuation of stakeholder communications. The mitigation and monitoring plans (Tables 15 and 16) summarize proposed timing of reporting.

121. A report on environmental monitoring and implementation of EMP will be prepared quarterly for the EA by the IA/ESU. The IA report will compile monthly reports provided by the EO of contractor, the reports of the EMC on monitoring, and input from the ES of the PIC. The IA/ESU report will also be sent to the DoNRE and ADB. The reports will table all indicators measured with the monitoring plan of EMP including performance monitoring indicators (Table 17), and will include relevant GoV environmental quality standards. A semi-annual report on the environment monitoring of the subproject must be prepared and submitted to the ADB by the EA

Table 16. Environmental Monitoring Plan

ENVIRONMENTAL EFFECTS MONITORING							
Environmental Indicators	**Location**	**Means of Monitoring**	**Frequency**	**Reporting**	**Responsibility** Supervision / Implementation		**Estimated Cost (USD)**
					Supervision	**Implementation**	
Pre-construction Phase – Update Baseline Conditions							
Update where necessary baseline on sensitive receptors (e.g., cultural property and values, new schools or hospitals, rare/endangered species, critical habitat along TL corridor.	A) RoW for transmission line (TL) B) Substation (SS) location	Original field work, community consultations	Once	Once	PIC/ESU	Environmental Monitoring Consultant	$1,000.
A) Air quality: dust, CO, NOx, SOx, noise B) Affected surface water quality, i.e., Ca Lo river: TSS, oil and grease, BOD_5, , TDS, TP, TN	A): Along TL and at SS site B): At SS site	Using field and analytical methods approved by DoNRE.	A) One day and one night measurement b) One measurement	One baseline supplement report before construction phase starts	PIC/ESU	Environmental Monitoring Consultant	A) $1,500 B) $2,500 .
Inventory of present and past land uses that could cause contaminated soil.	Possible contaminated lands at all excavation sites	Using field and analytical methods approved by DoNRE.	Once	Once	PIC/ESU	Environmental Monitoring Consultant	$500.
Construction Phase of 110 kV Substation and Transmission Line							
Analysis of soil quality (heavy metals (As, Cd, Pb, oil and	Possible contaminated lands at all excavation sites	Using field and analytical methods approved by DoNRE.	Once if	Once	ESU	Environmental Monitoring	$2,500.

grease, hydrocarbons).			**needed**			Consultant	
A) Air quality: dust, CO, NOx, SOx, noise B)) Affected surface water quality (Ca Lo river): TSS, oil and grease, BOD_5, , TDS, TP, TN C) Analysis of contaminated soil quality (heavy metals (As, Cd, Pb, Hg, Mn), hydrocarbons. D) Domestic (worker) and construction solid waste inside and outside construction sites including worker camps. E) Public comments and complaints F) Incidence of worker or public accident or injury	A and B): Baseline sites of pre-construction phase. C) At sites where contaminated soil is suspected. D) All construction sites and worker camps E) Using hotline number placed at construction areas F) At all construction areas	A – C : Using field and analytical methods approved by DoNRE. Include visual observations of dust and noise from contractor and public reports . D) Visual observation E) Information transferred by telephone hotline number posted at all construction sites. F) regular reporting by contractors/ESU	(A – B): Quarterly during construction periods Daily visual records C) Once at start of excavations D) Monthly E) Continuous public input F) Continuous	Monthly	(A - D):		A and B: $3,000./yr C: $1,500./yr D: no marginal cost
					ESU	Monitoring Consultant	
					(E and F) and daily observations:		
					IA/ESU	contractor	E: $1,000./yr F: no marginal cost
Operation of 110 kV Substation and Transmission Line							
Incidence of worker accidents, or spills on hazardous materials	At substation and along UGC transmission line	Regular documentation and reporting	Continuous		EVNHCM /PPMB		O and M

Table 17. Performance Monitoring Indicators for Subproject

Major Environmental Component	Key Indicator	Performance Objective	Data Source
Pre-construction Phase			
Public Consultation and Disclosure	Affected public and stakeholders	Meetings with public stakeholders contacted during IEE and new stakeholders convened for follow-up consultation and to introduce grievance mechanism	Minutes of meeting, and participants list
EMP	Updated EMP	All stakeholders contacted during IEE re-contacted for follow-up consultation	EMP
Bid Documents	Requirements of EMP (CEMP[16])	EMP appended to bidding documents with clear instructions to bidders for CEMP	Bid documents
Training of IA/ESU	Training course(s) and schedule	By end of pre-construction phase, required course(s) that will be delivered are designed and scheduled	Course(s) outline, participants, and schedule
Construction Phase			
All Subproject areas	Critical habitat, rare or endangered species ***if present***	All *present* critical habitat and R and E species if unchanged, and unharmed	Monitoring by EMC[17]
Affected water quality	TSS, oil and grease, BOD_5, , TDS, TP, TN	GoV environmental standards and criteria met	Monitoring by EMC
Air quality	dust, CO, NOx, SOx, noise	Levels never exceed pre-construction baseline levels	EMC and contractor monitoring reports,
Soil quality	Solid and liquid waste	Rigorous program of procedures and rules to collect and store all waste from construction camps and sites practiced.	Contractor and EMC monitoring reports
Hazardous materials and waste	Oil, gasoline, grease	Rigorous program of procedures to manage and store all waste from construction camps and sites practiced.	Contractor and EMC monitoring reports
Public and worker safety	Frequency of injuries	Adherence to GoV occupational health and Safety regulations[18]	Contractor reports
Cultural property	Incidence of damage, or complaints	No valued cultural property, or unearthed valuable relic is harmed in any way	Public input, contractor reports, public input, EMC

[16] Contractor Environmental Management Plan developed from EMP in contractor bidding document
[17] Environmental Monitoring Consultant hired to assist implementation of Environmental Monitoring Plan
[18] OSH Guidelines provided by MoLISA, *or* IFC World Bank EHS (2007)

Major Environmental Component	Key Indicator	Performance Objective	Data Source
			reports
Traffic	Frequency of disruptions and blocked roadways	Disruptions, stoppages, or detours are managed to absolute minimum.	Public input, contractor reports, EMC reports
Operation Phase of Substation and Transmission Line			
Worker and Public Safety	Frequency of accidents and spills	No increase in pre-construction frequency	EA

XI. ESTIMATED COST OF EMP

122. The marginal costs for implementing the EMP are primarily for environmental monitoring because the costs for implementing impact mitigation measures are included with the construction costs in contractor bid documents. From Table 16 the preliminary cost for the implementation of the EMP for the subproject including an estimated environmental training budget for EVNHCM / PPBM is approximately USD $27,500.00 which is summarized in Table 18.

Table 18. Estimated costs for Environmental Monitoring Plan of EMP

Activity Type	Estimated Cost (USD)
Pre-construction Phase	
Updating Environmental Baseline	
cultural receptors	$1,000.00
environmental quality	$4,500.00
Construction Phase	
environmental quality	$14,000.00
public consultation	$2,000.00
Operation Phase	
environmental quality	no cost
public input	no cost
Training and capacity development of EVNHCM / PPBM / ESU	$6,000.00
Total	**$27,500.00**

The environmental costs in table 18 are for field sampling and laboratory analyses which include professional per diems of technicians.

123. An estimated budget of USD $6,000.00 is required for training of the EA/IA/ESU on environmental assessment and management, and the implementation of the EMP. The estimated costs of the EMP and training will need to be updated by the PIC in conjunction with the IA/ESU during the pre-construction phase.

XII. EMERGENCY RESPONSE PLAN

124. The Contractor must develop emergency or incident response procedures during construction and operation phases of the new Noi Bai 110 kV substation and transmission line to protect workers and the public. The emergency response plan (ERP) outlines the roles and responsibilities of persons from first identification of an incident or emergency to the final steps of safe and complete closure of the situation. The detailed requirements for the ERP are described in Appendix D.

XIII. INSTITUTIONAL CAPACITY REVIEW AND NEEDS

125. Currently there is insufficient experience and capacity for environmental assessment and management in EVN HANOI for the implementation of the EMP, and to develop future safeguards for the non-core subprojects. The PIC with assistance from the ESU/IA of the subproject will develop and deliver training courses to the IA staff including the EO of the contractor. The purpose of the course(s) is to strengthen the ability of the project owner including the ESU to oversee implementation of the EMP by construction contractors, and EMC. Costs for training should be included with costs for implementation of the EMP.

126. Training on the implementation of an EMP should address two thematic areas. The first area should be principles environmental assessment and management focused on the potential impacts of subproject activities on the natural and social environments. The second area should be environmental safeguard requirements of the ADB and GoV with specific reference to the EMP.

XIV. CONCLUSIONS AND RECOMMENDATION

127. The initial examination of the Noi Bai 110 kV Substation and Transmission Line subproject in Ha Noi indicates that potential environmental impacts are construction-related impacts and disturbances that can be mitigated and managed.

128. The public consultation meetings underscored the need for effective management of construction impacts such as noise, dust, traffic disruptions, and public safety. Follow-up

meetings with the consulted stakeholders to address any construction-related issues are required. The civil construction impacts of elevated dust, noise, traffic disruptions, erosion and sedimentation, and public and worker safety can be managed effectively with standard construction practices (e.g., IFC/World Bank 2007).

129. The IEE concludes that the description of the feasibility design of the subproject combined with available information on the affected environment is sufficient to identify the scope of potential environmental impacts of the subproject. Providing that significant changes do not occur to the design of one or more of the subproject components, and that new sensitive environmental or PCR components are not identified in pre-construction phase, further detailed environmental impact assessment (EIA) of the subproject is not required.

XV. REFERENCES CITED

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APPENDICES

A. Rapid Environmental Assessment (REA) Checklist

B. Minutes of Public Consultation Meetings

B.1 Phu Cuong Commune – Soc Son District
B.2 Quang Minh Town – Me Linh District
B.3 Bac Hong Commune – Dong Anh District
B.4 Nam Hong Commune – Dong Anh District

C. Certificate of EIA for Noi Bai Substation and Transmission Lines

D. Emergency Response Plan

APPENDIX A

RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to Environment and Safeguards Division (RSES) for endorsement by Director, RSES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title:	**VIE: Ha Noi and Ho Chi Minh City Power Grid Development Sector Project**
Sector Division:	Noi Bai 110 kV Substation and OHL and UGC Transmission Line

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site		X	
▪ Protected Area		X	

Screening Questions	Yes	No	Remarks
▪ Wetland		X	The transmission will traverse rice paddy, but not wetlands recognized by RAMSAR Convention
▪ Mangrove		X	
▪ Estuarine		X	
▪ Buffer zone of protected area		X	
▪ Special area for protecting biodiversity		X	
B. Potential Environmental Impacts Will the Project cause…			
▪ encroachment on historical/cultural areas, disfiguration of landscape and increased waste generation?		X	The only cultural areas are a few distant gravesites near RoW of transmission which will be avoided. The short-term construction waste will be managed and removed as indicated in the mitigation sub-plan of the EMP for the subproject.
▪ encroachment on precious ecosystem (e.g. sensitive or protected areas)?		X	
▪ alteration of surface water hydrology of waterways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site?		X	The OHL transmission towers will not be placed near the Ca Lo river. Short-term soil erosion from construction and possible sedimentation of the river and all rice paddy areas will be mitigated with EMP for subproject.
▪ damage to sensitive coastal/marine habitats by construction of submarine cables?		X	
▪ deterioration of surface water quality due to silt runoff, sanitary wastes from worker-based camps and chemicals used in construction?		X	The impacts mitigation sub-plan of EMP for construction camps will manage all wastes produced by worker camps.
▪ increased local air pollution due to rock crushing, cutting and filling?		X	No significant rock crushing or quarrying is anticipated. The EMP specifies that all dust-producing activities such as road works should be managed with wetting agents
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		X	

Screening Questions	Yes	No	Remarks
▪ chemical pollution resulting from chemical clearing of vegetation for construction site?		X	
▪ noise and vibration due to blasting and other civil works?		X	
▪ dislocation or involuntary resettlement of people?		**X**	Any resettlement and compensation for land loss is addressed by RP for subproject.
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		X	
▪ social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads?	X		Potential traffic and access disruptions along access road to substation site and at road crossings of transmission line are limited during construction only, which can be easily mitigated.
▪ hazardous driving conditions where construction interferes with pre-existing roads?		X	
▪ creation of temporary breeding habitats for vectors of disease such as mosquitoes and rodents?		X	
▪ dislocation and compulsory resettlement of people living in right-of-way of the power transmission lines?	X		Minor resettlement or land loss is addressed by resettlement is addressed by RP
▪ environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)?		X	
▪ facilitation of access to protected areas in case corridors traverse protected areas?		X	
▪ disturbances (e.g. noise and chemical pollutants) if herbicides are used to control vegetative height?		X	
▪ large population influx during project construction and operation that cause increased burden on social infrastructure and services (such as water supply and sanitation systems)?		X	

Screening Questions	Yes	No	Remarks
▪ social conflicts if workers from other regions or countries are hired?		X	
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations?	X		An impact mitigation sub-plan for solid waste and sanitation in construction camps is provided in EMP. The potential spread of communicable diseases is addressed by social issues management of EMP.
▪ risks to community safety associated with maintenance of lines and related facilities?	X		Safety risks associated with routine maintenance of operational lines and facilities are managed with existing operating procedures and guidelines of EVN.
▪ community health hazards due to electromagnetic fields, land subsidence, lowered groundwater table, and salinization?		X	
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	x		There is minimal risk that accidents could happen but not expected to be significant. If so, measures will be in place to deal with them.
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., high voltage wires, and transmission towers and lines) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	x		These risks may happen only at tower locations. The tower may collapse due to typhoons or tropical cyclones. The underground cable may cause risks of power shock, cable broken when it happen earthquake, but this hazard will rarely appear in this project area and the project was designed to withstand the earthquake. Also, in the process of maintenance, the operation unit will conduct regular inspection for timely detection and treatment.

Climate Change and Disaster Risk Questions The following questions are not for environmental categorization. They are included in this checklist to help identify potential climate and disaster risks.	Yes	No	Remarks

▪ Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes (see Appendix I)?		x	
▪ Could changes in precipitation, temperature, salinity, or extreme events over the Project lifespan affect its sustainability or cost?		x	
▪ Are there any demographic or socio-economic aspects of the Project area that are already vulnerable (e.g. high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)?		x	
▪ Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., increasing traffic or housing in areas that will be more prone to flooding, by encouraging settlement in earthquake zones)?		x	

Environments, Hazards and Climate Changes

Environment	Natural Hazards and Climate Change
Arid/Semi-arid and desert environments	Low erratic rainfall of up to 500 mm rainfall per annum with periodic droughts and high rainfall variability. Low vegetative cover. Resilient ecosystems & complex pastoral and systems, but medium certainty that 10–20% of drylands degraded; 10-30% projected decrease in water availability in next 40 years; projected increase in drought duration and severity under climate change. Increased mobilization of sand dunes and other soils as vegetation cover declines; likely overall decrease in agricultural productivity, with rain-fed agriculture yield reduced by 30% or more by 2020. Earthquakes and other geophysical hazards may also occur in these environments.
Humid and sub-humid plains, foothills and hill country	More than 500 mm precipitation/yr. Resilient ecosystems & complex human pastoral and cropping systems. 10-30% projected decrease in water availability in next 40 years; projected increase in droughts, heatwaves and floods; increased erosion of loess-mantled landscapes by wind and water; increased gully erosion; landslides likely on steeper slopes. Likely overall decrease in agricultural productivity & compromised food production from variability, with rain-fed agriculture yield reduced by 30% or more by 2020. Increased incidence of forest and agriculture-based insect infestations. Earthquakes and other geophysical hazards may also occur in these environments.
River valleys/ deltas and estuaries and other low-lying coastal areas	River basins, deltas and estuaries in low-lying areas are vulnerable to riverine floods, storm surges associated with tropical cyclones/typhoons and sea level rise; natural (and human-induced) subsidence resulting from sediment compaction and ground water extraction; liquefaction of soft sediments as result of earthquake ground shaking. Tsunami possible/likely on some coasts. Lowland agri-business and subsistence farming in these regions at significant risk.

Small islands	Small islands generally have land areas of less than 10,000km^2 in area, though Papua New Guinea and Timor with much larger land areas are commonly included in lists of small island developing states. Low-lying islands are especially vulnerable to storm surge, tsunami and sea-level rise and, frequently, coastal erosion, with coral reefs threatened by ocean warming in some areas. Sea level rise is likely to threaten the limited ground water resources. High islands often experience high rainfall intensities, frequent landslides and tectonic environments in which landslides and earthquakes are not uncommon with (occasional) volcanic eruptions. Small islands may have low adaptive capacity and high adaptation costs relative to GDP.
Mountain ecosystems	Accelerated glacial melting, rockfalls/landslides and glacial lake outburst floods, leading to increased debris flows, river bank erosion and floods and more extensive outwash plains and, possibly, more frequent wind erosion in intermontane valleys. Enhanced snow melt and fluctuating stream flows may produce seasonal floods and droughts. Melting of permafrost in some environments. Faunal and floral species migration. Earthquakes, landslides and other geophysical hazards may also occur in these environments.
Volcanic environments	Recently active volcanoes (erupted in last 10,000 years – see www.volcano.si.edu). Often fertile soils with intensive agriculture and landslides on steep slopes. Subject to earthquakes and volcanic eruptions including pyroclastic flows and mudflows/lahars and/or gas emissions and occasionally widespread ashfall.

APPENDIX B

MINUTES OF PUBLIC CONSULTATION MEETINGS

Table 1. The summary of public consultation meeting and number of participants of Noi Bai Substation and transmission lines

No.	Name of subprojects	Location	Date	Participants*		
	EVN HANOI			Male	Female	Total
1.	New **Noi Bai Airport** 110 kV SS and associated 110 kV transmission line plus underground 110 kV cable connecting to Van Tri 220/110 kV substation.	**B1**. Phu Cuong commune – Soc Son District (Noi Bai SS and TL);	18 Oct 2013	16	4	20
		B2. Quang Minh Town- Me Linh District (OHL and	18 Oct, 2013	11	5	16

		UGC transmission line)				
		B3. Bac Hong Commune- Dong Anh District (OHL transmission line)	22 Oct 2013	21	3	24
		B4. Nam Hong Commune - Dong Anh District (OHL transmission line)	22 Oct 2013	17	5	22
		TOTAL		**65**	**17**	**82**

*This numbers is counted from list of participants; some persons are repeatedly counted since they participated in all meetings.

APPENDIX B.1 PUBLIC CONSULTATION- PHU CUONG COMMUNE, SOC SON DISTRICT

a) LIST OF PARTICIPANTS - PHU CUONG COMMUNE, SOC SON DISTRICT

Date (Ngày tháng) : 18-10-2013
Location (địa điểm) : Xã Phú Cường huyện Sóc Sơn Hà Nội

Num	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	(Organization/Addres)	Chữ ký (Signature)
01	Nguyễn Hồng Ninh	✓		Party secretary		
02	Trần Anh Tuấn		✓	Chairman of the People's Committee		
03	Nguyễn văn Huynh		✓	Vice Chairman of the People's Committee		
04	Nguyễn Văn Năm	✓		Party Deputy secretary		
05	Trần Văn Mưu		✓	Vice Chairman of the People's Committee		
06	Nguyễn Văn Tuấn	✓		Commune Police Chief		
07	Nguyễn Quang Tuất	✓		Chairman of the Fatherland Front Committee		
08	Nguyễn Văn Thanh	✓		Representatives of households		
09	Chu Văn Sửu	✓		Commune construction officer		
10	Nguyễn Tiếp Tài	✓		Commune Police Deputy Chief		
11	Trần Thị Thanh	✓		People's Committee office		
12	Trần Thị Nụ		✓	Chairwoman of the women's union		
13	Phạm Hoàng Hồng		✓	Design Consultant		

	Hà					
14	Bùi Văn Nghĩa	✓		Design Consultant		
15	Nguyễn Văn Trung	✓		Design Consultant		
16	Nguyễn Thị Loan	✓		ADB consultants		
17	Khúc Thị Thanh Vân			ADB consultants		
18	Đặng Tuấn Anh	✓		Deputy Head of Planning or project management unit		
19	Nguyễn Mạnh Hùng	✓		Officer project management unit		
20	Mai Chấn Chiến	✓		Department of land clearance of project management unit		

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THAM VẤN CỘNG ĐỒNG VỀ MÔI TRƯỜNG VÀ XÃ HỘI/TÁI ĐỊNH CƯ

LIST OF PARTICIPANTS
DANH SÁCH NGƯỜI THAM DỰ

Date (Ngày tháng): 18/10/2013
Location (địa điểm): Xã Phú Cường huyện Sóc Sơn Hà Nội

No. TT	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	Cơ quan/Địa chỉ (Organization/Address)	Chữ ký (Signature)
1	[illegible]	✓		Bí thư chi bộ xã		
2	Trần Văn Tuấn	✓		CT UBND xã		
3	Nguyễn Văn Huynh	✓		PCT UBND xã		
4	Nguyễn Văn Năm	✓		Phó BT Chi bộ		
5	Trần Văn Nhi	✓		PCT - UBND xã		
6	Nguyễn Văn Tiến	✓		Trưởng CA xã		
7	Nguyễn Quang Tiết	✓		CT UBMTTQ xã		
8	Nguyễn Văn Thao	✓		Bí thư chi bộ thôn		
9	Chu Văn Sáu	✓		TT XD xã		
10	Nguyễn Tiến Hải	✓		Xã đội phó		
11	Trần Thị Thanh		✓	VP - UBND xã		
12	Trần Thị Nhu		✓	CT Hội PN xã		
13	Phạm Hoàng Hồng Hà	✓		Tư vấn thiết kế		
14	Bùi Văn Nghĩa	✓		Tư vấn thiết kế		
15	Nguyễn Văn Dung	✓		Tư vấn thiết kế		
16	Nguyễn Thị Loan		✓	Tư vấn ADB		
17	Khúc Thị Thanh Vân		✓	Tư vấn ADB		
18	Đặng Tuấn Anh	✓		Phó phòng KH Ban QLDA		
19	Nguyễn Mạnh Hùng	✓		Phòng KH Ban QLDA		
20	Mai Chấn Chiến	✓		Phòng EPMB Ban QLDA		

b) MINUTES OF MEETINGS - PHU CUONG COMMUNE, SOC SON DISTRICT

Question/Opinions people	***Project owner/consultant Reply***
How the construction activities impact community transport and local people?	The impact is not high and negligible.
The Project needs to make new road to the project site (next to the old road corridor) When construction is finished the road needs to be rehabilitated.	The new road construction is planned. The road rehabilitation must be deployed immediately after construction. Before the construction of road surveyed, the project will have funds for road improvement for public service.
At Hong Ky Commune: electric shock killed buffalo. Need to research the electric field in order not to affect people.	Height column of tower is 30-37 m to prevent impact of electromagnetic field to surrounding people.
Lightning protection systems need to be built firmly with solid grounding system to cope with lightning strikes.	Lightning protection systems sometime is not effective because it is dismantled by local people. The Government has issued a regulation to fine people who damage lightning protection system.
The location for tower placement must be appropriate and do not place the tower on the middle of the paddies.	The survey has been conducted to select the appropriate location. (In the case changes occurs, these must be approved by local authorities and related agencies.)
The construction would affect the daily and production activities of local people and affecting drains, irrigation canal serving agricultural production activities.	Will pay attention to road and canal. During project construction, the solid concrete culvert will be constructed.
When constructing service road next to the old road, it may relate to land compensation for the people. Therefore, better to reinforce existing old road	Will consider that

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CỘNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự Do - Hạnh phúc
--------***--------

...Hà Nội......, Ngày 18..tháng.10.năm 2013

BIÊN BẢN HỌP THAM VẤN CỘNG ĐỒNG VỀ ĐÁNH GIÁ MÔI TRƯỜNG, TÁI ĐỊNH CƯ VÀ PHÁT TRIỂN DÂN TỘC THIỂU SỐ

Tiểu dự án:..Xây dựng mới TBA 110 kV Sân bay Nội Bài và nhánh rẽ
Phường/Xã......Phú Cường......, Quận/Huyện..Sóc...Sơn...Thành phố ..Hà Nội..

1. Thành phần tham dự

- Ông/Bà..Nguyễn Hồng Minh.................Chức vụ .Bí thư Đảng ủy xã.
- Ông/Bà..Trần Anh Tuấn..................Chức vụ .Chủ tịch UBND xã
- Ông/Bà..Nguyễn Quang Thất................Chức vụ .Chủ tịch UBMTTQ xã.
- Ông/Bà..Nguyễn Văn Thanh.............Chức vụ ..Đại diện hộ dân.
- Ông/Bà..Trần Thị Nu.........................Chức vụ .Chủ tịch hội PN xã.
- Ông/Bà..Khúc Thanh Vân..................... Chức vụ ...TV RP ADB..
- Ông/Bà..Nguyễn Thị loan...................Chức vụ ..TV IEE ADB.
- Ông/Bà.. Chức vụ ....
- Đại diện những người bị ảnh hưởng: ....người (*chi tiết xem danh sách đính kèm*)

I. Nội dung tham vấn

- ***Tư vấn thiết kế giới thiệu dự án***: Vị trí trạm, tuyến đường; vị trí và chiều dài tuyến đường dây trên địa bàn phường, xã.
- ***Tư vấn môi trường trình bày về:*** Chính sách môi trường của ADB; Các quy định về môi trường trong ngành điện của chính phủ Việt Nam; Các tác động về môi trường và các biện pháp giảm thiểu tương ứng (như trong IEE); Cơ chế khiếu nại khi có các vấn đề môi trường xảy ra
- ***Tư vấn xã hội/tái định cư trình bày về:*** Kế hoạch tái định cư của ADB; Những tác động khi thu hồi đất và các tài sản trên đất; Những chính sách của Chính phủ nước Cộng hoà xã hội chủ nghĩa Việt Nam và địa phương, chính sách của dự án trong vấn đề bồi thường thiệt hại khi Nhà nước thu hồi đất đai và các tài sản trên đất; Các tác động thu hồi đất/tái định cư dự kiến trên địa bàn; Các phương án bồi thường đề xuất (*theo Khung chính sách của dự án đã được phê duyệt*); Tổ chức thực hiện, kế hoạch thực hiện kế hoạch tái định cư.

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- **III. Ý kiến thảo luận**

III.1 Về các tác động môi trường tiêu cực và biện pháp giảm thiểu

- Thống nhất với các ý kiến đề xuất về tác động MT và biện pháp giảm thiểu do dự án đề ra
- Cần làm đường công vụ mới hoặc gia cố đường cũ vào trạm biến áp.
- Cần xây cột cao để điện từ trường của đường dây không ảnh hưởng đến dân
- Hệ thống chống sét phải xây chắc chắn, tiếp đất tốt để chống sét tốt
- Phải đặt vị trí cột ở nơi thích hợp, không đặt ở giữa ruộng
- Khi xây dựng đường công vụ phải gia cố cống - mương tưới, nước dưới, đường để đảm bảo cống không bị sập, làm người dân không có nước tưới để sản xuất nông nghiệp

III.2 Về các vấn đề thu hồi đất và các tài sản trên đất và các chính sách

- Đề nghị thu hồi các diện tích đất nhỏ lẻ, xen kẹt có tỷ lệ hỗ trợ thỏa đáng đảm bảo SX cải thiện của nhân dân.

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IV. Kết luận

UBND xã Phú Cường và đại diện của người dân đồng ý với chủ trương xây dựng mới trạm biến áp 110KW sân bay Nội bài và đường dây 110KW cấp điện cho trạm biến áp, đồng thời ủng hộ giúp đỡ trong quá trình thi công xây dựng

Đại diện Chủ đầu tư	Đại diện cộng đồng	Đại diện tư vấn	Đại diện UBND xã
Đặng Trần Mạnh	Nguyễn Văn Thanh	Phạm Hoàng Hữu Hà Nguyễn Thị Loan	CHỦ TỊCH Trần Anh Tuấn

c) PICTURES - PHU CUONG COMMUNE, SOC SON DISTRICT

ANNEX B.2 PUBLIC CONSULTATION AT QUANG MINH TOWN-ME LINH DISTRICT

a) LIST OF PARTICIPANTS - QUANG MINH TOWN

Date (Ngày tháng) : 18 Nov 2013
Location (địa điểm) : Quang Minh Town

No TT	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	Cơ quan/Địa chỉ (Organization/ Address)	Chữ ký (Signature)
01	Lê Văn Hoan	✓		Chairman of the People's Committee		
02	Dương Thị Vương		✓	Vice Chairman of the People's Committee		
03	Nguyễn T.T Huyền		✓	Cadres cadastral		
04	Hà Thanh Thuần	✓		Chairman of the Fatherland Front Committee		
05	Ngô Thị Anh		✓	Chairwoman of the women's union		
06	Nguyễn Văn Chang	✓		The Leader of population group 6		
07	Trương Quang Luyến	✓		The Leader of population group 7		
08	Lê Văn Đảng	✓		The Leader of population group 8		
09	Đặng Tuấn Anh	✓		Deputy Head of Planning or project management unit		
10	Nguyễn Mạnh Hùng	✓		Head of Planning or project management unit		
11	Mai Chấn Chiến	✓		Department of land clearance of project management unit		
12	Nguyễn Thị Loan		✓	ADB consultant		
13	Khúc Thị Thanh Vân		✓	ADB consultant		
14	Phạm Hoàng Hồng Hà	✓		Design Consultant		
15	Bùi Văn Nghĩa	✓		Design Consultant		
16	Nguyễn Văn Trung	✓		Design Consultant		

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LIST OF PARTICIPANTS
DANH SÁCH NGƯỜI THAM DỰ

Date (Ngày tháng) : 18 Nov 2013

Location (địa điểm) : Thị trấn Quang Minh

No. TT	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	Cơ quan/Địa chỉ (Organization/Address)	Chữ ký (Signature)
1	Lê Văn [illegible]	x		chủ tịch UBND TT		
2	Bạch Thị [illegible]		x	phó chủ tịch UBND		
3	Nguyễn Thị Huyền		x	cán bộ địa chính		
4	Hà Thanh Thuận	x		chủ tịch MTTQ		
5	Ngô Thị Anh		x	chủ tịch Hội phụ nữ		
6	Nguyễn Văn Chung	x		tổ trưởng tổ 6		
7	Trương Quang Luyện	x		tổ trưởng tổ 7		
8	Lê Văn Đông	x		tổ trưởng tổ 8		
9	Đặng Tuấn Anh	x		Phó phòng KH BQLDA		
10	Nguyễn Mạnh Hùng	x		Phòng KH BQLDA		
11	Mai Chấn Chiến	x		Phòng GPMB BQLDA		
12	Nguyễn Thị Loan		x	Tư vấn ADB		
13	Khúc Thị Thanh Vân		x	Tư Vấn ADB		
14	Phạm Hoàng Hồng Hà	x		Tư vấn thiết kế		
15	Bùi Văn Nghĩa	x		Tư vấn thiết kế		
16	Nguyễn Văn Tùng	x		Tư vấn thiết kế		

a) MINUTES OF MEETINGS AND PHOTOS - QUANG MINH TOWN

Opinions people	***Reply***
The construction activities are not large. Thus they would not have major impact on the environment. However, Construction units should inform locals before construction. In the past, many contractors have no responsibility for the environment.	Construction units will inform locals before construction.
Representative population groups agree with the environment mitigation measures proposed by project owner.	
When people have some complaints, the Contractor should immediately resolve this.	The constructor should do that.
There are drain/irrigation systems in the project area. When transporting construction materials constructor need to pay attention not to damage drain and culvert.	
The power transmission lines are passing through cultivated fields, the constructor needs to ensure no impact on the production and harvest of people.	The project owner has a budget to build service road to avoid causing damage to local infrastructure.
Can people use land area under transmission line and tower for agricultural production?	People can grow rice or vegetable because the height of transmission line is 10m above the ground.
The construction of underground cables may have impact on culverts of drain, irrigation system, and Noi Bai national road.	The damage will be repaired after construction. The underground cable section passing national road is drilled robot, not dig opened channel so that it does not affect transportation.
The construction of underground cables go over Quang Minh industrial park, thus it should be contacted	Will do that
The markers are needed to define safety corridors of electricity grid to let people know about that.	No need to have the markers because the line is 10 m higher than ground people can still cultivate at the land plot below the line. There are signals at the places where underground cables are buried.

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- **III. Ý kiến thảo luận**

III.1 Về các tác động môi trường tiêu cực và biện pháp giảm thiểu

- Các hạng mục xây dựng không lớn không gây ảnh hưởng lớn đến môi trường. Tuy nhiên đơn vị thi công cần liên hệ với địa phương trước khi thi công.
- Khi người dân có ý kiến khiếu nại thì nhà thầu phải có giải quyết ngay
- Trên tuyến đường dây có các đường giao thông và cống tưới tiêu cần phải chú ý khi vận chuyển vật liệu để không làm ảnh hưởng đến công trình
- Tuyến đường dây qua vùng đang canh tác cần đảm bảo không ảnh hưởng đến sản xuất
- Cần có mốc giới xác định hành lang an toàn lưới điện để người dân biết

III.2 Về các vấn đề thu hồi đất và các tài sản trên đất và các chính sách

- Khi có phương án đền bù thì phải họp với người dân bị ảnh hưởng
- Toàn bộ đất bị thu hồi là đất nông nghiệp. Khi thực hiện đền bù cần phối hợp chặt chẽ với chính quyền địa phương.

IV. Kết luận

UBND thị trấn Quang Minh đồng ý với chủ trương xây dựng mới trạm biến áp 110 KV sân bay Nội Bài và đường dây 110KV cấp điện cho trạm biến áp. UBND và đại diện các hộ bị ảnh hưởng ủng hộ và sẽ giúp đỡ nhà thầu và chủ đầu tư trong quá trình xây dựng

Đại diện Chủ đầu tư	Đại diện cộng đồng	Đại diện tư vấn	Đại diện UBND xã
Đặng Thái Anh	Lê Văn Đông	Phạm Hồng Kỳ Tài	CHỦ TỊCH
Bùi Diệu Minh	Thiều Quang Tuyến	Nguyễn Thị Lam	Lê Văn Hoan
	Nguyễn Văn Đông		
	Hà Thanh Thuận		

C) PICTURES - QUANG MINH TOWN

ANNEX B.3. PUBLIC CONSULTATION AT BAC HONG COMMUNE, DONG ANH DISTRICT

a) LIST OF PARTICIPANTS - BAC HONG COMMUNE, DONG ANH DISTRICT

Date (Ngày tháng): 22/10/2013
Location (địa điểm): Xã Bắc Hồng

No TT	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	(Organization/Address)	Chữ ký (Signature)
1	Nguyễn Văn Toàn	✓		Chairman of the People's Committee		
2	Nguyễn Văn Sáu	✓		Vice Chairman of the People's Committee		
3	Nguyễn Văn Bình	✓		Fatherland Front President		
4	Nguyễn Duy Ly	✓		Vice Chairman of the People's Committee		
5	Nguyễn Trung Thi	✓		Vice Chairman of the People's Committee		
6	Nguyễn Minh Lợi			Vice Chairman of the People's Committee		
7	Nguyễn Đức Phả	✓		Chairman of the elderly people		
8	Nguyễn Thanh Hoàng	✓		Member of the People's Committees		
9	Dương Văn Tiền	✓		Commune Police Chief		
10	Nguyễn Thị Thúy		✓	Chairwoman of the women's union		
11	Ngô Dàng Thảo	✓		Building Inspection		
12	Nguyễn Văn Tô	✓		Chief Inspector		
13	Nguyễn Tiến Thái	✓		Policy cadres		
14	Đỗ Ngọc Dương	✓		Radio Broadcasting		
15	Dương Văn Mười	✓		People's Committee Office		
16	Phan Anh Kiên	✓		Cultural cadres		
17	Đặng Tuấn Anh	✓		Deputy Head of Planning or PMU		
18	Nguyễn Mạnh Hùng	✓		Head of Planning or PMU		
19	Ngô Mạnh Quyền	✓		Department of land clearance of project management unit		
20	Nguyễn Thị Loan		✓	ADB consultant		
21	Khúc Thị Thanh Vân		✓	ADB consultant		
22	Phạm Hoàng Hồng Hà	✓		Design Consultant		
23	Bùi Văn Nghĩa	✓		Design Consultant		
24	Nguyễn Văn Trung	✓		Design Consultant		

Hanoi and Ho Chi Minh City Power Transmission Development Sector Project
DỰ ÁN NGÀNH PHÁT TRIỂN ĐƯỜNG DÂY TRUYỀN TẢI ĐIỆN THÀNH PHỐ HÀ NỘI VÀ HỒ CHÍ MINH

PUBIC CONSULTATION ON ENVIRONMENT AND SOCIAL/RESETLEMENT

THAM VẤN CỘNG ĐỒNG VỀ MÔI TRƯỜNG VÀ XÃ HỘI/TÁI ĐỊNH CƯ

LIST OF PARTICIPANTS
DANH SÁCH NGƯỜI THAM DỰ

Date (Ngày tháng) :
Location (địa điểm) : Xã Bắc Hồng

No. TT	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	Cơ quan/Địa chỉ (Organization/Address)	Chữ ký (Signature)
01	Nguyễn Văn Toàn	✓		Chủ tịch UBND		
02	Nguyễn Văn Sản	✓		Phó bí thư thường trực		
03	Nguyễn Văn Bình	✓		Chủ tịch mặt trận tổ quốc		
04	Nguyễn Duy Ly	✓		Phó chủ tịch	UBND	
05	Nguyễn Thường Thu	✓		Phó chủ tịch	UBND	
06	Nguyễn Minh Lợi	✓		Phó chủ tịch	HĐND	
07	Nguyễn Đức Phú	✓		Chủ tịch hội	người cao tuổi	
08	Nguyễn Thanh Hoàng	✓		Ủy viên UBND		
09	Dương Văn Tiến	✓		Trưởng công an xã		
10	Nguyễn Thị Thuý		✓	Chủ tịch hội	phụ nữ	
11	Ngô Đăng Thảo	✓		Thanh tra xây dựng		
12	Nguyễn Văn Tô	✓		Trưởng ban thanh tra nhân dân		
13	Nguyễn Tiến Thái	✓		Cán bộ chính sách		
14	Đỗ Ngọc Dương	✓		Đài truyền thanh		
15	Dương Văn Mừa	✓		Văn Phòng UBND		
16	Phan Anh Kiều	✓		Cán bộ văn hoá		
17	Đặng Tuấn Anh	✓		Phó Phòng KH	BQLDA	
18	Nguyễn Mạnh Hùng	✓		Phòng KH BQLDA		
19	Ngô Mạnh Quyền	✓		Phòng GPMB BQLDA		
20	Nguyễn Thị Loan		✓	Tư vấn ADB		
21	Khuất Thị Thanh Vân		✓	Tư vấn ADB		
22	Phạm Hoàng Hồng Hà	✓		Tư vấn TK		
23	Bùi Văn Nghĩa	✓		Tư vấn TK		
24	Nguyễn Văn Trung	✓		Tư vấn TK		

b) MINUTE OF MEETINGS - BAC HONG COMMUNE, DONG ANH DISTRICT

Opinions people	***Reply of Project owner and Consultant***
Paying attention to traffic and ensure road	Having been informed about the project, the project area through rice fields and crops have little effect when construction excavation - We welcome this consultation to inform people about the project.
Have to declare and complete the inventory, but also cultivated area is not favorable, the project would solve	Have finished up compensation plan clearance and they agreed, no complaints whatsoever.
	The position angle is fixed but the position may move other columns. If a small area, the project could make up that area (after the city People's Committee for compensation from the owner or the city budget.

Hanoi and Ho Chi Minh City Power Transmission Development Sector Project
DỰ ÁN NGÀNH PHÁT TRIỂN ĐƯỜNG DÂY TRUYỀN TẢI ĐIỆN THÀNH PHỐ HÀ NỘI VÀ HỒ CHÍ MINH

CỘNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự Do - Hạnh phúc
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...Hà Nội........, Ngày 22...tháng 10....năm 2013

BIÊN BẢN HỌP THAM VẤN CỘNG ĐỒNG VỀ ĐÁNH GIÁ MÔI TRƯỜNG, TÁI ĐỊNH CƯ VÀ PHÁT TRIỂN DÂN TỘC THIỂU SỐ

Tiểu dự án:..Xây dựng TBA 110kV Sân bay Nội Bài và nhánh rẽ
Phường/Xã........Bắc Hồng........, Quận/Huyện..................Thành phố .Hà Nội....

1. Thành phần tham dự

- Ông/Bà..Nguyễn Văn Toàn....................Chức vụ Chủ tịch UBND....
- Ông/Bà..Nguyễn Văn Sản....................Chức vụ ..Phó Bí thư thường trực
- Ông/Bà..Nguyễn Văn Bình....................Chức vụ Chủ tịch mặt trận Tổ quốc
- Ông/Bà..Nguyễn Đức Phả....................Chức vụ .Chủ tịch hội người cao tuổi
- Ông/Bà..Nguyễn Thị Thúy....................Chức vụ ..Chủ tịch Hội phụ nữ
- Ông/Bà... Chức vụ ....
- Đại diện những người bị ảnh hưởng: ....người (*chi tiết xem danh sách đính kèm*)

I. Nội dung tham vấn

- ***Tư vấn thiết kế giới thiệu dự án***: Vị trí trạm, tuyến đường; vị trí và chiều dài tuyến đường dây trên địa bàn phường, xã.
- ***Tư vấn môi trường trình bày về:*** Chính sách môi trường của ADB; Các quy định về môi trường trong ngành điện của chính phủ Việt Nam; Các tác động về môi trường và các biện pháp giảm thiểu tương ứng (như trong IEE); Cơ chế khiếu nại khi có các vấn đề môi trường xảy ra
- ***Tư vấn xã hội/tái định cư trình bày về:*** Kế hoạch tái định cư của ADB; Những tác động khi thu hồi đất và các tài sản trên đất; Những chính sách của Chính phủ nước Cộng hoà xã hội chủ nghĩa Việt Nam và địa phương, chính sách của dự án trong vấn đề bồi thường thiệt hại khi Nhà nước thu hồi đất đai và các tài sản trên đất; Các tác động thu hồi đất/tái định cư dự kiến trên địa bàn; Các phương án bồi thường đề xuất (*theo Khung chính sách của dự án đã được phê duyệt*); Tổ chức thực hiện, kế hoạch thực hiện kế hoạch tái định cư.

- **III. Ý kiến thảo luận**

III.1 Về các tác động môi trường tiêu cực và biện pháp giảm thiểu

- Khi thi công xây dựng, vận chuyển VTTB đề nghị nhà thầu thi công, chủ đầu tư lưu ý tránh quá tải khi thực hiện, tránh làm hư hỏng đường.
- Khu vực dự án đi qua ruộng lúa, hoa màu nên không có ảnh hưởng gì đến người dân, chỉ có ảnh hưởng nhỏ khi thi công đào móng
- Rất hoan nghênh việc tham vấn này để thông báo cho người dân biết về dự án.

III.2 Về các vấn đề thu hồi đất và các tài sản trên đất và các chính sách

- Đã lập xong phương án đền bù GPMB với các hộ đã đồng ý,
- Toàn bộ diện tích là đất nông nghiệp, khi thực hiện đề nghị phối hợp chặt chẽ với chính quyền địa phương.

IV. Kết luận

- UBND xã Bắc Hồng đồng ý với chủ trương đầu tư xây dựng TBA 110 kV Sầu Hay Nhà Bè trên địa bàn xã Bắc Hồng, nhìn chung việc đầu tư xây dựng không ảnh hưởng nhiều đến xã

Đại diện Chủ đầu tư	Đại diện cộng đồng	Đại diện tư vấn	Đại diện UBND xã
Đặng Trần Anh	Nguyễn Thị Thúy	Phạm Hải Hà Nguyễn Thế Loan	CHỦ TỊCH Nguyễn Văn Toàn

Nguyễn Tất Phú

c) PICTURES - BAC HONG COMMUNE, DONG ANH DISTRICT

ANNEX B.4 PUBLIC CONSULTATION AT BAC HONG COMMUNE, DONG ANH DISTRICT

a) LIST OF PARTICIPANTS - NAM HONG COMMUNE, DONG ANH DISTRICT

Date (Ngày tháng) :22/10/2013
Location (địa điểm) : Xã Nam Hồng

No TT	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	(Organization/Address)	Chữ ký (Signature)
01	Nguyễn Viết Khoa	✓		Chairman of the People's Committee		
02	Nguyễn Tiến Đức	✓		Vice-Chairman of the PC		
03	Phạm Thị Thiết		✓	Fatherland Front President		
04	Ngô Thị Đồng		✓	Chairwoman of the women's union		
05	Trần Văn Cường	✓		Vice Chairwoman of the women's union		
06	Nguyễn Vũ Thúc	✓		Irrigation and transportation officials		
07	Phạm Văn Thạch	✓		Vệ village heads		
08	Trần Vũ Minh	✓		Chairman of the rural cooperative Ve		
09	Nguyễn Văn Để	✓		Đoài village heads		
10	Ngô Văn Khánh	✓		Chairman of Rural Cooperatives Đoài		
11	Ngô Ngọc Xiêm	✓		Chairman of Rural Cooperatives Đìa		
12	Trần Xuân Chiên	✓		Deputy Secretary of Party Committee		
13	Hà Thị Thúy		✓	Staff		
14	Đặng Tuấn Anh	✓		Deputy Head of Planning or project management unit		
15	Nguyễn Manh Hùng	✓		Head of Planning or project management unit		
16	Nguyễn Thị Loan		✓	ADB consultants		
17	Khúc Thị Thanh Vân		✓	ADB consultants		
18	Phạm Hoàng Hồng Hà	✓		Design Consultant		
19	Bùi Văn Nghĩa	✓		Design Consultant		
20	Nguyễn Văn Trung	✓		Design Consultant		
21	Ngô Mạnh Quyền	✓		Department of land clearance of project management unit		
22	Phạm Văn Quyết	✓		Secretary Party branch		

PUBIC CONSUETATION ON ENVIRONMENT AND SOCIAL/RESETLEMENT

THAM VẤN CỘNG ĐỒNG VỀ MÔI TRƯỜNG VÀ XÃ HỘI/TÁI ĐỊNH CƯ

LIST OF PARTICIPANTS
DANH SÁCH NGƯỜI THAM DỰ

Date (Ngày tháng) : 22/10/2013
Location (địa điểm) : Xã Nam Hồng

No. TT	Họ và tên (Name)	Nam (M)	Nữ (F)	Chức vụ (Position)	Cơ quan/Địa chỉ (Organization/Address)	Chữ ký (Signature)
01	Nguyễn Việt Khoa	✓		Chủ tịch UBND		
02	Nguyễn Tiến Đức	✓		Phó chủ tịch UBND		
03	Phạm Thị Thiết		✓	Chủ tịch mặt trận	tổ quốc	
04	Ngô Thị Đông		✓	Chủ tịch hội phụ nữ		
05	Trần Văn Lương	✓		Phó chủ tịch UBND		
06	Nguyễn Vũ Thuế			Cán bộ giao thông thuỷ lợi		
07	Phạm Văn Thanh	✓		Trưởng thôn Vệ		
08	Trần Vũ Minh	✓		Chủ nhiệm HTX Thôn Vệ		
09	Nguyễn Văn Đỗ	✓		Trưởng thôn Đoài		
10	Ngô Văn Khanh	✓		Chủ nhiệm HTX Thôn Đoài		
11	Ngô Ngọc Xiêm	✓		Chủ nhiệm HTX Thôn Đìa		
12	Trần Xuân Chiến	✓		Phó bí thư đảng uỷ		
13	Hà Thị Thuý		✓	PVhân viên		
14	Đặng Tuấn Anh	✓		Phó Phòng KH	BQLDA	
15	Nguyễn Mạnh Hưng	✓		Phòng KH	BQLDA	
16	Nguyễn Thị Loan		✓	Tư vấn ADB		
17	Khuất Thị Thanh Vân		✓	Tư vấn ADB		
18	Phạm Hoàng Hồng Hà	✓		Tư vấn TK		
19	Bùi Văn Nghĩa	✓		Tư vấn TK		
20	Nguyễn Văn Thung	✓		Tư vấn TK		
21	Ngô Mạnh Quyền	✓		Phòng GPMB BQLDA		
22	Phạm Văn Quyết	✓		Bí thư chi bộ		

b) MINUTE OF MEETINGS AND PHOTOS - NAM HONG COMMUNE, DONG ANH DISTRICT

People Opinions/Questions	***Reply from project owner/consultants***
Agree with the environmental impacts and mitigation measures	
When the construction starts the project owner need to contact commune to resolve the land acquisition issues.	Will do that
When digging tower foundation, ensure safety by providing fence to prevent children from falling into the pit.	Will do that
Do not use highly loaded truck when transporting construction material to prevent damage to the road.	If the road in damage, it will be repaired after construction finish.
Make sure the water drainage system and the production of normal people.	Will do that
Ensure public security, register temporary workers to local authority.	Will do that
The local road is very weak, use small truck to transport materials, need to reinforce road before construction.	Each part of tower will be transported to the erection site.
When wiring, it is necessary to compensate plant crops on the ground to farmers.	Since 36 m high tower is used and the distance between two towers is short, the wires do not touch the ground and will not affect the crops below.
Contractor needs to restore environment after construction is completed.	Will do that
When identifying the pole location, the contractor and project owner need to discuss with commune PC to find the most appropriate placement.	Will do that
Do not affect the production and life of the people in the construction process.	Prior to the construction, there will be meeting with the contractor to thoroughly explain understand the issues of resettlement and

	environmental impacts.

Hanoi and Ho Chi Minh City Power Transmission Development Sector Project
DỰ ÁN NGÀNH PHÁT TRIỂN ĐƯỜNG DÂY TRUYỀN TẢI ĐIỆN THÀNH PHỐ HÀ NỘI VÀ HỒ CHÍ MINH

CỘNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự Do - Hạnh phúc
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Hà Nội, Ngày 22 tháng 10 năm 2013

BIÊN BẢN HỌP THAM VẤN CỘNG ĐỒNG VỀ ĐÁNH GIÁ MÔI TRƯỜNG, TÁI ĐỊNH CƯ VÀ PHÁT TRIỂN DÂN TỘC THIỂU SỐ

Tiểu dự án: Xây dựng TBA 110kV Sân bay Nội Bài và các đấu nối
Phường/Xã: Nam Hồng, Quận/Huyện: Đông Anh Thành phố Hà Nội

1. Thành phần tham dự

- Ông/Bà: Trần Xuân Chiêu Chức vụ: Phó Bí thư thường trực
- Ông/Bà: Nguyễn Tiến Đức Chức vụ: Phó Chủ tịch UBND
- Ông/Bà: Phan Tài Tiến Chức vụ: Chủ tịch mặt trận tổ quốc
- Ông/Bà: Ngô Tài Đăng Chức vụ: Chủ tịch Hội phụ nữ
- Ông/Bà: Ngô Văn Khánh Chức vụ: Chủ tịch HTX Thôn Đoài
- Ông/Bà: Nguyễn Văn Bế Chức vụ: Trưởng Thôn Đoài
- Ông/Bà: Ngô Ngọc Kiêm Chức vụ: Chủ tịch HTX Thôn Đài
- Ông/Bà: ..... Chức vụ: .....
- Đại diện những người bị ảnh hưởng: .....người (*chi tiết xem danh sách đính kèm*)

2. Nội dung tham vấn

- ***Tư vấn thiết kế giới thiệu dự án***: Vị trí trạm, tuyến đường; vị trí và chiều dài tuyến đường dây trên địa bàn phường, xã.
- ***Tư vấn môi trường trình bày về:*** Chính sách môi trường của ADB; Các quy định về môi trường trong ngành điện của chính phủ Việt Nam; Các tác động về môi trường và các biện pháp giảm thiểu tương ứng (như trong IEE); Cơ chế khiếu nại khi có các vấn đề môi trường xảy ra
- ***Tư vấn xã hội/tái định cư trình bày về:*** Kế hoạch tái định cư của ADB; Những tác động khi thu hồi đất và các tài sản trên đất; Những chính sách của Chính phủ nước Cộng hoà xã hội chủ nghĩa Việt Nam và địa phương, chính sách của dự án trong vấn đề bồi thường thiệt hại khi Nhà nước thu hồi đất đai và các tài sản trên đất; Các tác động thu hồi đất/tái định cư dự kiến trên địa bàn; Các phương án bồi thường đề xuất (*theo Khung chính sách của dự án đã được phê duyệt*); Tổ chức thực hiện, kế hoạch thực hiện kế hoạch tái định cư.

3. Ý kiến thảo luận

3.1 Về các tác động môi trường tiêu cực và biện pháp giảm thiểu

- Nhất trí với các tác động môi trường và biện pháp giảm thiểu như đã trình bày
- Trong quá trình thi công, đơn vị thi công phối hợp chặt chẽ với chính quyền địa phương, với thôn, xã, HTX (nếu có) hạn chế tối đa ảnh hưởng đến hệ thống tưới tiêu, hệ thống đường.
- Đảm bảo an toàn khi đào móng, phải có biển báo thi công để tránh nguy hiểm cho người dân. Nhà thầu phải dọn dẹp liền ngày sau khi thi công.
- Phải có biện pháp vận chuyển VTTB, nguyên vật liệu hợp lý để tránh hư đường.
- Khai báo tạm trú cho công nhân thi công.

3.2 Về các vấn đề thu hồi đất, các tài sản trên đất và các chính sách

- Thực hiện tuân thủ các quy định của nhà nước trong quá trình thu hồi đất phục vụ thi công

IV. Kết luận

- UBND xã Nam Hồng nhất trí với chủ trương đầu tư xây dựng mới TBA 110kV Sân bay Nội Bài và đường dây 110kV cấp điện cho TBA.
- Trong quá trình thi công rất mong đơn vị đầu tư, nhà thầu thi công phối hợp chặt chẽ với chính quyền địa phương

Đại diện Chủ đầu tư	Đại diện cộng đồng	Đại diện tư vấn	Đại diện UBND xã
Đặng Trần Nhu	Phạm Thị Chất Phạm Văn Thanh	Phạm Hồng Hà Nguyễn Thị Loan	PHÓ CHỦ TỊCH Nguyễn Tiến Đức

c) PICTURES - NAM HONG COMMUNE, DONG ANH DISTRICT

APPENDIX C. CERTIFICATE OF EIA FOR NOI BAI SUBSTATION AND TRANSMISSION LINES

HANOI PEOPLE'S COMMITTEE

SOCIALIST REPUBLIC OF VIETNAM

Independence – Freedom – Happiness

No: 4793/QĐ-UBND

Hanoi, August 12th, 2013

DECISION

Re. Approval of Environmental impact assessment report

Project: New construction of 110kV Noi Bai airport substation and 110kV line to supply power for the substation

Investor: Hanoi Power Corporation

Investor representative: Hanoi power network Project Management Unit

HANOI PEOPLE'S COMMITTEE

Pursuant to Law on Organisation of People's Council and People's Committee dated November 26th, 2003;

Pursuant to Law on Environmental Protection dated November 29th, 2005;

Pursuant to Decree no.29/2011/ND-CP dated April 18th, 2001 of the Government regarding Regulation on strategic environment assessment, environmental impact assessment, environmental protection commitment;

Pursuant to Circular no. 26/2011/TT-BTNMT dated July 18th, 2011 of Ministry of Natural Resources and Environment clarifying some articles of Decree no.29/2011/ND-CP dated April 18th, 2001 of the Government.

With reference to the request of the Director of Department of Natural Resources and Environment of Hanoi in Official Document no. 3383/TTr-STNMT-CCMT dated July 15th, 2013; enclosed with certification document, report on environmental assessment of Project "New construction of 110kV Noi Bai airport substation and 110kV line to supply power for the substation" revised on the basis of comments in the Appraisal Council's minute in the meeting on May 23rd, 2013.

DECISION

Article 1. Approving the Environmental impact assessment report of Project "New construction of 110kV Noi Bai airport substation and 110kV line to supply power for the substation" prepared by the Hanoi power network PMU (hereinafter referred to as the project owner) with the following main contents:

1. Scope, scale and capacity of the project: mentioned in the investment records and reports of projects.
2. The environmental protection requirement for the project: the project owner and the unit that manages and operates project shall be responsible for implementing and strictly complying with contents mentioned in the environmental impact assessment report and the following compulsory requirements:

2.1. Responsible for the implementation and application of the environmental mitigation and remedy measures during the construction and operation of the project with special attention to the following issues:

- The process of construction and dismantlement of buildings must comply with regulations on ensuring order, safety and environmental sanitation during the construction of buildings in Hanoi promulgated together with the resolution No. 55/2009/QD-UBND dated 17th March, 2009 and the dust reduction measures specified in the Decision No. 02/2005/QD-UBND dated October 01st, 2005 of the People's Committee of Hanoi City.

- Noise and vibration in the process of construction shall be prevented by mitigation measures in compliance with the provisions of National Technical Regulation QCVN 26:2010/MONRE (common area) on noise and QCVN 27:2010/MONRE (table 2 – common area) on vibration.

- Dust and emissions generated during the construction shall be prevented by mitigation measures in compliance with the provisions of National Technical Regulations QCVN 05:2009 / MONRE on ambient air quality and QCVN 06:2009 / MONRE on toxic substances in the ambient air.

- Domestic solid waste must be collected and processed in accordance with Decree 59/2007/ND-CP dated September 04th, 2007 by the Government on the solid waste, the regulations on common solid waste management in the area of Hanoi issued together with Decision No. 03/6/2013 16/QD-UBND of Hanoi city People's Committee.

- Hazardous waste discharged in the process of construction and operation of the project must be classified, collected, stored, managed and disposed according to the provisions of Circular 12/2011/TT- BTNMT dated April 14th, 2011 by the Ministry of Natural Resources and Environment for the management of hazardous waste.

- All wastewater from the process of construction and operation of the project must be collected and treated in accordance with QCVN 14:2008 / MONRE (column B) before being discharged into the public drainage system in the area.

2.2. Project owner and the unit that manages and operates the project have to implement the annual environmental monitoring program mentioned in the report on assessment of environmental impact. The periodical environmental monitoring results must be sent to the Environment Protection Agency - Department of Natural Resources and Environment in Hanoi for inspection and monitoring.

2.3. Project owner and the unit that manages and operates the project have to compensate those environmental damages that may be caused by the project pursuant to the Environment Protection Law and Decree 117/2009/ND-CP dated 31st December,2009 of Government on handling of violations of law in the field of environmental protection.

2.4. Project and the unit that manages and operates the project have to ensure budget for the investment and construction and operation of environmental treatment facilities as committed in the report on the assessment of environmental impact.

Article 2. Project owner have to establish, approve and publicly list the environmental management plan of the project; strictly satisfy the requirements of environmental protection in the preparation period for investment and the construction period of the project; prepare the documents to request the examination and confirmation on the availability of environmental protection facilities and measures for the operational phase of the project to be submitted to the competent authorities to supervise and certify before formally operating the project under the Circular No. 26/2011/17-BTNMT dated July 18th, 2011 by the Ministry of Natural Resources and Environment specifying some articles of Decree No. 29/2011/ND-CP dated April 18th 2011 by the Government regulating strategic environmental assessment, environmental impact assessment, environmental protection commitment.

Article 3. During the implementation process, changes on the content of paragraphs 1 and 2 of Article 1 of this Decision, if any, shall be submitted in a written report by the project owner and shall only be made upon written approval of the appropriate authorities.

Article 4. The Decision approving the report on the assessment of environmental impact shall act as the foundation for project investment decision; as a basis for the State's competent management agencies to supervise and inspect the implementation of environmental protection of the project.

Article 5. Authorizing the Director of the Department of Natural Resources and Environment to authenticate the supplemental cover page of the approved report on the assessment of

environmental impact and execute the examination and monitoring on the implementation of environmental protection in the approved report on the assessment of environmental impact .

Article 6. This decision takes effect from the date of signing. Chief of Office of the People's Committees of the city, Director of the Department of Natural Resources and Environment, the Heads of provincial Departments, Industries concerned, Chairman of People's Committee of Soc Son district and Dong Anh district, Director of the board of management of the power grid project in Hanoi and the civil work contractors are responsible for executing this decision./.

Destination:

- As the article 6;
- The Ministry of Resources and Environment(to report);
- The President of People's Committee of City(to report);
- The Vice- President Mr. Vo Hong Khanh;
- Committee Office, Chief of Office, Vice-chief of office Mr. Pham Chi Cong;
- Sub-Department of Environmental Protection in Hanoi;

ON BEHALF OF PEOPLE'S COMMITTEE

pp. Chairman

Deputy Chairman

(signed and sealed)

Vu Hong Khanh

Tổng cty Hà Nội

001

ỦY BAN NHÂN DÂN THÀNH PHỐ HÀ NỘI	CỘNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập – Tự do – Hạnh phúc
Số: 4793 /QĐ-UBND	*Hà Nội, ngày 12 tháng 8 năm 2013*

QUYẾT ĐỊNH

Về việc phê duyệt Báo cáo đánh giá tác động môi trường
Dự án: Xây dựng mới trạm biến áp 110kV sân bay Nội Bài và đường dây 110kV cấp điện cho trạm biến áp
Chủ đầu tư: Tổng công ty điện lực thành phố Hà Nội
Đại diện chủ đầu tư: Ban quản lý dự án lưới điện Hà Nội

ỦY BAN NHÂN DÂN THÀNH PHỐ HÀ NỘI

Căn cứ Luật tổ chức HĐND và UBND ngày 26/11/2003;

Căn cứ Luật Bảo vệ môi trường ngày 29 tháng 11 năm 2005;

Căn cứ Nghị định số 29/2011/NĐ-CP ngày 18 tháng 4 năm 2011 của Chính phủ Quy định về đánh giá môi trường chiến lược, đánh giá tác động môi trường, cam kết bảo vệ môi trường;

Căn cứ Thông tư số 26/2011/TT-BTNMT ngày 18 tháng 7 năm 2011 của Bộ Tài nguyên và Môi trường quy định chi tiết một số điều của Nghị định số 29/2011/NĐ-CP ngày 18 tháng 4 năm 2011 của Chính phủ;

Xét đề nghị của Giám đốc Sở Tài nguyên và Môi trường Hà Nội tại Tờ trình số 5384/TTr-STNMT-CCMT ngày 15 tháng 7 năm 2013; kèm theo bản xác nhận, báo cáo đánh giá tác động môi trường Dự án "Xây dựng mới trạm biến áp 110kV sân bay Nội Bài và đường dây 110kV cấp điện cho trạm biến áp" đã được chỉnh sửa, bổ sung theo ý kiến nhận xét tại biên bản của Hội đồng thẩm định họp ngày 23/5/2013.

QUYẾT ĐỊNH:

Điều 1. Phê duyệt báo cáo đánh giá tác động môi trường của Dự án "Xây dựng mới trạm biến áp 110kV sân bay Nội Bài và đường dây 110kV cấp điện cho trạm biến áp" được lập bởi Ban quản lý dự án lưới điện Hà Nội (sau đây gọi là Chủ dự án) với các nội dung chủ yếu sau đây:

1. Phạm vi, quy mô, công suất của Dự án: Được nêu trong hồ sơ, báo cáo đầu tư của dự án

2. Yêu cầu bảo vệ môi trường đối với dự án: Chủ dự án và đơn vị tiếp nhận, quản lý vận hành dự án có trách nhiệm thực hiện đúng những nội dung đã được nêu trong báo cáo đánh giá tác động môi trường và những yêu cầu bắt buộc sau đây:

2.1. Chịu trách nhiệm thực hiện và áp dụng các biện pháp giảm thiểu và xử lý ô nhiễm môi trường trong suốt quá trình đầu tư xây dựng và đi vào hoạt động của Dự án, đặc biệt lưu ý các vấn đề sau đây:

- Quá trình thi công xây dựng và phá dỡ các công trình phải thực hiện đúng Quy định về đảm bảo trật tự, an toàn và vệ sinh môi trường trong quá trình xây dựng các công trình tại Thành phố Hà Nội ban hành kèm theo Quyết định số

55/2009/QĐ-UBND ngày 17/3/2009 và các biện pháp giảm bụi theo quy định tại Quyết định số 02/2005/QĐ-UBND ngày 10/01/2005 của UBND Thành phố Hà Nội.

- Tiếng ồn và độ rung trong quá trình thi công xây dựng dự án phải có biện pháp giảm thiểu, đảm bảo tuân thủ quy định tại Quy chuẩn Kỹ thuật Quốc gia QCVN 26:2010/BTNMT (khu vực thông thường) về tiếng ồn và QCVN 27:2010/BTNMT (Bảng 2- Khu vực thông thường) về độ rung.

- Bụi và khí thải phát sinh trong quá trình thi công xây dựng dự án phải có các biện pháp giảm thiểu, đảm bảo tuân thủ quy định tại Quy chuẩn Kỹ thuật Quốc gia QCVN 05:2009/BTNMT về chất lượng không khí xung quanh và QCVN 06:2009/BTNMT về một số chất độc hại trong không khí xung quanh.

- Chất thải rắn sinh hoạt phải được thu gom và xử lý theo đúng quy định tại Nghị định 59/2007/NĐ-CP ngày 09/04/2007 của Chính phủ về quản lý chất thải rắn, Quy định về quản lý chất thải rắn thông thường trên địa bàn Thành phố Hà Nội ban hành kèm theo Quyết định số 16/QĐ-UBND ngày 03/6/2013 của UBND Thành phố Hà Nội.

- Chất thải nguy hại phát sinh trong quá trình thi công xây dựng và vận hành khai thác dự án phải được phân loại, thu gom, lưu giữ, quản lý và xử lý theo đúng quy định tại Thông tư 12/2011/TT-BTNMT ngày 14/4/2011 của Bộ Tài nguyên và Môi trường quy định về quản lý chất thải nguy hại.

- Toàn bộ nước thải sinh hoạt phát sinh trong quá trình thi công xây dựng và vận hành của dự án đều phải được thu gom và xử lý đạt QCVN 14:2008/BTNMT (cột B) trước khi thải ra hệ thống thoát nước chung trong khu vực

2.2. Chủ dự án và đơn vị tiếp nhận, quản lý vận hành dự án phải thực hiện chương trình giám sát môi trường hàng năm đã nêu trong báo cáo đánh giá tác động môi trường. Kết quả giám sát môi trường định kỳ phải gửi đến Chi cục Bảo vệ Môi trường - Sở Tài nguyên và Môi trường Hà Nội để kiểm tra và giám sát.

2.3. Chủ dự án và đơn vị tiếp nhận, quản lý vận hành dự án phải đền bù những thiệt hại môi trường do dự án gây ra theo Luật Bảo vệ Môi trường và Nghị định 117/2009/NĐ-CP ngày 31/12/2009 của Chính phủ về xử lý vi phạm pháp luật trong lĩnh vực Bảo vệ Môi trường.

2.4. Chủ dự án và đơn vị tiếp nhận, quản lý vận hành dự án phải đảm bảo nguồn kinh phí đầu tư xây dựng và vận hành các công trình xử lý môi trường đã cam kết trong báo cáo đánh giá tác động môi trường.

Điều 2. Chủ dự án phải lập, phê duyệt và niêm yết công khai kế hoạch quản lý môi trường của dự án; nghiêm túc thực hiện các yêu cầu về bảo vệ môi trường trong giai đoạn chuẩn bị đầu tư và giai đoạn thi công xây dựng dự án; lập hồ sơ đề nghị kiểm tra, xác nhận việc đã thực hiện các công trình, biện pháp bảo vệ môi trường phục vụ giai đoạn vận hành của dự án gửi cơ quan có thẩm quyền để kiểm tra, xác nhận trước khi đưa dự án vào vận hành chính thức theo quy định tại Thông tư số 26/2011/TT-BTNMT ngày 18 tháng 7 năm 2011 của Bộ Tài nguyên và Môi trường quy định chi tiết một số điều của Nghị định số 29/2011/NĐ-CP ngày 18 tháng 4 năm 2011 của Chính phủ quy định về đánh giá môi trường chiến lược, đánh giá tác động môi trường, cam kết bảo vệ môi trường.

Điều 3. Trong quá trình thực hiện nếu dự án có những thay đổi so với các khoản 1 và 2 Điều 1 của Quyết định này, Chủ dự án phải có văn bản báo cáo và chỉ

được thực hiện những thay đổi sau khi có văn bản chấp thuận của cấp có thẩm quyền.

Điều 4. Quyết định phê duyệt báo cáo đánh giá tác động môi trường của dự án là căn cứ để quyết định việc đầu tư dự án; là cơ sở để các cơ quan quản lý nhà nước có thẩm quyền kiểm tra, thanh tra việc thực hiện công tác bảo vệ môi trường của dự án.

Điều 5. Ủy nhiệm Giám đốc Sở Tài nguyên và Môi trường xác nhận vào trang phụ bìa của Báo cáo đánh giá tác động môi trường đã được phê duyệt và thực hiện việc kiểm tra, giám sát việc thực hiện các nội dung bảo vệ môi trường trong báo cáo đánh giá tác động môi trường đã được phê duyệt.

Điều 6. Quyết định này có hiệu lực thi hành kể từ ngày ký. Chánh Văn phòng UBND Thành phố; Giám đốc Sở Tài nguyên và Môi trường; Thủ trưởng các Sở, Ban, Ngành liên quan, Chủ tịch UBND huyện Sóc Sơn và huyện Đông Anh, Giám đốc Ban quản lý dự án lưới điện Hà Nội và các nhà thầu thi công xây dựng chịu trách nhiệm thi hành Quyết định này./.

Nơi nhận:
- Như điều 6;
- Bộ Tài nguyên và Môi trường (để b/c);
- Chủ tịch UBNDTP (để b/c);
- Phó Chủ tịch Vũ Hồng Khanh;
- VPUB: CVP, PCVP Phạm Chí Công;
- Chi cục Bảo vệ Môi trường Hà Nội;
- TH, TNMT (b,th);
- Lưu: VT.

MSHS.15378.CCMT

TM. ỦY BAN NHÂN DÂN
KT. CHỦ TỊCH
PHÓ CHỦ TỊCH

Vũ Hồng Khanh

APPENDIX D: EMERGENCY RESPONSE PLAN

1. The Contractor must develop emergency or incident response procedures (ERP) during construction. In the operational phase, the operator/civil authorities will have responsibility for any emergencies or serious incidents. The construction phase should ensure:

i) Emergency Response Team (ERT) of the Contractor as initial responder;
ii) the District fire and police departments, emergency medical service, the Department of Public Health (DPH), collectively referred to as the External Emergency Response Team (EERT), as ultimate responders.

2. The Contractor will provide and sustain the required technical, human and financial resources for quick response during construction.

Table 1. Roles and Responsibilities in Emergency Incident Response

Entity	Responsibilities
Contractor Team (ERT)	- Communicates / alerts the EERT. - Prepares the emergency site to facilitate the response action of the EERT, e.g., vacating, clearing, restricting site. - When necessary and requested by the EERT, lends support / provides assistance during EERT's response operations.
External Emergency Response Team (EERT)	- Solves the emergency/incident
Contractor Resources	- Provide and sustain the people, equipment, tools and funds necessary to ensure Subproject's quick response to emergency situations. - Maintain good communication lines with the EERT to ensure prompt help response and adequate protection, by keeping them informed of Subproject progress.

3. The ERT will be led by the senior Contractor engineer (designated ERTL) on site with a suitably trained foreman or junior engineer as deputy. Trained first-aiders and security crew will be the core members of the ERT.

4. The Contractor will ensure that ERT members are physically, technically and psychologically fit for their emergency response roles and responsibilities.

5. Prior to the mobilization of civil works, the Contractor, through its Construction Manager, ERTL, in coordination with the EA/IA, will meet with the ultimate response institutions to discuss the overall construction process, including, but not limited to:

i) Subproject sites;
ii) construction time frame and phasing;
iii) any special construction techniques and equipment that will be used; i
iv) any hazardous materials that will be brought to and stored in the construction premise and details on their applications and handling/management system;
v) the Contractor's Emergency Management Plan
vi) names and contact details of the ERT members

6. The objective of this meeting is to provide the ultimate response institutions the context for:

i) their comments on the adequacy of the respective Emergency Management Plans
ii) their own assessment of what types, likely magnitude and likely incidence rate of potential hazards are anticipated
iii) the arrangements for coordination and collaboration.

7. To ensure effective emergency response, prior to mobilization of civil works, the Contractor will:

i) set up the ERT;
ii) set up all support equipment and facilities in working condition
iii) made arrangements with the EERT;
iv) conducted proper training of ERT members, and encouraged and trained volunteers from the work force; v) conducted orientation to all construction workers on the emergency response procedures and facilities, particularly evacuation procedures, evacuation routes, evacuation assembly points, and self-first response, among others; and vi) conducted drills for different possible situations.

8. To sustain effective emergency response throughout Subproject implementation an adequate budget shall be provided to sustain the capabilities and efficiency of the emergency response mechanism, the emergency response equipment, tools, facilities and supplies. Drills and reminders will take place regularly, the former at least every two months and the latter at least every month.

Alert Procedures

9. Means of communicating, reporting and alerting an emergency situation may be any combination of the following: i) audible alarm (siren, bell or gong); ii) visual alarm (blinking/rotating red light or orange safety flag); iii) telephone (landline); iv) mobile phone; v) two-way radio; and vi) public address system/loud speakers. Some rules relative to communicating/alerting will be:

(i) Whoever detects an emergency situation first shall immediately :

- call the attention of other people in the emergency site,
- sound the nearest alarm, and/or
- report/communicate the emergency situation to the ERT.

(ii) Only the ERTL and, if ERTL is not available, the Deputy ERTL are authorized to communicate with the EERT. Exceptional cases to this rule may be necessary and should be defined in the Emergency Management Plans.

(iii) When communicating/alerting an emergency to the EERT, it is important to provide them with at least: i) the type of emergency situation; ii) correct location of the emergency; ii) estimated magnitude of the situation; iii) estimated persons harmed; iv) time it happened; v) in case of a spill, which hazardous substance spilled; and vi) in case of fire and explosion, what caused it. Such details would allow the EERT to prepare for the appropriate response actions. For an effective reporting/alerting of an emergency situation:

(i) The names and contact details of the relevant persons and institutions should be readily available in, or near to, all forms of communication equipment, and strategically posted (at legible size) in all Subproject sites and vehicles:

- Most relevant construction/operations staffs namely, the ERTL, Deputy ERTL, first-aiders, supervising engineers, foremen
- EERT institutions/organizations
- Concerned village authority/ies
- IA Office, SS

(ii) All Subproject sites should have good access to any combination of audible and visual alarms, landline phones, mobile phones and two-way radio communication at all times.

(iii) Contractor's construction vehicles should also be equipped with the appropriate communication facilities.

Emergency Response Situations

The following tables suggest general procedures that will be refined in the final EMP during detailed design, and described in more detail in the Emergency Management Plans of the Contractor.

Table 2. Evacuation Procedure

Procedure	Remarks
▪ Move out as quickly as possible as a group, but avoid panic.	▪ All workers/staff, sub-contractors, site visitors to move out, guided by the ERT.
▪ Evacuate through the directed evacuation route.	▪ The safe evacuation shall have been determined fast by the ERTL/Deputy ERTL and immediately communicated to ERT members.
▪ Keep moving until everyone is safely away from the emergency site and its influence area.	▪ A restricted area must be established outside the emergency site, all to stay beyond the restricted area.
▪ Once outside, conduct head counts.	▪ Foremen to do head counts of their

Procedure	Remarks
	sub-groups; ERTL/Deputy ERTL of the ERT.
▪ Report missing persons to EERT immediately.	▪ ERTL/Deputy ERTL to communicate with the EERT.
▪ Assist the injured in evacuation and hand them over to the ERT first-aiders or EERT medical group	▪ ERT to manage injured persons to ensure proper handling.
▪ If injury warrants special care, DO NOT MOVE them, unless necessary and instructed/directed by the EERT.	▪ ERTL/Deputy ERTL communicates with EERT to get instructions/directions in handling the injured.

Table 3. Response Procedure During Medical Emergency

Procedure	Remarks
▪ Administer First Aid regardless of severity immediately.	▪ Fundamentals when giving First Aid: - Safety first of both the rescuer and the victim. - Do not move an injured person unless: - victim is exposed to more danger when left where they are, e.g., during fire, chemical spill - it would be impossible for EERT to aid victims in their locations, e.g., under a collapsed structure - instructed or directed by the EERT. ▪ First AID to be conducted only by a person who has been properly trained in giving First Aid.
▪ Call the EERT emergency medical services and/or nearest hospital.	▪ ERTL/Deputy ERTL or authorized on-site emergency communicator
▪ Facilitate leading the EERT to the emergency site.	▪ ERTL/Deputy ERTL to instruct: - an ERT member on- site to meet EERT in access road/strategic location. He/she shall hold orange safety flag to get their attention and lead them to site. - Other ERT members to clear access road for smooth passage of the EERT.
▪ If applicable, vacate site and influence area at once, restrict site, suspend work until further notice.	▪ Follow evacuation procedure.

Table 4. Response Procedure in Case of Fire

Procedure	Remarks
▪ Alert a fire situation.	▪ Whoever detects the fire shall immediately: - call the attention of other people in the site, - sound the nearest alarm, and/or - Foreman or any ERT member among the construction sub-group contacts the fire department (in this case it should be agreed on that it is alright for any ERT member in the sub-group to alert the fire department) - report/communicate the emergency situation to the ERTL/Deputy ERTL.
▪ Stop all activities/operations and evacuate.	▪ All (non-ERT) workers/staff sub-contractors, site visitors and concerned public to move out to safe grounds following the evacuation procedure.
▪ Activate ERT to contain fire/control fire from spreading.	▪ Guided by the training they undertook, ERT members assigned to mitigate the fire shall assess their own safety situation first before attempting to control fire spread.
▪ Call the nearest fire and police stations and, if applicable, emergency medical services.	▪ When alerting the EERT, ERTL will give the location, cause of fire, estimated fire alarm rating, any injuries.
▪ Facilitate leading the EERT to the emergency site.	▪ ERTL/Deputy ERTL to instruct: - an ERT member to meet the EERT in the access road or strategic location and lead them to the site. He/she shall hold the orange safety flag to get their attention and lead them to the site. - some ERT members to stop traffic in, and clear, the access road to facilitate passage of the EERT.
▪ ERT to vacate the site as soon as their safety is assessed as in danger.	▪ Follow appropriate evacuation procedure.