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EXECUTIVE SUMMARY

ES 1 INTRODUCTION

The electricity demand in most parts of Burkina Faso is primarily met through thermal power generation. The economic difficulties of operating oil-fired thermal power plants especially their high costs of production have led to gradual degradation in the quality of electricity supply to the population of Ouagadougou, which has in turn impacted on their productivity. Additionally, the negative environmental impacts of oil-fired thermal generation with regard to green-house gas emissions and their effects on global warming and climate change need to be avoided wherever possible. Furthermore, due to growing demand that has far surpassed available generating capacity, combined with these economic difficulties, there is a need for the Société Nationale d'Electricité du Burkina (SONABEL), the national electric power utility provider to reinforce its quality of supply especially through the diversification of its mode of electricity production.

ES 2 PROJECT BACKGROUND AND JUSTIFICATION

The southern neighbor of Burkina Faso, Ghana, has a number of ongoing and near-planned electricity generation projects. The Volta River Authority (VRA), the national electric power utility company in Ghana, was established under the Volta River Development Act 1961, Act 46, with functions including the generation of electric power for industrial and domestic needs of Ghana. The generation system of VRA consists of two (2) hydroelectric power plants on the Volta River at Akosombo (1,020 MW) and Kpong (160 MW) and a Thermal Generation plant at Aboadze near Takoradi (550 MW). The Kpong Hydro Electric Plant (HEP), located some 24 km downstream of the Akosombo HEP Generation station, has four generating units, each individually rated at 40 MW. The Akosombo HEP Generation Station has six generating units, with a total installed capacity of

912 MW, including 15% overload capacity. In 2005, VRA undertook an overhaul to bring the total plant installed capacity to 1,020 MW. VRA also generates power from the Takoradi Thermal Power Plant, which runs on light crude oil and consists of the 330 MW Combined Cycle Takoradi Thermal Power Generating Station (TTPS); and currently 220 MW from the 330 MW Combined Cycle Takoradi International Company Plant (TICO). The TTPS is wholly owned by VRA and comprises two nominal 110 MW Combustion Turbine Generators and a nominal 110 MW Steam Turbine Generator. Ghana has also acquired a 125 MW simple cycle barge mounted Thermal Plant at Effasu which has been handed over to a private investor for operation, and has commenced the construction of the Tema Thermal Power Projects consisting of a 126 MW Tema Thermal 1 Power Project, 80 MW Mines Reserve Power Plant, and the 50 MW Tema Thermal 2 Power Plant. A 300 MW thermal generating plant that was originally to be located at Kpone under the Kpone Thermal Power Project has been relocated to the Jomoro District under the Domini Thermal Project to take advantage of the associated gas of the nearby Jubilee Fields. There is also the Sunon-Asogli Thermal Power Plant and a number of other generating plants in various stages of construction. With the commissioning of the West African Gas Pipeline (WAGP) and the recent oil find in Ghana (with associated natural gas), all these power generating plants could be run on Liquefied Natural Gas (LNG) to produce cheaper and more environmentally friendly electric power. The proposed Bui Dam project in the north-western part of Ghana is expected to add about 400 MW of power to the national power pool after its completion to further boost Ghana's energy base. As a result, Ghana's energy generation potential has increased immensely, justifying the construction of this project in anticipation of evacuation of spare power to immediate neighbor Burkina Faso. In addition, the extension of the existing interconnection line emanating from Côte d'Ivoire through Ghana and Togo/Benin to Nigeria with the 330 kV Ikeja West (Nigeria) – Sakete (Benin) transmission line project, will increase the available spare capacity in Ghana. This will permit

the exportation of cheaper power to Ouagadougou from Ghana through a transmission interconnection line from Bolgatanga (Ghana) to Ouagadougou (Burkina Faso), in line with the adopted West African Power Pool (WAPP) Master Plan. A different but affiliated company called Ghana Grid Company Limited manages power transmission in Ghana.

ES 3 PROJECT DESCRIPTION

The 225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection project is a trans-boundary electric power transmission line to emanate from Bolgatanga in Ghana to Ouagadougou in Burkina Faso. It involves the construction of approximately 200 kilometer-long power evacuation infrastructure comprising steel lattice towers, insulators and conductors to transmit up to 225 kilo Volts of electric power. Primarily, the line is expected to evacuate electrical energy supply generated in Ghana directly to Burkina Faso. The Ghana section of the project covers the construction of approximately 39.3 kilometers of the 225 kV transmission line and the extension of the existing 161 kV substation in Bolgatanga to accommodate the line.

The construction of such a project requires the acquisition of a 40-metre line route corridor within which the transmission line infrastructure will be positioned. A preliminary line route survey was undertaken for the proposed transmission line in 1990 by Tractebel Energy Engineering. However, the project was shelved until 2008, when a joint venture led by Cabinet d'Ingénierie et de Recherche Appliquée (CabIRA) was commissioned by the West African Power Pool (WAPP) as promoters of the project to update the line route survey studies and undertake an environmental and social impact assessment ESIA). Since 1990, however, considerable physical developments have taken place in an around Bolgatanga resulting in sections of the line route being unavailable for the project. The construction of the transmission line project utilizing the original transmission line route was going to be difficult without involving massive involuntary resettlement of people. Even the current updated line route which has sought to reduce

involuntary resettlement by re-aligning the line route has encountered some challenges to do with the availability of the right-of-way. Utilizing the update line route for the project will require the acquisition of land for the 40 meter project corridor from Bolgatanga to the Ghana-Burkina Faso border near Paga, where the line would exit Ghana into Burkina Faso. Within the proposed line route are buildings and crops belonging to some individuals and families.

By the Lands (Statutory Wayleaves) Act, 1963, Act 186 and the Lands (Statutory Wayleaves) Regulations, 1964, (LI 334) of Ghana, the state (government) retains the power to compulsorily acquire any (stretch of) land for public use if necessary, and pay prompt and appropriate compensation to the original owner(s) of the said land. The World Bank Operational Policy (OP 4.12) on Involuntary Resettlement mandates that projects that require the Bank's funding should, as much as possible, avoid or minimize involuntary resettlement by exploring all viable alternative project designs. It indicates further that where displacement is unavoidable, a resettlement plan should be developed that will be implemented prior to the commencement of the project.

Having undertaken the ESIA using the updated line route, CabIRA is also required by the project Terms of Reference (TOR) to draw a Resettlement Action Plan that will guide the compensation and resettlement issues relating to the acquisition of the project right-of-way (also referred to as line route corridor).

ES 4 BACKGROUND OF PROJECT PROMOTERS

West African Power Pool (WAPP)

The West African Power Pool (WAPP) is a regional power market development initiative by the Economic Commission of West African States (ECOWAS), created by Decision A/DEC.5/12/99 at the 22nd Summit of the Authority of ECOWAS Heads of State and Governments in order to address the issue of power supply deficiency within West Africa. Its primary objective is to establish a regional electricity market in West Africa through

the judicious development and realization of key priority infrastructure that would permit accessibility to economic energy resources, to all member states of the ECOWAS. Currently, WAPP member countries comprise Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

In order to further advance the implementation of the priority projects of the West African Power Pool (WAPP), the WAPP Secretariat, located in Cotonou, Benin, and the WAPP Members have commenced preparatory works towards the implementation of the following priority interconnection projects:

- 330 kV Volta (Ghana) – Mome Hagou (Togo) - Sakete (Benin) transmission project
- 150 kV Sikasso – Koiutiala (Mali) - Segou (Mali) transmission project
- 330 kV Aboadze (Ghana) – Prestea (Ghana) transmission project
- 225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection project.

The WAPP Secretariat on behalf of the Volta River Authority (VRA) of Ghana and the Société Nationale d'Electricité du Burkina (SONABEL) of Burkina Faso have engaged the services of CabIRA, a consortium of environmental and engineering consultants, to undertake the following activities:

- Update an existing Line Route survey, produce maps, plans and profiles, and
- Undertake an Environmental and Social Impact Assessment study of the surveyed route and prepare an Environmental Impact Statement.

The Volta River Authority

The Volta River Authority (VRA) is the sole public corporation established under the Volta River Development Act 1961, Act 46, with functions including the generation and transmission of electric power for industrial and domestic needs of Ghana. In addition, the VRA sells electricity to

nearby countries of Togo and Benin, and has interconnection with la Cote d'Ivoire. The VRA operates both hydro and thermal power plants.

VRA's power transmission operation has recently been taken over by Ghana Grid Company Limited (GRIDCo) which has been formed out of VRA to solely manage transmission, by the Volta River Development Act, 2005, Act 692. The transmission system comprised approximately 4000 - circuit km of High Voltage lines and 42 switching and bulk supply points (substations). The transmission network consists of about 3700 km 161 kV transmission lines spread over the whole country as well as a 128 km 161 kV double circuit line and a 75 km 225 kV single circuit transmission line for interconnection with Togo and Benin in the east and Cote d'Ivoire in the west respectively. There is also about 100 km of 69 kV transmission line in the eastern part of the country. The construction of a 215 km 330 kV transmission line from the Takoradi Thermal Power Station (TTPS), Aboadze to the Volta substation, Tema which forms part of the 330 kV WAPP Coastal Transmission Backbone is almost completed. The procurement process for the construction of a 330 kV transmission line from the Volta substation through Mome-Hagou, Togo to link up with the Sakete, Benin to Ikeja West, Nigeria is also in progress. Again, the bidding processes for the Ghana – Burkina Faso Cross Border Project from Bawku (Ghana) to Bittou (Burkina Faso) as well as the 330 KV Aboadze-Prestea-Kumasi-Han Transmission System and the 330 KV Tumu-Han –Wa Transmission Line Project both in Ghana are in progress. However, at present GRIDCo is operating in close collaboration with VRA with regard to this project, and may be referred to interchangeably for the purpose of this project.

ES 5 PROJECT LOCATION

Bolgatanga is the capital of the Upper East Region of Ghana. Together with the Upper West and Northern Regions, the Upper East Region falls under the Northern Ghana territory. Northern Ghana lies within the Sudan or Short Grass savannah vegetation belt of West Africa which is characterized

by grasses interspersed with low density wood land of drought and fire-resistant species.

The proposed transmission line will originate from the VRA's substation in Bolgatanga in the Upper East Region of Ghana and travel in a general northwestern direction towards the national border with Burkina Faso, traversing the Kassena – Nankana District and the newly established Kassena - Nankana West District to exit Ghana near Paga into Burkina Faso. The project corridor lies between latitude 10° 45'N to 11° 45' N and longitude 1° 7'30" W to 0° 52'30" E. From the substation, the line traverses or runs close to about fifteen (15) settlements to the Ghana – Burkina Faso Border at the Goiree community in the Kassena Nakana West District.

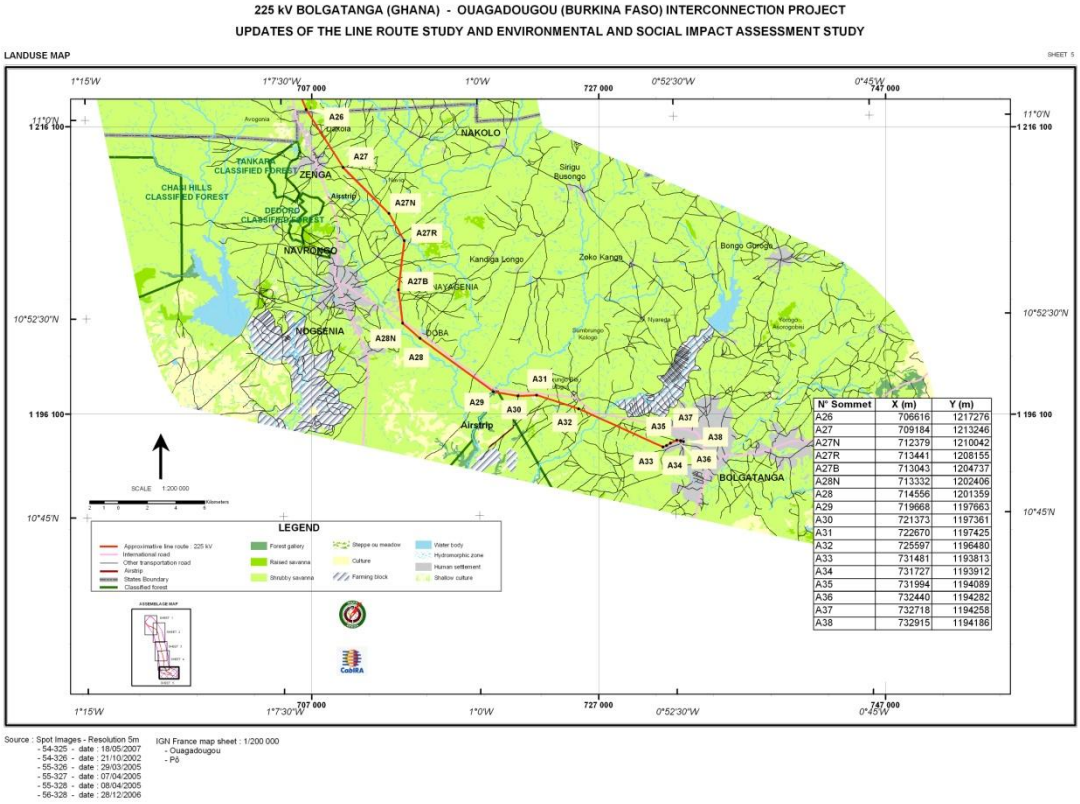

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Table 1: List of affected communities traversed by the proposed line route

DISTRICT/MUNICIPALITY	CAPITAL	AFFECTED COMMUNITIES
Bolgatanga Municipality	Bolgatanga	Zorbisi
		Sokabisi
		Yikene
		Sumbrungu
		Kulbia
		Anateem
Kassena-Nankana East	Navrongo	Kandiga
		Doba
		Nayagnia
		Pinyoro
		Pungu
Kassena-Nankana West	Paga	Nyangua
		Tekuru Kizito
		Baduno
		Paga Zenga

ES 6 PROJECT DETAILS

The per capita consumption of, and the level of access to energy supply services are key indicators of socio-economic development of any country. One of the obstacles to achieving the Millennium Development Goals (MDGs) is the lack of access to energy services such as electricity. A major strategy identified by the Governments of Economic Community of West African States (ECOWAS) for increasing energy access is the interconnection of power systems and the encouragement of trans-boundary electricity supply. The objective is for countries that are better endowed in terms of electricity to provide the less endowed member states with access to cost-competitive energy. To address the constraint of lack of access to electricity, ECOWAS, the Authority of Heads of States and Governments of Member States authorized the establishment of the West African Power Pool (WAPP). The WAPP is expected to provide a mechanism and the institutional framework for integrating the power systems of the ECOWAS Member States by providing reliable and sustainable electricity supply for the economic development of the sub-region. It is within this framework that the WAPP Secretariat, and the

national energy utilities of Ghana and Burkina Faso, (Volta River Authority, VRA and the Société Nationale d'Electricité du Burkina, SONABEL) is undertaking a project that will comprise the construction of a 210-kilometre long, 225 kV transmission line from Bolgatanga in the Upper East Region of Ghana to Ouagadougou in Burkina Faso to transmit high-tension electric power from Ghana to Burkina Faso. To that effect, the WAPP Secretariat on behalf of VRA and SONABEL, has procured the services of the joint venture Consultancy led by CabIRA to undertake a Line Route survey update an Environmental and Social Impact Assessment study for the proposed 225kV Bolgatanga-Ouagadougou Interconnection project.

On the Ghanaian side, the project will result in the following:

- construction of approximately 39.3 km of 225 kV transmission line, and
- extension of the 161 kV substation in Bolgatanga (Ghana).

The project is at the pre-construction phase, and environmental approval given by the Ghana EPA. The project Terms of Reference (TOR) requires the drawing up of a Resettlement Action Plan that will guide the compensation and resettlement issues relating to the acquisition of the project right-of-way.

ES 7 SCOPE OF RESETTLEMENT ACTION PLAN (RAP)

This RAP has been drawn in line with the requirements of the Environmental Assessment Regulations, 1999, LI 1652 of Ghana and the World Bank Operational Procedures 4.12 on Involuntary Resettlement, and covers the following key aspects:

- Project Description
- Baseline Socio-Economic Information on Project Area
- Justification for Resettlement Action Plan
- Impacts of Resettlement
- Objectives of RAP
- Methodology for RAP Implementation
- Public Participation

- Organizational Responsibilities in RAP Implementation
- Implementation Schedule
- Budget
- Monitoring and Evaluation

ES 7.1 Baseline socio-economic data of affected communities

The proposed transmission traverses three contiguous administrative districts in the Upper East Region from its source to the exit point on the Ghana-Burkina Faso border. These districts are Bolgatanga Municipality, Kassena-Nankana District and Kassena-Nankana West Districts. Specific data relevant to the affected communities are presented below.

Demographics and Population of Affected Communities

In all, 15 communities in three (3) administrative districts are affected by the project. Table 2 below shows the ratios of affected people in the various populations of the affected communities.

Table 2 Populations of Project-Affected Persons and Communities

District	Community	Population	Population of Pap's	Percentage
Bolgatanga Municipal	Zorbisi	1,053	69	6.6
	Sorkabisi	874	76	8.7
	Yikene	1,344	32	2.4
	Sumbrungu	2,897	187	6.5
	Kulbia	1,576	118	7.5
	Anateem	892	58	6.5
	TOTAL	**8,636**	**540**	**6.93**
Kassena-Nankana East	Doba	1,784	203	11.4
	Nayagnia	1,213	50	4.1
	Pinyoro	348	10	2.9
	Pungu-Nimbasinia	1,789	110	6.1
	Tekuru-Kazito	359	34	9.5
	Nyangua-Kwania	273	33	12.1
	TOTAL	**5,766**	**440**	**7.6**
Kassena-Nankana West	Kandiga	1,108	80	7.2
	Badunu	392	7	1.8
	Zenga	532	42	7.9
	Paga	2,131	57	2.7
	TOTAL	**4,163**	**186**	**4.5**

Credit: Populations on Communities from Development Planning offices of District Assemblies

It is noteworthy that the most affected community (Nyangua-Kwania in the Kassena-Nankana East) has 12.1 per cent of its population being affected by the project, while the least affected community (Badunu in the Kassena-Nankana West District) has 1.8 percent of its population affected.

Social and Economic Characteristics of Project Affected People and Communities

Under this section, we present a social and economic profile of the project affected communities, with specific reference to sources of livelihood, household strength and community facilities.

- **Source of Livelihood**

The table below depicts the various economic activities/employments that the PAP's are engaged in for their livelihoods. In an answer to the question: what type of economic activity are you engaged in as your source of livelihood, out of the 150 owners of compounds/gates within the various households 142 (95%) of them derived their source of livelihood from farming (peasant farmers) and only 8 representing 5% are Government employees. It must be noted that 29% and 11% of the respondents who said they were farmers are also engaged in leather work/basketry and petty trading respectively. Table 3 below presents the various sources of livelihood for project affected-persons.

Table 3: Source(s) of Livelihood of Project-Affected Persons

Economic Activity	No. of Persons	Percentage (%)
Farming	142	95
Fishing	3	2
Government Employment	8	5
Non-Governmental Organisation	0	0
Petty Trading/self employed	17	11
Leather work/Basketry	43	29

Source: Field Survey

- **Household Composition and Structure**

There are a total of 87 households affected by the project in all the 16 communities cutting across the three Districts with a population of 1,166. This results in an average household size of 13.0. It must be noted here that, some of the relatives/members of the households of the PAPs normally travel to the southern part of the country, especially during the dry season to seek greener pastures to avoid idling since no farming activities take place at this time. Also, out of the 87 households, only 8 of them are owned or headed by women while the rest belongs to men.

- **Household and Community Facilities**

The Upper East Region is considered among the most deprived regions in Ghana, in terms of social and economic infrastructure. Out of the 16 communities affected by the project, 9 of them are connected to electricity from the national grid. Four (4) of these communities are in the Bolgatanga Municipality, 2 in the Kassena-Nankana East District and 3 Kassena-Nankana West. On the affected properties, only 17 of the 87 households are connected with electricity. Also, all the 15 communities have access to potable water; 4 of them have access to pipe-borne water while the rest have their source of water from natural and/or man-made sources such as river/stream, borehole and dug-outs. However, none of the affected households has been connected with water or has its own water supply system but rather draw water from bore-holes, wells and other sources within the communities.

Land Tenure and Land ownership

Land ownership is mainly by families. Family heads hold lands in trust for the entire family, allocating portions to adult family members for their cultivation. Such members enjoy usufruct, but do not have the right to lease or sell the land without the approval of the family head or the entire family. In the Kassena-Nankana District, individuals do not own lands but the family heads. The chiefs oversee the transmission and sale of land. The Tidanas/Tigatu are the original owners of the land; however they transfer

land to other family heads. There are a few state owned land, and also some owned by individuals. Land use is mainly for cultivation and pasture. However, the rain-fed nature of agriculture makes farming a seasonal event, except in areas where there are dug-outs, dams and impoundments, or close to river basins and tributaries. For an area where agriculture engages the majority of the working category of the population (over 60%), land availability and use is key to survival.

ES 8 PROJECT ACTIVITIES THAT NECESSITATE RESETTLEMENT

The main project activities that justify the need for the acquisition of the project principal components and activities of the project that has an impact on the resettlement zone of the project are:

Update of Existing Line Route Corridor

According to the Terms of Reference for this project, a preliminary line route for the project was selected in 1990. However, owing to physical developments in the project area over the years, the identified line route required to be updated in order to proceed with the Environmental and Social Impact Assessment (ESIA) study. The update process has identified and proposed revisions to the original preliminary route for the transmission lines through an analysis of alternatives, taking into account new developments in the social and natural environment, which comprise mainly the presence of environmentally-sensitive areas, built-up areas and religious and community properties. Thus, the line route update has sought to avoid built-up areas, restricted zones (such as the proposed civil airport near Anateem), and environmentally sensitive areas such as the Atamwidi forest reserve and the pond/dug-out near Sumbrungu-Kulbia. The revision of the provisional line route means that new areas different from what had already been demarcated has to be now acquired.

Vegetation clearing within the Line route corridor

The construction and operation of the proposed line will require a RoW of approximately 40 m width for the entire 39.3 km of the line within Ghana,

from Bolgatanga to Ghana's northern frontier with Burkina Faso, adding up to an area of 1.572 km^2. The entire corridor shall be cleared of all trees to a maximum height of about 1.25 m above ground level. Also, trees outside the corridor that are considered to be potentially capable of threatening the proposed transmission line will be cut down or pruned as appropriate. Access tracks are pathways that are used to gain access to the corridor from outside it. Access tracks will be created for construction and maintenance activities. Once the corridor is accessed, then vehicular movement continues on the tower corridor track. Their creation would involve the clearing of trees, stumps and vegetation to facilitate the movement of project trucks and construction machinery. A tower corridor track will be constructed and kept within the corridor for maintaining the towers. This is a 3 m wide maintenance track running from one tower to the next along the entire length of the proposed power line route. Basically, the tower corridor track will be cleared of all trees and stumps, leaving minimum vegetation that would not impede the movement of a pick-up truck or a four wheel (4x4) vehicle and construction machinery. Also to be cleared of vegetation will be the selected tower base areas or spots. These will be selected for constructing tower bases and erecting the tower structures within the corridor. If the corridor is not acquired and the project-affected persons (PAPs) not resettled by this time, clearing of vegetation (trees) for all these activities would create conflict between the project promoters and the owners of such properties. All these vegetation clearing will be done by physical means. No chemical will be used for weed control.

Tower erection and stringing of conductors

During tower mounting and conductor stringing, a lot of activities are done from heights. Tower members or components are assembled in stages and lifted by cranes to be installed on the bases before they are anchored using bolts and nuts. Stringing of conductors also involves works at a height. The line would cross or pass close to some roads, and rivers and streams. There is, therefore, the need to secure the corridor from public activities in order to ensure public safety.

Operation and maintenance activities of transmission line

The line will be operating at 225 kV. Operational hazards such as dropping of live conductors, shattering of insulator units and collapse of tower units would endanger the lives of members of the public who would happen to be in the line vicinity should they happen. Special issues such as effects of electromagnetic force (EMF) and risk of gas leaks from switch gears and circuit breakers also account for the need to keep the line corridor clear of human activity by acquiring the corridor.

ES 9 LEGAL REGULATORY AND POLICY FRAMEWORK

This RAP has been prepared to comply with the requirement of the laws of the Republic of Ghana, specifically to the constitutional requirements regarding acquisition of land by the state. Other specific legislation such as the Lands (Statutory) Wayleaves Act of 1963 (Act 186), Environmental Assessment Regulations, 1999, LI 1652 and the Environmental Protection Agency Act, 1994, Act 490 have also been considered. The World Bank as a co-financier of this project also requires that all issues regarding involuntary resettlement and compensation should comply with its Operational Procedures OP 4.12 “Involuntary Resettlement”. The major Ghanaian legislations that govern the involuntary resettlement of the 225 kV Bolgatanga – Ouagadougou Interconnection Project are summarized below:

ES 9.1 The Constitution of the Republic of Ghana, 1992

The 1992 Constitution gives maximum protection to individual property rights. Private properties are only to be taken where there is compelling reasons for the state to interfere with such rights. Article 20 establishes that no property “shall be compulsorily taken possession of or acquired by the State” unless it is, among various purposes, “to promote the public benefit”. The Constitution also provides that where private lands are surrendered for public good, the affected owners must not be made worse off. It states that “Acquisition of property by the State shall only be made under a law which

makes provision for (a) the prompt payment of fair and adequate compensation; and (b) a right of access to the High Court by any person who has an interest in or right over the property. Further, "where a compulsory acquisition or possession of land affected by the State in accordance with (1) of this article involves displacement of any inhabitants, the State shall resettle the displaced inhabitants on suitable alternative land with due regard for their economic well-being and social and cultural values".

ES 9.2 The Volta River Development Act, 1961 (Act 46)

The Act established the Volta River Authority (VRA) and defined its functions and responsibilities. Part 4, Section 17 (2) (d) of the Act authorizes the VRA to acquire land necessary "for the proper discharge of the Authority's functions." Act 46 enjoins the VRA to pay monetary compensation or resettle affected people as may be applicable so as to ensure that those whose properties are affected by its operations are adequately catered for.

ES 9.3 Volta River Authority (Transmission Line Protection) (Amendment) Regulations, 2004 (LI 1737)

For a 225 kV transmission line, the Volta River Authority (Transmission Line Protection) (Amendment) Regulations, 2004 (LI 1737), defines "transmission line right-of-way" to include the area extending for a distance of 20 meters, on either side from the centre line of the transmission towers. VRA shall ensure that this is done to provide for the protection of the RoW in the project area for the smooth implementation and operation of the project. The regulations prohibit a number of activities in the RoW, including mining, construction of buildings and cultivation or farming without the permission of the VRA.

ES 9.4 The State Lands Act, 1962 (Act 125)

This Act vests in the President of the Republic the authority to acquire land for public good. The President "may, by Executive Instrument, declare any land specified in the instrument to be land required in the public interest"

(Sect. 1-1). On the publication of an Instrument, the land shall, without any further assurance than this subsection, vest in the President on behalf of the Republic, free from any encumbrance whatsoever (Sect. 1-3). The State Lands Act 1962 places responsibility for registering a claim on the party affected, for it recognizes that it is only the affected person who can best establish the nature of his or her interest among others. Act 125 defines the terms “cost of disturbance”, “market value”, “replacement value” and “other damage (Section 7)”.

ES 9.5 The Lands (Statutory Wayleaves) Act, 1963 (Act 186)

Act 186 provides for entry on any land for the purpose of the construction, installation and maintenance of works of public utility, and for the creation of rights of way for such works. The owner/occupier of the land must be formally notified at least a week in advance of the intent to enter, and be given at least 24 hours notice before actual entry. An authorized person may enter at any time for the purpose of inspecting, maintaining, replacing or removing any specified works [Section 5]. Any damage due to entry must be compensated in accordance with the established procedure, unless the land is restored or replaced. In the case of roads, not more than one-fifth of a plot may be take and the remainder must be viable, or the entire plot must be taken; Section 6-3(b). Where a right of way must be established in the public interest, the President may declare the land as subject to such statutory wayleave. On publication of a wayleave instrument specifying the area required, and without further assurance, the land shall be deemed to be subject to wayleave. Compensation is then determined and paid, with the right of appeal to a Tribunal established by the President, in parallel with the Lands Act, 1962. (Again, “appeal to the Tribunal” has, under the 1992 Constitution, been replaced by “appeal to the High Court”).

ES 9.6 The Lands (Statutory Wayleaves) Regulations, 1964 (LI334)

This law restates the principles of the Lands (Statutory Wayleaves) Act of 1963, and establishes provisions for Wayleave Selection Committees to determine the optimal routing and to ensure that the selected wayleaves

are consistent with planning statuses. The proposed 225 kV Bolgatanga – Ouagadougou Interconnection Project is a “linear” project spanning approximately 39.3 km. The key issues in the RAP arise from the acquisition of the right-of-way (RoW) for the project. The implications of these regulations on the acquisition of the RoW have been discussed, and form the basis of evaluation of some aspects of the impacts on the socio-economic/cultural environment regarding loss of land use.

ES 9.7 The Ghana Land Policy, 1999

It provides guidelines and policy actions for land use (e.g., agriculture, forestry, extractive industry, settlement and infrastructure). These guidelines are aimed at enhancing conservation and environmental quality, thus preserving options for present and future generations. Key objectives of the Land Policy which are relevant to the 225 kV Bolgatanga – Ouagadougou Interconnection Project include: protection of the rights of landowners, ensuring payment of fair and adequate within a reasonable time, of promoting public awareness at all levels, and community participation in sustainable land management.

ES 9.8 Forestry Commission Act (1999)

The Forestry Commission Act confirms the constitutional position of the Forestry Commission and reaffirms it as sole implementing agency of government policy in the forestry sector. The VRA and the Forestry Services Division (FSD) of the Commission have concluded a Memorandum of Understanding (MOU). This is expected to provide guidelines for the two institutions to collaborate effectively for the efficient management of electric power-related activities in national forest reserves.

ES 9.9 Environmental Protection Agency Act, 1994 (Act 490)

The EPA was established, among other things, with the following functional areas; to prescribe standards and guidelines relating to environmental pollution. The Agency may by notice in writing require any person responsible for any undertaking which in the opinion of the Agency has or is

likely to have adverse effect on the environment to submit to the Agency in respect of the undertaking an Environmental Impact Assessment containing such information within such period as shall be specified in the notice.

ES 9.10 Environmental Assessment Regulations, 1999, L.I. 1652

The LI clearly spells out undertakings requiring registration and issue of environmental permit. Electric power transmission lines, hydroelectric power plants and related structures fall under this category as stipulated in Section 13 of Schedule 1 of the regulations. It is mandatory for the promoter of any such project to undertake or cause to be undertaken an Environmental Impact Assessment for the project.

ES 9.11 World Bank Group Safeguard Policies and Guidelines

a) The World Bank Operational Policies OP 4.12 on Involuntary Resettlement (December 2001, Revised February 2011) is applicable to the project. The main features of this directive in relation to the project are as follows:
   - All viable alternatives project designs should be explored to avoid or minimize the need for resettlement and where it cannot be avoided, to minimize the scale and impacts of resettlement;
   - Resettlement measures are to be conceived and executed as sustainable development programs, providing sufficient resources to give the persons displaced the opportunity to share in the project benefits. Assistance should be given to the community in their efforts to improve former production levels, income earning capacity and living standards or at least restore them to the levels they would have been without the project;
   - Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

b) The OP 4.01 (Environmental Assessment, January, 1999, Revised February 2011) requires among others that environmental assessment

(EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making, and that screening for potential impacts is carried out early in order to determine the level of EA to assess and mitigate potential adverse impacts.

c) World Bank Operational Policies OP 4.04 Natural Habitats which seeks to promote and support natural habitat conservation and improved land use, and the protection, maintenance and rehabilitation of natural habitats and their functions in its project financing.

d) The policy OP 4.11 (July, 2006) addresses physical cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Through this policy, the Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances.

e) World Bank Operational Policies OP 4.36 Forestry which aims to reduce deforestation enhances the environmental contribution of forested areas, promote afforestation, reduce poverty and encourage economic development.

ES 10 INSTITUTIONAL FRAMEWORK

Various institutions exist in Ghana that have either direct or indirect responsibilities for acquisition of properties in line with the 1992 Constitution. This is to ensure that project affected persons are provided with prompt, fair and adequate compensation and that they are not worse off following the implementation of any project. The following institutions would have various roles to play in the implementation of the Resettlement Action Plan for the project:

ES 10.1 The Land Valuation Division of the Lands Commission

The Land Valuation Division aims at delivering an open, timely and cost effective valuation service, with the view to supporting economic development and poverty reduction.

ES 10.2 The Forestry Commission

The Commission is responsible for the management and utilization of the nation's forest and wildlife resources. The Commission has three Divisions, two of which are relevant to this project. These are:

i. Forest Services Division: Responsible for management, development and utilization of the nation's forest resources.

ii. Wildlife Division: Responsible for wildlife conservation, management and protection of wildlife reserves, as well as conservation of wetlands.

Iii the Timber industry Development Division

ES 10.3 Ghana Museum And Monuments Board

The Ghana Museum and Monuments Board's aim is to acquire, protect, conserve and document the nation's movable and immovable material cultural and natural heritage for posterity, for purposes of research and education of the public. To this end, the Board endeavours to promote and foster national identity and unity, take advantage of the Institution, the community and the nation in collaboration with Government, marketing and promoting agencies.

ES 10.4 District Assemblies – Bolgatanga Municipality, Kassena-Nankana and Kassena-Nankana West Districts

The proposed project line traverses the Bolgatanga Municipality, Kassena-Nankana and Kassena Nankana West Districts. The District Assemblies have been created as the pivot of administrative and developmental decision-making in the district and the basic unit of government administration. They have been established as a monolithic structure to which is assigned the responsibility of the totality of government to bring

about integration of political, administrative and development support needed to achieve a more equitable allocation of power, wealth, and geographically dispersed development in Ghana. They are assigned with deliberative, legislative as well as executive functions and are the Planning Authority for the District.

ES 10.5 Elders of Local Communities as Stakeholders

Elders of the various communities are made up of the Chiefs, opinion leaders and local council representatives known as the Assembly persons. They are responsible for local policy matters, economic development, resolving local conflicts, and providing orderly leadership and democratic practices at the grassroots level in their respective communities. This mode of governance facilitates mass participation in government affairs and exposes the general populace to their civil rights and obligations particularly regarding their involvement in development programs and projects in their own areas. For the purpose of this project, community elders and chiefs have played a key role in identifying project affected persons for compensation purposes.

ES 11 OBJECTIVES OF RESETTLEMENT ACTION PLAN

The main objectives of the resettlement measures are:

- To ensure that all project affected persons are fairly and adequately compensated in a prompt manner, for all properties that would have been lost directly as a result of the Ghana section of the 225kV Bolgatanga – Ouagadougou Interconnection Project,
- To assist project-affected persons to resettle at their new location, ensuring that they are not worse off for the project, and are at least restored as close as possible to their original standard of living,
- To ensure that all the above is accomplished prior to the commencement of construction activities of the project,
- To employ public participation in setting resettlement objectives, identifying and implementing re-establishment solutions.

- To ensure that grievance procedures are installed for dis-satisfied PAPs to seek redress, and ultimately,
- To ensure that the project complies with local and funding agency requirements on Compensation and Involuntary Resettlement. Reliable cost estimates and provisions of required financing, with resettlement activities phased in tune with civil works construction

ES 12 IMPACTS OF RESETTLEMENT

ES 12.1 Land ownership impacts

Acquiring RoW will not have a significant impact on land ownership. As only the right-of-way is acquired for the project, title to the land is not affected. Thus the owners will continue to retain their ownership of their various parcels. Any time the line is decommissioned, the land reverts to the owner from whom the land was taken automatically.

ES 12.2 Land Tenure Arrangement

The tenure arrangement under the provisions and operation of the Ghanaian laws and custom are briefly outlined under:

- Customary Tenure
- Freehold Tenure
- Leasehold Tenure
- Licensees/Sharecroppers

The majority of the affected persons are themselves landowners under the customary tenure system. In effect, the impact of landowners losing their sources of income through the farming activities will be offset by the minimal, since they retain the right to continue to crop annuals.

ES 12.3 Land use

Land use along the proposed transmission line corridor is mainly for small-scale subsistence farming. Indications are that during the planting (rainy) season the area traversed by the project is intensively cropped with cereals which is the main crop planted in the region. Apart from Zorbisi near

Tamale, settlements in these areas are mostly rural, taking the form where there are a group of buildings accommodating various members of an extended family (see Annex 6, Pictures of some affected houses)

The Volta River Transmission Line Protection Act (LI 542) prohibits any activity within the 40 m corridor that will undermine the safety and security of the line. The VRA holds the discretionary powers to allow activities such as cropping of annuals such as vegetables, maize etc., that would be harvested within a year or several times a year. Thus, except for the occasional tree within the corridor that will have to be removed, the impact of the line on current land use would be minimal.

During the construction stage, sections of farms located within the line corridor would be affected. Farmers whose crops may not be ready for harvesting would feel the major impact. Also, perennial tree crops such as sheanut (Vitellaria paradoxa), wood lots, dawadawa (Parkia biglobosa), mangoes, etc would be destroyed within the RoW. This would result in loss of crops to the owners. In all, a total of 139 economic trees would be affected. Since the valuation of affected properties was done in the dry season, there was no cultivation of crops. This would not have any impact on the compensation, since it has been indicated that crop cultivation would be permitted within the line route corridor. Crops that are cultivated along the stretch include millet (sorghum), yam, groundnut and other cereal.

Buildings both residential and non-residential as well as other structures within the RoW would be removed. This is to make way for construction to be carried out. Surveys carried out indicated that eighty seven (87) housing units will have to be demolished for the implementation of the project. Some vacant lots of land were also identified, which would belong to clans/families and some individuals. These lots have been captured in the list of affected properties and their owners have been identified for compensation purposes.

ES 12.4 Impacts on population

The project is not expected to have any significant adverse impacts on the size of the population within the communities. At its peak, the project will

require about 140 workers. Out of this number, 60% - 70%, which will usually be unskilled labor may be employed from among the local communities. The skilled workers from outside the communities will be about 40 in number. The ethnic composition of the affected persons shows that most of them are indigenous of the affected communities and this will not be significantly altered during the duration of the project implementation phases.

ES 12.5 Impact on Employment and Incomes

The project is expected to provide direct job opportunities for about 120 to 140 persons from the local communities during the construction phase. These would be non-skilled labourers who will be required for non-specialized tasks such as bush clearing and concrete works. A few skilled positions such as carpenters and masons will also be required. The project is expected to have an overall positive impact on the communities, as some income would be earned and some technology or skills transfer would also take place. Apart from these direct jobs, the project would also create indirect job opportunities like food vending and sale of petty items to the workers, which would be taken up mostly by women in the communities.

During the operation and maintenance phase, contractors who will carry out line maintenance and vegetation clearing on behalf of GRIDCo would employ some of these people and this would be an additional benefit. Employment created by the project and the incidental indirect jobs created, such as petty trading and food vending, will help to boost the levels of incomes. This impact, though positive, will only be of a rather limited duration.

ES 12.6 Cultural and Religious impacts

The implementation of the proposed project would impact significantly on cultural properties, historical sites and buried artifacts particularly during the construction phase. Issues regarding cultural properties and the possibility of cultural and/or archaeological chance finds are considered to be significant and would require mitigation. Through consultation, however, the

line route has avoided all such cultural and religious property. Rather, what emerged was that some of the potential project-affected people have household idols that would require some pacification rites prior to relocation. The custodians of these idols have been consulted on the requisite pacification rites. These are attached as Annex 5.

ES 13 METHODOLOGY FOR RAP IMPLEMENTATION

The VRA has also developed a Land Acquisition and Resettlement Policy (LARP) Framework for establishing the criteria by which displaced persons will be deemed eligible for compensation and other resettlement assistance. The procedure includes provisions for meaningful consultations with affected persons and communities, local authorities, and it specifies grievance mechanisms. The VRA Resettlement Policy Framework which was prepared under the Ghana Energy Development & Access Project is provided as Annex 2. The VRA LARP outlines the difference between World Bank policy requirement and that of the Ghana Government. As per the project TOR, wherever there are any differences, the World Bank requirements take precedence over the local regulatory framework. To ensure best practices, the VRA has largely adopted the principles outlined in the World Bank Operational Procedures 4.12 and this has formed the basis for preparing this RAP. In this regard the following principles and objectives would be applied:

a) Acquisition of land and other assets will be minimized as much as possible.
b) All PAPs residing or cultivating land along an alignment or segment of alignment to be rehabilitated or constructed under the project are, as of the date of the baseline surveys, entitled to be provided with compensation sufficient to assist them to improve or at least maintain their pre-project living standards, income earning capacity and production levels. Lack of legal rights to the assets lost will not bar the PAP from entitlement to such rehabilitation measures.

The compensation to be provided should be at replacement cost (market value) for houses and other affected structures and or agricultural land for land of equal productive capacity acceptable to the PAP. Plans for acquisition of land and provision of compensation will be carried out in consultation with PAPs to ensure minimal disturbance. Entitlements will be provided to PAPs no later than one month prior to expected start up of works at respective project site.

The Land Valuation Division (LVD) unit prices have been used as a guide to determine the compensation for agricultural crops and residential properties. The methodology for the calculation of crop compensation rates takes into account both the market value of agricultural produce, and the reestablishment period of perennial crops. It must be noted the computation of these values were based on applicable rates prepared by the LVD. To ensure that the affected people are paid fair values, these rates will be calculated to reflect actual replacement and market values of the crops or other assets to be lost and also to meet the World Bank Standards. The categories of affected assets are provided in Table 4 below.

Table 4 Categories of Affected Assets

Asset Category	**Type of Loss**	**Affected Persons**	**Compensation Strategy**
Agricultural land	Restricted access and use due to RoW acquisition	Families, individuals, tenant farmers, lessees	Cultivation may continue subject to height restrictions
Residential land	Loss of title and use	Families, individuals	Cash compensation or replacement
Physical structures	Living quarters	Families, individuals	Cash compensation or replacement
Cultural assets	Family shrines/gods in affected homes	Families, individuals	Pacification rites for relocation
Annual crops	Loss of income from yield(s)	Tenant farmer, land owner, sharecropper	Cultivation of annual crops will be allowed

Asset Category	Type of Loss	Affected Persons	Compensation Strategy
Economic trees	Loss of income	Land owner, tenant farmer, sharecropper	Cash compensation based on type, age and productive value
Incomes and Livelihood	Income from wage earnings	PAP	Cash compensation equal to temporary period of interruption of economic activity.
Environment-related	Environmental losses due to vegetation clearing, etc	Communities/Natural environment	Rehabilitation and re-vegetation

ES 13.1 Property valuation principles

Property valuation principles take into account the type of asset under each category since each type has peculiar valuation characteristics. Thus, in valuing assets, the following principles were used as a guide:

- Valuation of assets was undertaken by qualified valuation professionals.
- Valuation of assets is arrived at as replacement cost plus transaction costs. Depreciation of structures and assets should not be taken into account.
- Cash compensation levels should be sufficient to replace the lost land and other assets at full replacement cost in local markets.
- Valuation of assets was undertaken by qualified valuation professionals.
- Valuation of assets is arrived at as replacement cost plus transaction costs. Depreciation of structures and assets should not be taken into account.

Details of eligibility criteria, grievance procedure and resettlement measures are provided in the main report.

ES 13.2 Public Disclosure

The whole process of compensation and resettlement will be conducted in a transparent and open manner. It would be publicized in national newspapers and local radio stations. However, the confidentiality of PAPs will be respected in that their names and compensation sums would not be disclosed nor published. The World Bank Public Disclosure procedures will also be followed.

ES 14 ORGANISATIONAL RESPONSIBILITY IN RAP IMPLEMENTATION

The general organization of the resettlement action plan will be based on inputs from the following institutions:

i. VRA will be entirely responsible for the plan, and will implement it with its own teams and means;
ii. Lands Valuation Division will participate in the final valuation of the properties on behalf of the Government of Ghana
iii. Upper West Regional Coordinating Council will be responsible for the formation of the Wayleaves Selection Committee for the acquisition of the RoW
iv. External valuators will assess the process on technical, socio-economical and financial aspects, should that be necessary, on the request of any of the PAPs, or of VRA.

ES 15 IMPLEMENTATION SCHEDULE

This RAP will be implemented prior to the construction phase of the project and will continue for three years after the commissioning of the transmission line.

ES 16 BUDGET

A total of nine hundred thousand, nine hundred and fifty three, fifty pesewas (GHC 900,953.50) have been determined as compensation to be paid for affected properties, comprising GHC 887,110.00 for houses and

buildings, GHC 11,603.50 for economic crops and trees, GHC 2,240 for compensation for acquired land for tower bases, and GHC 11,536.00 for pacification costs for the relocation of family shrines and idols.

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1. PROJECT DESCRIPTION

The electricity demand in the capital of Burkina Faso, Ouagadougou, is primarily met through thermal power generation. The economic difficulties of operating oil-fired thermal power plants especially their high costs of production have led to gradual degradation in the quality of electricity supply to the population of Ouagadougou, which has in turn impacted on their productivity. Additionally, the negative environmental impacts of oil-fired thermal generation with regard to green-house gas emissions and their effects on global warming and climate change need to be avoided wherever possible. Furthermore, due to growing demand that has far surpassed available generating capacity, combined with these economic difficulties, there is a need for the Société Nationale d'Electricité du Burkina (SONABEL), the national electric power utility provider to reinforce its quality of supply especially through the diversification of its mode of electricity production.

The ongoing and near-planned electricity generation projects in Burkina Faso's southern neighbor Ghana, in addition to the extension of the existing interconnection line emanating from Côte d'Ivoire through Ghana and Togo/Benin to Nigeria with the 330 kV Ikeja West (Nigeria) – Sakete (Benin) transmission line project, will increase the available spare capacity in Ghana. This, coupled with the anticipated generation from power plants in Ghana to be fired by gas from the recently commissioned West Africa Gas Pipeline, will permit the exportation of cheaper power to Ouagadougou from Ghana through a transmission interconnection line from Bolgatanga (Ghana) to Ouagadougou (Burkina Faso), in line with the adopted West African Power Pool (WAPP) Master Plan.

The Volta River Authority (VRA) is the national electric power utility company in Ghana, established under the Volta River Development Act 1961, Act 46, with functions including the generation of electric power for industrial and domestic needs of Ghana. In addition, the VRA sells electricity to nearby countries of Togo and Benin, and has interconnection with la Cote d'Ivoire. (A different but affiliated company called Ghana Grid

Company Limited manages power transmission in Ghana.) The generation system of VRA consists of two (2) hydroelectric power plants on the Volta River at Akosombo (1,020 MW) and Kpong (160 MW) and a Thermal Generation plant at Aboadze near Takoradi (550 MW). The Kpong Hydro Electric Plant (HEP), located some 24 km downstream of the Akosombo HEP Generation station, has four generating units, each individually rated at 40 MW. The Akosombo HEP Generation Station has six generating units; four of the units were completed in 1965 whilst the other two were completed in 1972. The six units originally had a total installed capacity of 912 MW, including 15% overload capacity. In 2005, VRA completed a retrofit of the generating units which included the replacement of the turbines runners which has increased the total plant installed capacity to 1,020 MW.

VRA also generates power from the Takoradi Thermal Power Plant, which runs run on light crude oil and consists of the 330 MW Combined Cycle Takoradi Thermal Power Generating Station (TTPS); and currently a 220 MW from the 330 MW Combined Cycle Takoradi International Company Plant (TICO). The TTPS is wholly owned by VRA and comprises two nominal 110 MW Combustion Turbine Generators and a nominal 110 MW Steam Turbine Generator. Ghana has also acquired a 125 MW simple cycle barge mounted Thermal Plant at Effasu which has been handed over to a private investor for operation, and has commenced the construction of the Tema Thermal Power Projects consisting of a 126 MW Tema Thermal 1 Power Project, 80 MW Mines Reserve Power Plant, and the 50 MW Tema Thermal 2 Power Plant. The 300MW Kpone Thermal Power Project has been relocated to the Jomoro District under the Domini Thermal Project to take advantage of the associated gas of the nearby Jubilee Fields. There is also the Sunon-Asogli Thermal Power Plant and a number of other generating plants in various stages of construction. With the commissioning of the West African Gas Pipeline (WAGP) and the recent oil find in Ghana (with associated natural gas), all these power generating plants could be run on Liquefied Natural Gas (LNG) to produce cheaper and more

environmentally friendly electric power. The proposed Bui Dam project in the north-western part of Ghana is expected to add about 400 MW of power to the national power pool after its completion to further boost Ghana's energy base. As a result, Ghana's energy generation potential has increased immensely, justifying the construction of this project in anticipation of evacuation of spare power to immediate neighbor Burkina Faso.

The 225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection project is a trans-boundary electric power transmission line to emanate from Bolgatanga in Ghana to Ouagadougou in Burkina Faso. It involves the construction of approximately 200 kilometer-long power evacuation infrastructure comprising steel lattice towers, insulators and conductors to transmit up to 225 kilo Volts of electric power. Primarily, the line is expected to evacuate electrical energy supply generated in Ghana directly to Burkina Faso. The Ghana section of the project covers the construction of approximately 39.3 kilometers of the 225 kV transmission line and the extension of the existing 161 kV substation in Bolgatanga to accommodate the line.

The construction of such a project requires the acquisition of a 40-metre line route corridor within which the transmission line infrastructure will be positioned. A preliminary line route survey was undertaken for the proposed transmission line in 1990 by Tractebel Energy Engineering. However, the project was shelved until 2008, when a joint venture led by Cabinet d'Ingénierie et de Recherche Appliquée (CabIRA) was commissioned by the West African Power Pool (WAPP) as promoters of the project to update the line route survey studies and undertake an environmental and social impact assessment ESIA). Since 1990, however, considerable physical developments have taken place in an around Bolgatanga resulting in sections of the line route being unavailable for the project. The construction of the transmission line project utilizing the original transmission line route was going to be difficult without involving massive involuntary resettlement of people. Even the current updated line route which has sought to reduce

involuntary resettlement by re-aligning the line route has encountered some challenges to do with the availability of the right-of-way. Utilizing the update line route for the project will require the acquisition of land for the 40 meter project corridor from Bolgatanga to the Ghana-Burkina Faso border near Paga, where the line would exit Ghana into Burkina Faso. Within the proposed line route are buildings and crops belonging to some individuals and families.

By the Lands (Statutory Wayleaves) Act, 1963, Act 186 and the Lands (Statutory Wayleaves) Regulations, 1964, (LI 334) of Ghana, the state (government) retains the power to compulsorily acquire any (stretch of) land for public use if necessary, and pay prompt and appropriate compensation to the original owner(s) of the said land. The World Bank Operational Policy (OP 4.12) on Involuntary Resettlement mandates that projects that require the Bank's funding should, as much as possible, avoid or minimize involuntary resettlement by exploring all viable alternative project designs. It indicates further that where displacement is unavoidable, a resettlement plan should be developed that will be implemented prior to the commencement of the project.

Having undertaken the ESIA using the updated line route, CabIRA is also required by the project Terms of Reference (TOR) to draw a Resettlement Action Plan that will guide the compensation and resettlement issues relating to the acquisition of the project right-of-way (also referred to as line route corridor).

1.1 BACKGROUND OF PROJECT PROMOTERS

1.1.1 The West African Power Pool (WAPP)

The West African Power Pool (WAPP) is a regional power market development initiative by the Economic Commission of West African States (ECOWAS), created by Decision A/DEC.5/12/99 at the 22nd Summit of the Authority of ECOWAS Heads of State and Governments in order to address the issue of power supply deficiency within West Africa. Its primary objective is to establish a regional electricity market in West Africa through

the judicious development and realization of key priority infrastructure that would permit accessibility to economic energy resources, to all member states of the ECOWAS. Currently, WAPP member countries comprise Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

In order to further advance the implementation of the priority projects of the West African Power Pool (WAPP), the WAPP Secretariat, located in Cotonou, Benin, and the WAPP Members have commenced preparatory works towards the implementation of the following priority interconnection projects:

- 330 kV Volta (Ghana) – Mome Hagou (Togo) - Sakete (Benin) transmission project
- 150 kV Sikasso – Koiutiala (Mali) - Segou (Mali) transmission project
- 330 kV Aboadze (Ghana) – Prestea (Ghana) transmission project
- 225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection project.

The WAPP Secretariat on behalf of the Volta River Authority (VRA) of Ghana and the Société Nationale d'Electricité du Burkina (SONABEL) of Burkina Faso have engaged the services of CabIRA, a consortium of environmental and engineering consultants, to undertake the following activities:

- Update an existing Line Route survey, produce maps, plans and profiles, and
- Undertake an Environmental and Social Impact Assessment study of the surveyed route and prepare an Environmental Impact Statement.

1.1.2 The Volta River Authority

The Volta River Authority (VRA) is the sole public corporation established under the Volta River Development Act 1961, Act 46, with functions

including the generation and transmission of electric power for industrial and domestic needs of Ghana. In addition, the VRA sells electricity to nearby countries of Togo and Benin, and has interconnection with la Cote d'Ivoire. The VRA operates both hydro and thermal power plants.

The hydro-generation system of VRA comprises two (2) hydroelectric power plants on the Volta River at Akosombo (1,020 MW) and Kpong (160 MW) and a Thermal Generation plant at Aboadze near Takoradi (550 MW). The Kpong Hydro Electric Plant (HEP), located some 24 km downstream of the Akosombo HEP Generation station, has four generating units, each individually rated at 40 MW. The Akosombo HEP Generation Station has six generating units; four of the units were completed in 1965 whilst the other two were completed in 1972. The six units originally had a total installed capacity of 912 MW, including 15% overload capacity. In 2005, VRA completed a retrofit of the generating units which included the replacement of the turbines runners which has increased the total plant installed capacity to 1,020 MW.

The Takoradi Thermal Power Plant is presently run on light crude oil and consists of the 330 MW Combined Cycle Takoradi Thermal Power Generating Station (TTPS); and currently a 220 MW from the 330 MW Combined Cycle Takoradi International Company Plant. The TTPS is wholly owned by VRA and comprises two nominal 110 MW Combustion Turbine Generators and a nominal 110 MW Steam Turbine Generator. The TICO plant is a joint venture arrangement between VRA and TAQA of Abu Dhabi and consists of two simple cycle 110 MW Combustion Turbine Generators. Plans are well advanced to expand the Takoradi Thermal Power Plant from the existing capacity of 550 MW to its ultimate capacity of 660 MW by converting the TICO plant into a combined cycle plant with the addition of the 110 MW steam Turbine generator. The VRA has also commenced the construction of the Tema Thermal Power Projects consisting of a 126MW Tema Thermal 1 Power Project, 80 MW Mines Reserve Power Plant and the 50 MW Tema Thermal 2 Power Plant. These plants are in their various stages of construction. The generating plants for

the 300MW Kpone Thermal Power Project have been relocated to the Jomoro District in the Western Region under the Domini Thermal Project to take advantage of the associated gas of the nearby Jubilee Fields.

VRA's power transmission operation has recently been taken over by Ghana Grid Company Limited (GRIDCo) which has been formed out of VRA to solely manage transmission, by the Volta River Development Act, 2005, Act 692. The transmission system comprised approximately 4000 - circuit km of High Voltage lines and 42 switching and bulk supply points (substations). The transmission network consists of about 3700 km 161 kV transmission lines spread over the whole country as well as a 128 km 161 kV double circuit line and a 75 km 225 kV single circuit transmission line for interconnection with Togo and Benin in the east and Cote d'Ivoire in the west respectively. There is also about 100 km of 69 kV transmission line in the eastern part of the country. The construction of a 215 km 330 kV transmission line from TTPS, Aboadze to the Volta substation, Tema which forms part of the 330 kV WAPP Coastal Transmission Backbone is almost completed. The procurement process for the construction of a 330 kV transmission line from the Volta substation through Mome-Hagou, Togo to link up with the Sakete, Benin to Ikeja West, Nigeria is also in progress. Again, the bidding processes for the Ghana – Burkina Faso Cross Border Project from Bawku (Ghana) to Bittou (Burkina Faso) as well as the 330 KV Aboadze-Prestea-Kumasi-Han Transmission System and the 330 KV Tumu-Han –Wa Transmission Line Project both in Ghana are in progress. However, at present GRIDCo is operating in close collaboration with VRA with regard to this project, and may be referred to interchangeably for the purpose of this project.

1.2 PROJECT LOCATION

Bolgatanga is the capital of the Upper East Region of Ghana. Together with the Upper West and Northern Regions, the Upper East Region falls under the Northern Ghana territory. Northern Ghana lies within the Sudan or Short Grass savannah vegetation belt of West Africa which is characterized

by grasses interspersed with low density wood land of drought and fire-resistant species. In Ghana, this vegetation belt is limited to the extreme northern part covering an area of about 10,540 square kilometers.

The proposed transmission line will originate from the VRA's substation in Bolgatanga in the Upper East Region of Ghana and travel in a general northwestern direction towards the national border with Burkina Faso, traversing the Kassena – Nankana District and the newly established Kassena - Nankana West District to exit Ghana near Paga into Burkina Faso. The project corridor lies between latitude 10° 45'N to 11° 45' N and longitude 1° 7'30" W to 0° 52'30" E. From the substation, the line traverses or runs close to about fifteen (15) settlements to the Ghana – Burkina Faso Border at the Goiree community in the Kassena Nakana West District, as indicated in Table 1 below:

Table 1: List of affected communities traversed by the proposed line route

DISTRICT/MUNICIPALITY	CAPITAL	AFFECTED COMMUNITIES
Bolgatanga Municipality	Bolgatanga	Zorbisi
		Sokabisi
		Yikene
		Sumbrungu
		Kulbia
		Anateem
Kassena-Nankana East	Navrongo	Kandiga
		Doba
		Nayagnia
		Pinyoro
		Pungu
Kassena-Nankana West	Paga	Nyangua
		Tekuru Kizito
		Baduno
		Paga Zenga

The length of the Ghana side of the 225 kV Bolgatanga – Ouagadougou Transmission Project is approximately 39.3 km, out of the entire project distance of about 210.1 km.

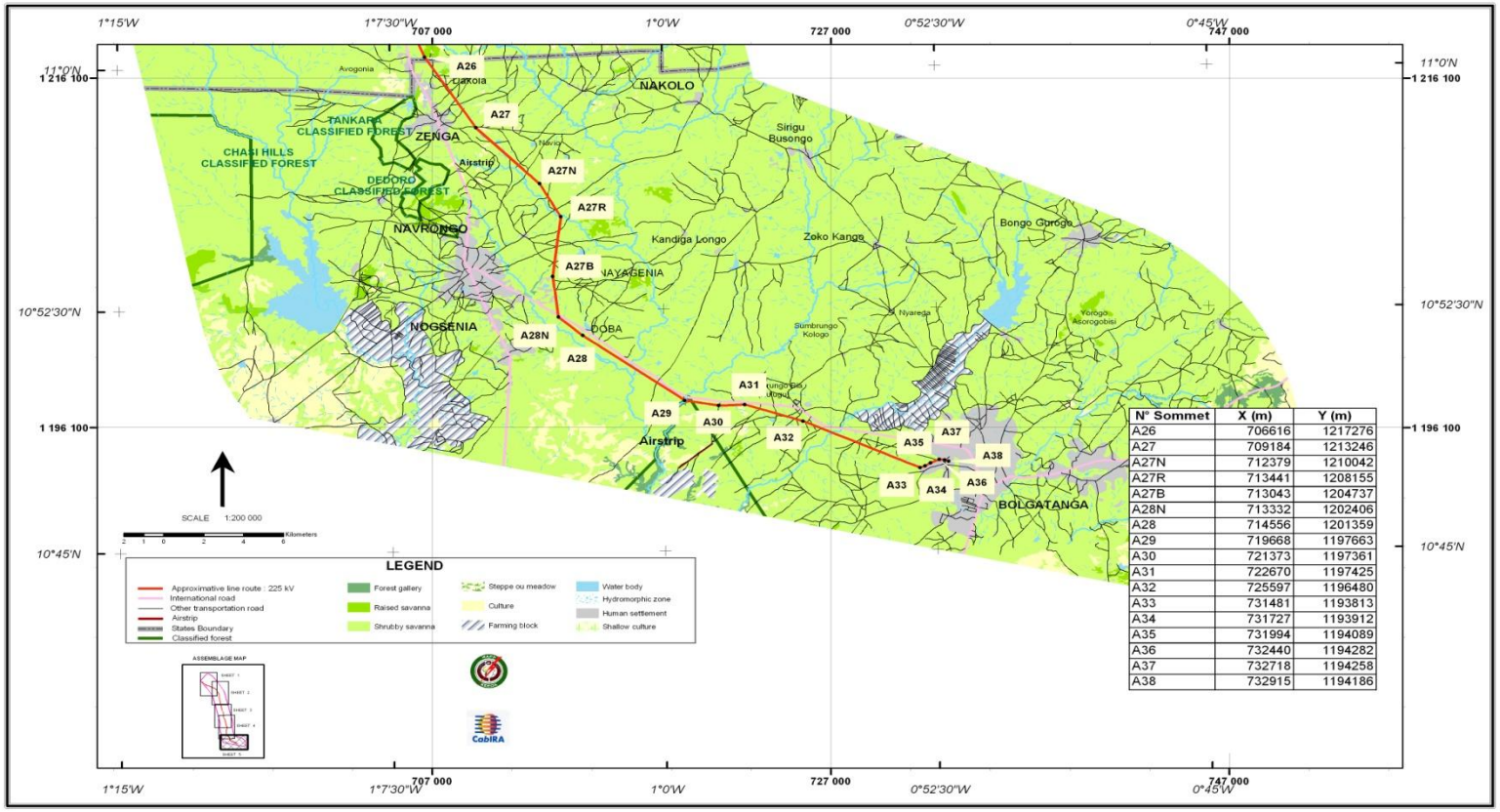
The fifteen settlements that the 39.3-km 40-meter wide right-of-way on the Ghana side traverses are identified to be within the project area of influence. Commencing from Zorbisi the line travels northwest through Sorkabisi, Yikene and Sumbrungu in the Bolgatanga Municipality. Between Yikene and Sumbrungo, the line will traverse a tributary of the Yarogatouga River. It continues in the northwestern direction through Anateem, Pungu and Pinyoro in the Kassena-Nankana East District till Doba, when it turns slightly northward, passing by Nayagenia. It again heads in a northwestern direction towards Zenga and Paga to exit Ghana near Goiree close to the Ghana – Burkina Faso border. It must be noted that a review of the line route following consultations with the Ghana Civil Aviation Authority has ensured that the line passes about 1 kilometre clear of the proposed civil airport at Anateem. For the most part, the line runs parallel and close to the Bolgatanga – Navrongo road and the existing high voltage (HV) Bolgatanga – Navrongo transmission line, until just after Doba (A28N), where it parts in a northern path. It moves slightly westward toward the Navrongo-Dakola road as it approaches the Ghana-Burkina Faso border.

Figure 1 below is a land use map showing the various ecological zones in Ghana.

Figure 1: Land use map showing project line route (next page)

225 kV BOLGATANGA (GHANA) - OUAGADOUGOU (BURKINA FASO) INTERCONNECTION PROJECT
UPDATES OF THE LINE ROUTE STUDY AND ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT STUDY

LANDUSE MAP SHEET 5



N° Sommet	X (m)	Y (m)
A26	706616	1217276
A27	709184	1213246
A27N	712379	1210042
A27R	713441	1208155
A27B	713043	1204737
A28N	713332	1202406
A28	714556	1201359
A29	719668	1197663
A30	721373	1197361
A31	722670	1197425
A32	725597	1196480
A33	731481	1193813
A34	731727	1193912
A35	731994	1194089
A36	732440	1194282
A37	732718	1194258
A38	732915	1194186

Source : Spot Images - Resolution 5m
- 54-325 - date : 18/05/2007
- 54-326 - date : 21/10/2002
- 55-326 - date : 29/03/2005
- 55-327 - date : 07/04/2005
- 55-328 - date : 08/04/2005
- 56-328 - date : 28/12/2006

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In line with the provisions of the Volta River Authority (Transmission Line Protection) (Amendment) Regulations, 2004, LI 1737, a line route corridor of 40 metres width is designated for the 225 kV transmission line. The total land take for the 39.3 km for the entire line route within Ghana is approximately (40 metres x 39,300 metres) 1,572,000 square metres, or 1.52 sq km, which will have to be necessarily acquired by legal means for the line route corridor. Buildings and other immovable physical structures within this corridor have been enumerated and assessed by a certified property valuer using approved methods and values. These values would be validated by the Land Management Unit of the Engineering Department of the Ghana Grid Company (GRIDCo), in collaboration with the Land Valuation Division of the Lands Commission, which is the statutory valuer of properties in such matters, before the implementation of the RAP. The properties would then be paid for at Open Market Value by the Land Management Unit of the Engineering Department of GRIDCo.

1.3 PROJECT DETAILS

The per capita consumption of, and the level of access to energy supply services are key indicators of socio-economic development of any country. One of the obstacles to achieving the Millennium Development Goals (MDGs) is the lack of access to energy services such as electricity. A major strategy identified by the Governments of Economic Community of West African States (ECOWAS) for increasing energy access is the interconnection of power systems and the encouragement of trans-boundary electricity supply. The objective is for countries that are better endowed in terms of electricity to provide the less endowed member states with access to cost-competitive energy.

To address the constraint of lack of access to electricity, ECOWAS, the Authority of Heads of States and Governments of Member States authorized the establishment of the West African Power Pool (WAPP). The WAPP is expected to provide a mechanism and the institutional framework for integrating the power systems of the ECOWAS Member States by

providing reliable and sustainable electricity supply for the economic development of the sub-region.

It is within this framework that the WAPP Secretariat, and the national energy utilities of Ghana and Burkina Faso, (Volta River Authority, VRA and the Société Nationale d'Electricité du Burkina (SONABEL) is undertaking a project that will comprise the construction of a 206-kilometre long, 225 kV transmission line from Bolgatanga in the Upper East Region of Ghana to Ouagadougou in Burkina Faso to transmit high-tension electric power from Ghana to Burkina Faso. To that effect, the WAPP Secretariat on behalf of VRA and SONABEL, has procured the services of the joint venture Consultancy led by CabIRA to undertake a Line Route survey and an Environmental and Social Impact Assessment study for the proposed 225kV Bolgatanga-Ouagadougou Interconnection project.

On the Ghanaian side, the project will result in the following:

- construction of approximately 39.3 km of 225 kV transmission line, and
- extension of the 161 kV substation in Bolgatanga (Ghana).

Alongside site preparation activities, the proposed transmission line project will comprise the design, manufacture, testing and delivery to site, erection, testing and commissioning of the 225 kV transmission lines between Bolgatanga in Ghana and Ouagadougou in Burkina Faso. The steel lattice towers will be constructed at specified intervals along the 39.3 km line route. The height of towers will be approximately 40 m, and will be constructed to provide a minimum of 8.5 m clearance between the conductors and the ground at the lowest point. The line route corridor has a maximum width of 40 m.

The project is at the pre-construction phase, and an ESIA has been finalized and ESIA report has been approved by the EPA on January 25, 2011. The project Terms of Reference (TOR) requires the drawing up of a Resettlement Action Plan that will guide the compensation and resettlement issues relating to the acquisition of the project right-of-way (also referred to as line route corridor). The major project activities at this pre-construction stage are the project planning and design, update of the line route survey

and the preparation of the Environmental Impact Assessment study. The preparation of Resettlement Action Plan and the acquisition of the right-of-way follow the approval of the Environmental Impact Assessment report. Then construction activities could begin.

1.4 SCOPE OF RESETTLEMENT ACTION PLAN (RAP)

This RAP has been drawn in line with the requirements of the Environmental Assessment Regulations, 1999, LI 1652 of Ghana and the World Bank Operational Procedures OP 4.12 on Involuntary Resettlement, and covers the following key aspects:

- Project Description
- Baseline Socio-Economic Information on Project Area
- Justification for Resettlement Action Plan
- Impacts of Resettlement
- Objectives of RAP
- Methodology for RAP Implementation
- Public Participation
- Organizational Responsibilities in RAP Implementation
- Implementation Schedule
- Budget
- Monitoring and Evaluation

2. BASELINE SOCIO-ECONOMIC DATA OF AFFECTED COMMUNITIES

The proposed transmission traverses three contiguous administrative districts in the Upper East Region from its source to the exit point on the Ghana-Burkina Faso border. These districts are Bolgatanga Municipality, Kassena-Nankana District and Kassena-Nankana West Districts.

The Kassena-Nankana West District was been carved out of the Kassena-Nankana District in 2008 under an Executive Instrument with the intent of ensuring proper decentralization of governance and infrastructural development. Thus, the local authority has not as yet developed the relevant data about itself. However, having been created out of an existing district within the past two and a half years, most of the background information on the Kassena-Nankana District would also apply to the newly created district to a large extent. Specific data relevant to the affected communities are presented below.

2.1 DEMOGRAPHICS AND POPULATION OF AFFECTED COMMUNITIES

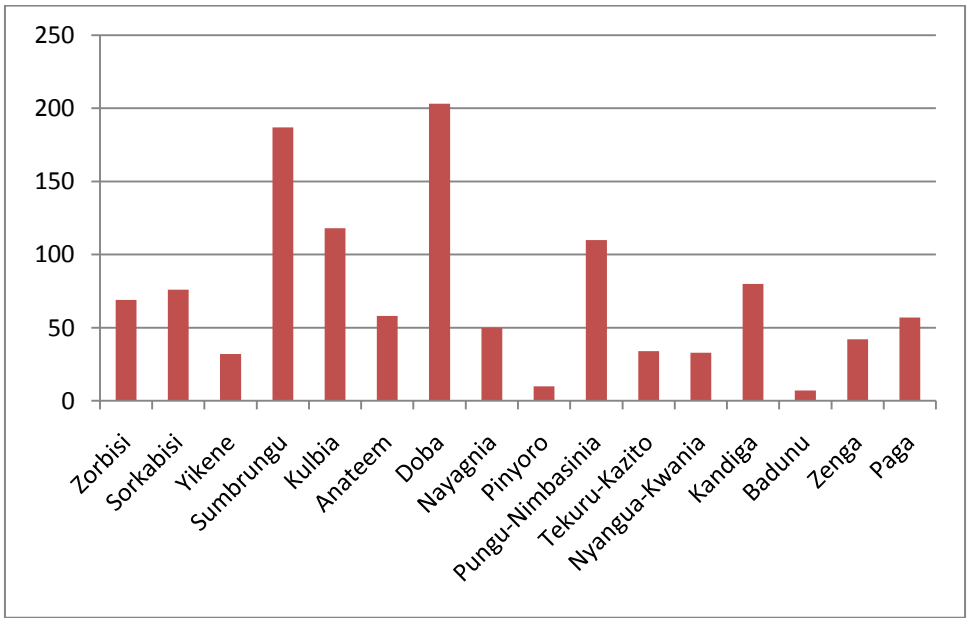
In all, 15 communities in three (3) administrative districts are affected by the project. Table 2 below shows the ratios of affected people in the various populations of the affected communities.

It is noteworthy that the most affected community (Nyangua-Kwania in the Kassena-Nankana East) has 12.1 per cent of its population being affected by the project, while the least affected community (Badunu in the Kassena-Nankana West District) has 1.8 per cent of its population affected.

Table 2 Populations of Project-Affected Persons and Communities

District	Community	Population	Population Of PAP's	Percentage
Bolgatanga Municipal	Zorbisi	1,053	69	6.6
	Sorkabisi	874	76	8.7
	Yikene	1,344	32	2.4
	Sumbrungu	2,897	187	6.5
	Kulbia	1,576	118	7.5
	Anateem	892	58	6.5
	TOTAL	**8,636**	**540**	**6.93**
Kassena-Nankana East	Doba	1,784	203	11.4
	Nayagnia	1,213	50	4.1
	Pinyoro	348	10	2.9
	Pungu-Nimbasinia	1,789	110	6.1
	Tekuru-Kazito	359	34	9.5
	Nyangua-Kwania	273	33	12.1
	TOTAL	**5,766**	**440**	**7.6**
Kassena-Nankana West	Kandiga	1,108	80	7.2
	Badunu	392	7	1.8
	Zenga	532	42	7.9
	Paga	2,131	57	2.7
	TOTAL	**4,163**	**186**	**4.5**

Credit: Populations on Communities from Development Planning offices of District Assemblies



Chart/Table 2: Project-Affected Persons and Communities

2.2 SOCIAL AND ECONOMIC CHARACTERISTICS OF PROJECT AFFECTED PEOPLE AND COMMUNITIES

Under this section, we present a social and economic profile of the project affected communities, with specific reference to sources of livelihood, household strength and community facilities.

2.2.1 Source of Livelihood

The table below depicts the various economic activities/employments that the PAP's are engaged in for their livelihoods. In an answer to the question: what type of economic activity are you engaged in as your source of livelihood, out of the 150 owners of compounds/gates within the various households 142 (95%) of them derived their source of livelihood from farming (peasant farmers) and only 8 representing 5% are Government employees. It must be noted that 29% and 11% of the respondents who said they were farmers are also engaged in leather work/basketry and petty trading respectively. Table 3 below presents the various sources of livelihood for project affected-persons.

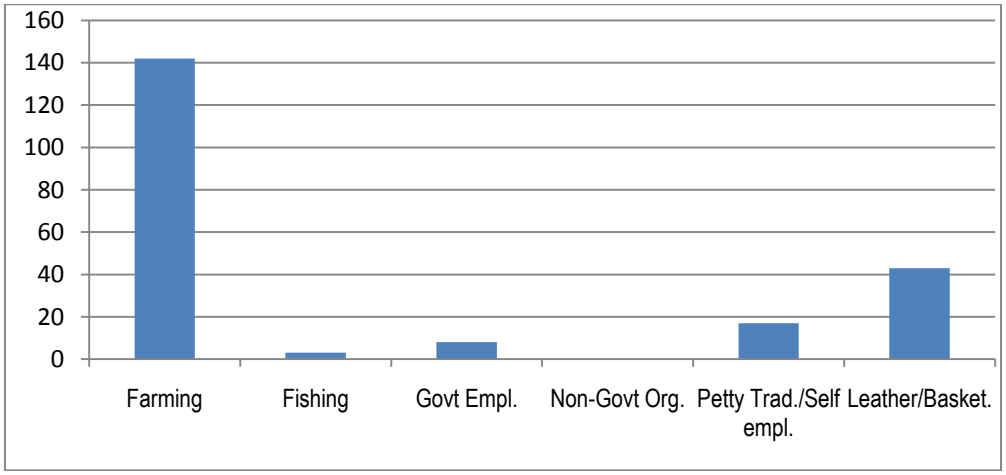
Table 3: Source(s) of Livelihood of Project-Affected Persons

Economic Activity	No. Of Persons	Percentage (%)
Farming	142	95
Fishing	3	2
Government Employment	8	5
Non-Governmental Organisation	0	0
Petty Trading/self employed	17	11
Leather work/Basketry	43	29

Source: Field Survey

The affected properties are mainly houses and economic trees. Those who are losing their houses are being compensated for the house and the land on which their houses are built. Those losing economic trees are being

compensated for the trees. Nobody will lose farmlands since it has been indicated that the cultivation of annuals (crops that are harvested within a year) will be permitted within the line route corridor. As per the Wayleaves law, anytime the line is decommissioned, the line reverts to the original owners.



Chart/Table 3: Source(s) of Livelihood of Project-Affected Persons

2.2.2 Household Composition and Structure

There are a total of 87 households affected by the project in all the 16 communities cutting across the three Districts, with a total number of 1,166 project-affected persons. Out of the 87 households, only of them wish to have their houses rebuilt; the rest prefer cash compensation (see *Annex 3 Compensation Values of Affected Houses*). A total of 50 persons are in these three households. Two of these are in Zorbisi, one with a population of 27 and another with 23. The third is an uncompleted house in Kulbia. It must be noted here that, some of the relatives/members of the households of the PAPs normally travel to the southern part of the country, especially during the dry season to seek greener pastures to avoid idling since no farming activities take place at this time. Also, out of the 87 households, only 8 of them are owned or headed by women whilst the rest belongs to men.

2.2.3 Household and Community Facilities

The Upper East Region is considered among the most deprived regions in Ghana, in terms of social and economic infrastructure. Out of the 16 communities affected by the project, 9 of them are connected to electricity from the national grid. Four (4) of these communities are in the Bolgatanga Municipality, 2 in the Kassena-Nankana East District and 3 Kassena-Nankana West. On the affected properties, only 17 of the 87 households are connected with electricity. Also, all the 15 communities have access to potable water; 4 of them have access to pipe-borne water while the rest have their source of water from natural and/or man-made sources such as river/stream, borehole and dug-outs. However, none of the affected households has been connected with water or has its own water supply system but rather draw water from bore-holes, wells and other sources within the communities.

2.3 LAND TENURE AND LAND OWNERSHIP

Land ownership is mainly by families. Family heads hold lands in trust for the entire family, allocating portions to adult family members for their cultivation. Such members enjoy usufruct, but do not have the right to lease or sell the land without the approval of the family head or the entire family. In the Kassena-Kassena District, individuals do not own lands but the family heads. The chiefs oversee the transmission and sale of land. The Tidanas/Tigatu are the original owners of the land; however they transfer land to other family heads. There are a few state owned land, and also some owned by individuals. Land use is mainly for cultivation and pasture. However, the rain-fed nature of agriculture makes farming a seasonal event, except in areas where there are dug-outs, dams and impoundments, or close to river basins and tributaries. Construction of sandcrete buildings is an emerging trend. The gradual urban spread is gradually making land for cultivation scarce, and farmers have had to move to more peri-urban areas to access large tracts of land for cultivation, or close to water bodies. For an area where agriculture engages the majority of the working category

of the population (over 60%), land availability and use is key to survival. Relatively high population densities in the urban areas have given rise to the rapid development of cottages at the peri-urban areas. This is gradually putting stress on land availability and use. Extensive cultivation, over-grazing, an erratic rainfall pattern and soil degradation is pre-disposing land here to desertification. That the region is close to the Sahelian zone makes the situation more precarious.

2.4 VULNERABILITY ANALYSIS

For the purposes of this project, vulnerability criteria include:

- Aged and/or widowed,
- Single individuals living alone
- Disabled – physically handicapped or challenged,
- Health status – poor health, physically weak, etc.

During the study, 4 households were identified to have vulnerable individuals by these criteria. There were four aged widows, one of whom lived alone. The rest lived with other family members. The single widow indicated that due to the dry season, her younger and stronger relations have travelled to the south and will be back during the rainy season, or as soon as they hear that the compensation package is ready to be paid. Such individuals also form part of the Municipal pro-poor groups and receive assistance packages such as the Livelihood Empowerment Against Poverty (LEAP), a social intervention that disburses cash packages to such vulnerable people.

There are no illegal land users within the line route corridor.

3. JUSTIFICATION FOR THE RESETTLEMENT ACTION PLAN

The proposed 225 kV Bolgatanga – Ouagadougou Interconnection Project requires the acquisition of a 40 m wide line route corridor. This process of right-of-way acquisition is backed by legislations that define the width of the corridor depending on the capacity of the line, and empower the state (of Ghana) to acquire the stipulated strip of land comprising the corridor width for the entire stretch of the line, and pay prompt and adequate compensation for any properties that may be affected by the acquisition. The acquisition is principally to prevent human activities that will endanger the safety and security of the line, and to protect the health and safety of the general public. The Lands (Statutory) Way leaves Act, 1963, Act 186, grants easement to the project promoters over land within the project corridor. VRA (Transmission Line Protection) (Amendment) Regulation, 2004 (LI 1737) provides for the right of way distances for transmission lines of all capacities in Ghana. By the legislation, the RoW for 225 kV transmission lines is 40 meters. The legislation further prohibits a number of activities within the RoW including mining, construction of physical structures such as buildings, and cultivation of some types of crops.

The acquisition of the line route corridor would impact on local people and their economic activities. The selected line route corridor traverses some communities and habitations, and affects farms and cash crops. The people whose properties would be affected, the value of those affected properties, the mode of evaluation and the process of compensation payment and associated matters need to be properly planned and executed to ensure that all affected persons are satisfactorily resettled. This Resettlement Action Plan (RAP) is to guide this process.

Under this section, project activities that require the acquisition of the line route corridor and the involuntary resettlement of project-affected persons are discussed.

3.1 PROJECT ACTIVITIES THAT NECESSITATE RESETTLEMENT

The main project activities that justify the need for the acquisition of the project principal components and activities of the project that has an impact on the resettlement zone of the project are:

3.1.1 Update of Existing Line Route Corridor

According to the Terms of Reference for this project, a preliminary line route for the project was selected in 1990. However, owing to physical developments in the project area over the years, the identified line route requires to be updated in order to proceed with the Environmental and Social Impact Assessment (ESIA) study. The update process has identified and proposed revisions to the original preliminary route for the transmission lines through an analysis of alternatives, taking into account new developments in the social and natural environment. These developments comprise mainly the presence of environmentally-sensitive areas, built-up areas and religious properties such as shrines and sacred groves. It is important that the provisional line route takes into account the inter-relation between line and the ESIA study. Therefore, the line route update has sought to avoid built-up areas, restricted zones (such as the proposed civil airport near Anateem), and environmentally sensitive areas such as the Atamwidi forest reserve and the pond/dug-out near Sumbrungu-Kulbia. The revision of the provisional line route means that new areas different from what had already been demarcated has to be now acquired.

3.1.2 Vegetation clearing within the Line route corridor

The construction and operation of the proposed line will require a RoW of approximately 40 m width for the entire 39.3 km of the line within Ghana, from Bolgatanga to Ghana's northern frontier with Burkina Faso. The entire corridor shall be cleared of all trees to a maximum height of about 1.25 m above ground level. Also, trees outside the corridor that are considered to be potentially capable of threatening the proposed transmission line will be cut down or pruned as appropriate. These would be trees which could

damage the transmission line should they fall on it or those whose branches may grow big enough to tamper with the lines.

Access tracks are pathways that are used to gain access to the corridor from outside it. Normally, existing farm tracks parallel or perpendicular to the corridor are used. Where farm tracks do not exist, access tracks will be created for construction and maintenance activities. Once the corridor is accessed, then vehicular movement continues on the tower corridor. Their creation would involve the clearing of trees, stumps and vegetation to facilitate the movement of project trucks and construction machinery.

A tower corridor track will be constructed and kept within the corridor for maintaining the towers. This is a 3 m wide maintenance track running from one tower to the next along the entire length of the proposed power line route. Thus, it will not require any additional land take and will be permanent as the road will be required for both construction and operation of the line. Wherever practicable this road will be continuous along the length of the line, with the exception of areas of difficult terrain such as swamps. In such sections access will be obtained from the other end of the obstacle, causing break in the continuity of the track. Basically, the tower corridor track will be cleared of all trees and stumps, leaving minimum vegetation that would not impede the movement of a pick-up truck or a four wheel (4x4) vehicle and construction machinery.

Also to be cleared of vegetation will be the selected tower base areas or spots. These will be selected for constructing tower bases and erecting the tower structures within the corridor. The area to be cleared for a single tower will be made up of the dimensions of the tower base (5 m x 5 m) with an additional buffer of 2 m on two sides of the base, depending on the design of the individual towers. A mean value of 29 m^2 will be used for each pylon in the estimation of compensation for the tower spots.

If the corridor is not acquired and the project-affected persons (PAPs) not resettled by this time, clearing of vegetation (trees) for all these activities would create conflict between the project promoters and the owners of such

properties. All these vegetation clearing will be done by physical means. No chemical will be used for weed control.

3.1.3 Tower erection and stringing of conductors

During tower mounting and conductor stringing, a lot of activities are done from heights. Tower members or components are assembled in stages and lifted by cranes to be installed on the bases before they are anchored using bolts and nuts. Stringing of conductors also involves works at a height. The line would cross or pass close to some roads, and rivers and streams. There is, therefore, the need to secure the corridor from public activities in order to ensure public safety.

3.1.4 Operation and maintenance activities of transmission line

The line will be operating at 225 kV. Operational hazards such as dropping of live conductors, shattering of insulator units and collapse of tower units would endanger the lives of members of the public who would happen to be in the line vicinity should they happen. Special issues such as effects of electromagnetic force (EMF) and risk of gas leaks from switch gears and circuit breakers also account for the need to keep the line corridor clear of human activity by acquiring the corridor.

3.2 LEGAL REGULATORY AND POLICY FRAMEWORK

This RAP has been prepared to comply with the requirement of the laws of the Republic of Ghana, specifically to the constitutional requirements regarding acquisition of land by the state. Other specific legislation such as the Lands (Statutory) Wayleaves Act of 1963 (Act 186), Environmental Assessment Regulations, 1999, LI 1652 and the Environmental Protection Agency Act, 1994, Act 490 have also been considered. The World Bank as a co-financier of this project also requires that all issues regarding involuntary resettlement and compensation should comply with its Operational Procedures OP 4.12 “Involuntary Resettlement”. The major Ghanaian legislations that govern the involuntary resettlement of the 225

kV Bolgatanga – Ouagadougou Interconnection Project are discussed below:

3.2.1 The Constitution of the Republic of Ghana, 1992

The 1992 Constitution gives maximum protection to individual property rights. Private properties are only to be taken where there is compelling reasons for the state to interfere with such rights. Article 20 establishes that no property "shall be compulsorily taken possession of or acquired by the State" unless it is, among various purposes, "to promote the public benefit". The Constitution also provides that where private lands are surrendered for public good, the affected owners must not be made worse off. It states that "Acquisition of property by the State shall only be made under a law which makes provision for (a) the prompt payment of fair and adequate compensation; and (b) a right of access to the High Court by any person who has an interest in or right over the property. Further, "where a compulsory acquisition or possession of land affected by the State in accordance with (1) of this article involves displacement of any inhabitants, the State shall resettle the displaced inhabitants on suitable alternative land with due regard for their economic well-being and social and cultural values".

3.2.2 The Volta River Development Act, 1961 (Act 46)

The Act established the Volta River Authority (VRA) and defined its functions and responsibilities. Part 4, Section 17 (2) (d) of the Act authorizes the VRA to acquire land necessary "for the proper discharge of the Authority's functions." Act 46 enjoins the VRA to pay monetary compensation or resettle affected people as may be applicable so as to ensure that those whose properties are affected by its operations are adequately catered for.

3.2.3 Volta River Authority (Transmission Line Protection) (Amendment) Regulations, 2004 (LI 1737)

For a 225 kV transmission line, the Volta River Authority (Transmission Line Protection) (Amendment) Regulations, 2004 (LI 1737), defines "transmission line right-of-way" to include the area extending for a distance of 20 meters, on either side from the centre line of the transmission towers. VRA shall ensure that this is done to provide for the protection of the RoW in the project area for the smooth implementation and operation of the project. Once the route of the transmission line has been established, the land lying within the RoW will be subject to the provisions of the law. Currently, the regulations prohibit a number of activities in the RoW, including mining, construction of buildings and cultivation or farming without the permission of the VRA.

3.2.4 The State Lands Act, 1962 (Act 125)

This Act vests in the President of the Republic the authority to acquire land for public good. The President "may, by Executive Instrument, declare any land specified in the instrument to be land required in the public interest" (Sect. 1-1). On the publication of an Instrument, the land shall, without any further assurance than this subsection, vest in the President on behalf of the Republic, free from any encumbrance whatsoever (Sect. 1-3). The State Lands Act 1962 places responsibility for registering a claim on the party affected, for it recognizes that it is only the affected person who can best establish the nature of his or her interest among others.

The State Lands Act, 1962 defines the terms "cost of disturbance", "market value", "replacement value" and other damage (Section 7). "'Cost of disturbance' means the reasonable expenses incidental to any necessary change of residence or place of business by any person having a right or interest in the land". "'Market value' means the sum of money which the land might have been expected to realize if sold in the open market by a willing seller at the time of the declaration made under section 1 of this Act". "'Replacement value' means the value of the land where there is no

demand or market for the land by reason of the situation or of the purpose for which the land was devoted oat the time of the declaration made under section 1 of this Act, and shall be the amount required for reasonable re-instatement equivalent to the condition of the land at the date of the said declaration." Finally, "'other damage' means damage sustained by any person having a right or interest in the land or in adjoining land at the date of the declaration made under section 1 of this Act, by reason of severance from or injurious affection to any adjoining land."

3.2.5 The Lands (Statutory Wayleaves) Act, 1963 (Act 186)

Act 186 provides for entry on any land for the purpose of the construction, installation and maintenance of works of public utility, and for the creation of rights of way for such works. The owner/occupier of the land must be formally notified at least a week in advance of the intent to enter, and be given at least 24 hours notice before actual entry. An authorized person may enter at any time for the purpose of inspecting, maintaining, replacing or removing any specified works [Section 5]. Any damage due to entry must be compensated in accordance with the established procedure, unless the land is restored or replaced. In the case of roads, not more than one-fifth of a plot may be take and the remainder must be viable, or the entire plot must be taken; Section 6-3(b).

Where a right of way must be established in the public interest, the President may declare the land to be subject to such statutory wayleave. On publication of a wayleave instrument specifying the area required, and without further assurance, the land shall be deemed to be subject to wayleave. Compensation is then determined and paid, with the right of appeal to a Tribunal established by the President, in parallel with the Lands Act, 1962. (Again, "appeal to the Tribunal" has, under the 1992 Constitution, been replaced by "appeal to the High Court").

3.2.6 The Lands (Statutory Wayleaves) Regulations, 1964 (LI334)

This law restates the principles of the Lands (Statutory Wayleaves) Act of 1963, and establishes provisions for Wayleave Selection Committees to determine the optimal routing and to ensure that the selected wayleaves are consistent with planning statuses. The proposed 225 kV Bolgatanga – Ouagadougou Interconnection Project is a "linear" project spanning approximately 39.3 km. The key issues in the RAP arise from the acquisition of the right-of-way (RoW) for the project. The implications of these regulations on the acquisition of the RoW have been discussed, and form the basis of evaluation of some aspects of the impacts on the socio-economic/cultural environment regarding loss of land use.

3.2.7 The Ghana Land Policy, 1999

It provides guidelines and policy actions for land use (e.g., agriculture, forestry, extractive industry, settlement and infrastructure). These guidelines are aimed at enhancing conservation and environmental quality, thus preserving options for present and future generations. Key objectives of the Land Policy which are relevant to the 225 kV Bolgatanga – Ouagadougou Interconnection Project include: protection of the rights of landowners, ensuring payment of fair and adequate within a reasonable time, of promoting public awareness at all levels, and community participation in sustainable land management.

3.2.8 Forestry Commission Act (1999)

The Forestry Commission Act confirms the constitutional position of the Forestry Commission and reaffirms it as sole implementing agency of government policy in the forestry sector. The VRA and the Forestry Services Division (FSD) of the Commission have concluded a Memorandum of Understanding (MOU). This is expected to provide guidelines for the two institutions to collaborate effectively for the efficient management of electric power-rated activities in national forest reserves.

3.2.9 Environmental Protection Agency Act, 1994 (Act 490)

The EPA was established, among other things, with the following functional areas; to prescribe standards and guidelines relating to environmental pollution. The Agency may by notice in writing require any person responsible for any undertaking which in the opinion of the Agency has or is likely to have adverse effect on the environment to submit to the Agency in respect of the undertaking an Environmental Impact Assessment containing such information within such period as shall be specified in the notice.

3.2.10 Environmental Assessment Regulations, 1999, L.I. 1652

Clearly spells out undertakings requiring registration and issue of environmental permit. Electric power transmission lines, hydroelectric power plants and related structures fall under this category as stipulated in Section 13 of Schedule 1 of the regulations. It is mandatory for the promoter of any such project to undertake or cause to be undertaken an Environmental Impact Assessment for the project.

3.2.11 World Bank Group Safeguard Policies and Guidelines

The World Bank's Operational Policies (OP) includes guidance on Environmental Assessment requirements. The Bank's Safeguard Policies is meant to ensure that operations of the Bank do not lead to adverse impacts or cause any harm. The Safeguard Policies are categorized into Environment, Rural Development, Social Development and International Law. The following are relevant for considerations under the transmission line project.

Involuntary Resettlement (OP 4.12)

The Policy on Involuntary Resettlement OP 4.12 (Involuntary Resettlement, December 2001, Revised February 2011) is intended to assist displaced people arising from development projects, in order not to impoverish any affected people within the area of influence of projects. An action plan that at least restores the standard of living must be instituted, in cases where resettlement is inevitable or loss of assets and impacts on livelihood

occurs. Public consultation of “re-settlers” as well as the host communities is significant for the successful resettlement process and implementation of the action plan, in order to incorporate appropriate choices.

The Policy states that involuntary resettlement may cause severe long-term hardship, impoverishment, and environmental damage unless appropriate measures are carefully planned and carried out. For these reasons, the overall objectives of the Bank's policy on involuntary resettlement are the following:

a) Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.
b) Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
c) Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

<u>Environmental Assessment (OP 4.01)</u>

The OP 4.01 (Environmental Assessment, January, 1999, Revised February 2011) requires among others that environmental assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making, and that screening for potential impacts is carried out early in order to determine the level of EA to assess and mitigate potential adverse impacts. The Bank’s project screening criteria group projects into three categories:

- Category A – Detailed Environmental Assessment;
- Category B - Initial Environmental Examination and
- Category C – Environmentally friendly

The EA ensures that appropriate levels of environmental and social assessment are carried out as part of project design, including public consultation process, especially for Category A and B projects. The OP 4.01 is applicable to all components of Bank financed projects, even for co-financed components.

Physical Cultural Resources (OP 4.11)

The policy OP 4.11 (July, 2006) addresses physical cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance.

Through this policy, the Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances. The impacts on physical cultural resources resulting from project activities, including mitigating measures, may not contravene either the borrower's national legislation, or its obligations under relevant international environmental treaties and agreements.

Other relevant OPs

The following are also applicable.

a) World Bank Operational Policies OP 4.04 Natural Habitats which seeks to promote and support natural habitat conservation and improved land use, and the protection, maintenance and rehabilitation of natural habitats and their functions in its project financing.
b) World Bank Operational Policies OP 4.36 Forestry which aims to reduce deforestation enhances the environmental contribution of forested areas, promote afforestation, reduce poverty and encourage economic development.

3.3 INSTITUTIONAL FRAMEWORK

Various institutions have been established in Ghana that have either direct or indirect responsibilities for acquisition of properties in line with the 1992

Constitution. This is to ensure that project affected persons are provided with prompt, fair and adequate compensation and that they are not worse off following the implementation of any project.

The following institutions would have various roles to play in the implementation of the Resettlement Action Plan for the project:

3.3.1 The Land Valuation Division of the Lands Commission

The Land Valuation Division aims at delivering an open, timely and cost effective valuation service, with the view to supporting economic development and poverty reduction. Their main functions are:

- Determine all matters of compensations for land compulsorily acquired by Government, any organ of Government, any organ of Government, or Public Corporation.
- Prepare the valuation list for property rating purposes for the Metropolitan/Municipal/District Assemblies, updating and maintaining the valuation list.
- Undertake valuation of immovable properties for the administration of Capital Gains Tax and Stamp Duty as well as any other duties that the State shall envy.
- Undertake valuation of immovable properties including land, buildings , furniture, fittings and fixtures, trade stock, plant and machinery and other effects, plant and machinery and other effects, for any purpose, for Government agencies, or any organ of the Government.
- Determine the rental values of all properties of which Government is the owner, tenant, or prospective tenant.
- Advise all organs of Government on all matters of valuation of interest in immovable properties.
- Advise the Office of the Administrator of Stool Lands and the Forestry Commission on royalty payments on forestry holdings and products.

- Monitor private valuation activities with a view to protecting the national interest.
- Advise the Government on the streamlining of the Valuation Departments in public establishments.
- Advise on mining issues as they relate to compensation.

3.3.2 The Forestry Commission

The Commission is responsible for the management and utilization of the nation's forest and wildlife resources. The Commission has three Divisions, two of which are relevant to this project. These are:

i. Forest Services Division

Responsible for management, development and utilization of the nation's forest resources.

ii. Wildlife Division

Responsible for wildlife conservation, management and protection of wildlife reserves, as well as conservation of wetlands.

The third is the Timber industry Development Division.

3.3.3 Ghana Museum and Monuments Board

The Ghana Museum and Monuments Board's aim is to acquire, protect, conserve and document the nation's movable and immovable material cultural and natural heritage for posterity, for purposes of research and education of the public. To this end, the Board endeavors to promote and foster national identity and unity, take advantage of the Institution, the community and the nation in collaboration with Government, marketing and promoting agencies.

In pursuance of this, the Ghana Museums and Monuments Board undertakes the following activities:

- Equipping, maintaining and managing all material, cultural and natural heritage of the nation.

- Establishing, equipping and managing new museums.
- Controlling the export and import; sale and change of ownership of material cultural properties through licensing and issuance of permit.
- Establishing a national register and keeping inventory of all material cultural and natural heritage of the nation.
- Identifying and recommending for declaration as national monuments, structures and sites of historical and cultural significance.
- Undertaking research and publishing on all matters relating to material cultural and natural heritage

3.3.4 District Assemblies – Bolgatanga Municipality, Kassena-Nankana and Kassena Nankana West Districts

The District Assemblies have been created as the pivot of administrative and developmental decision-making in the district and the basic unit of government administration. They have been established as a monolithic structure to which is assigned the responsibility of the totality of government to bring about integration of political, administrative and development support needed to achieve a more equitable allocation of power, wealth, and geographically dispersed development in Ghana. They are assigned with deliberative, legislative as well as executive functions and are the Planning Authority for the District.

Various sub-bodies exist for the performance of its functions and these are the Urban/Town/Zonal/Area Councils and the Unit Committees. The District Assembly works through the Executive Committee, which includes the Social Services Sub-Committee, Works Sub-Committee, Finance Administration and Development Planning Sub-Committee among others. The proposed project line traverses the Bolgatanga Municipality, Kassena-Nankana and Kassenan Nankana West Districts.

3.3.5 Elders of Local Communities as Stakeholders

Elders of the various communities are made up of the Chiefs, opinion leaders and local council representatives known as the Assembly persons. They are responsible for local policy matters, economic development, resolving local conflicts, and providing orderly leadership and democratic practices at the grassroots level in their respective communities. This mode of governance facilitates mass participation in government affairs and exposes the general populace to their civil rights and obligations particularly regarding their involvement in development programs and projects in their own areas. For the purpose of this project, community elders and chiefs will play a key role in identifying project affected persons for compensation purposes. Fifteen (15) local communities fall within the project affected areas and these are listed in Table 1.

4. OBJECTIVES OF RESETTLEMENT ACTION PLAN

Resettlement measures are to be conceived and executed as development activities providing sufficient resources to give the persons displaced the opportunity to share in the project benefits. Until recently, development-induced displacement of population was considered a ‘sacrifice’ some people had to make for the larger good. Resettlement programs in general were limited to statutory monetary compensation for land acquired for the project. However, perceptions are changing because of delays in project implementations and benefits foregone. Furthermore, impoverished people are a drain on the national economy, thus, avoiding or minimizing displacement as well as proper rehabilitation of those displaced make good economic sense as well as being fair to those adversely affected. Good resettlement, it has been observed, can prevent impoverishment of affected persons and can even reduce poverty by building sustainable livelihoods.

The following are some of the factors identified to be relevant to the successful implementation of resettlement programs.

- Commitment of borrowers in the form of laws, policies, and resource allocation
- Close adherence to established guidelines and procedures in implementation
- Sound social analysis, reliable, demographic assessments, and appropriate technical expertise in planning for development-oriented resettlement
- Reliable cost estimates and provisions of required financing, with resettlement activities phased in tune with civil works construction
- Effective executing agencies that are responsive to local development needs, opportunities and constraints
- Public participation in setting resettlement objectives, identifying and implementing re-establishment solutions.

The development of the project which is land-related is expected to have socio-economic and environmental impacts on the immediate communities

and districts as a whole. The VRA as the local representative of the project promoter subscribes as a matter of policy and practice to the following compensation objectives:

- To consider involuntary compensation as an integral part of project design, and deal with resettlement issues from the earliest stages of project preparation;
- To consult with project-affected persons (PAPs) in a meaningful manner, and to provide opportunity for their participation in the planning and execution of resettlement programs;
- To assist PAPs in proportion to impact, recognizing the special needs of vulnerable populations;
- To compensate PAPs fully and fairly for all assets lost permanently or temporarily, this means timely payment of full replacement value prior to construction;
- To ensure that all PAPs who lose income-generating resources are assisted in their efforts to improve their livelihoods and standards of living or at least restore them, in real terms, to pre-project levels;
- Assistance would be given to the affected persons in their efforts to improve former production levels, income earning capacity and living standards or at least restore them to the levels they would have been without the project. The three main performance indicators of power supply systems would all be positively enhanced by the construction of the project. In addition the completion of the project will complement the nation's policy priorities of poverty alleviation, energy efficiency, promotion of economic growth and enhanced rural electrification. Incidentally most of the communities to be affected by the project are already linked to the national grid.
- Farm extension services and health education would be provided to the PAP's and the affected communities.

These policy objectives apply to all direct economic and social impacts that result from the project and that are caused by the involuntary taking of land that results in relocation or loss of shelter, loss of assets or access to

assets, or the loss of income sources or means of livelihood, whether or not `the affected persons must move to another location. Further, these policy objectives apply to all components of the project that result in involuntary resettlement regardless of the source of financing.

All project-affected persons (PAPs) have been identified and issues of compensation and involuntary resettlement would be appropriately addressed. These would include the valuation of the cost of affected properties and the replacement of lost private lands and property in such situations. Grievance procedures have been instituted for person(s) dissatisfied with their compensation packages to seek redress.

5. IMPACTS OF RESETTLEMENT

5.1 LAND OWNERSHIP IMPACTS

Acquiring RoW will not have a significant impact on land ownership. As only the right-of-way is acquired for the project, title to the land is not affected. Thus the owners will continue to retain their ownership of their various parcels. The RoW would only serve as an encumbrance on land ownership. It however does not significantly detract from the ownership factor. Any time the line is decommissioned, the land reverts to the owner from whom the land was taken automatically.

5.2 LAND TENURE ARRANGEMENT

The tenure arrangement under the provisions and operation of the Ghanaian laws and custom are briefly outlined as below:

- **Customary Tenure** is the form of land ownership by virtue of one's customary rights and occupation of the land; they have proprietary interest in the land and are entitled to certificates of customary ownership. It is a principle that is generally accepted as binding and authoritative by the group of persons it applies to.
- **Freehold Tenure** derives its legality from the Constitution and its incidence from the law. It involves the holding of land in perpetuity or for a period less than perpetuity fixed by a condition. It enables the owner/holder to exercise the full powers of ownership, subject to law.
- **Leasehold Tenure** is created either by contract or operation of the law. It is a form of land ownership which a landlord or lessor grants the tenant or lessee exclusive possession of the land, usually for a period defined and in return for a rent. The tenant has security of tenure and a proprietary interest in the land.
- **Licensees/Sharecroppers** are granted authority to use land for agricultural production. Licensees have no legal security of tenure or any proprietary right in the land. This tenure is purely contractual.

Thus, the majority of the affected persons are themselves landowners under the customary tenure system. In effect, the impact of landowners losing their sources of income through the farming activities will be offset by the minimal, since they retain the right to continue to crop annuals.

5.3 LAND USE

Land use along the proposed transmission line corridor is mainly for small-scale subsistence farming. Indications are that during the planting (rainy) season the area traversed by the project is intensively cropped with cereals which is the main crop planted in the region. Apart from Zorbisi near Tamale, settlements in these areas are mostly rural, taking the form where there are a group of buildings accommodating various members of an extended family (see Annex 6, Pictures of some affected houses). The construction and operation of the proposed line will require a RoW of approximately 40 m width for the entire 39.3 km of the line within Ghana, from Bolgatanga to Ghana's northern frontier with Burkina Faso, adding up to an area of 1.572 km^2. Even this piece land is available for cropping, except for the corridor track.

The Volta River Transmission Line Protection Act (LI 542) prohibits any activity within the 40m corridor that will undermine the safety and security of the line. The VRA holds the discretionary powers to allow activities such as cropping of annuals such as vegetables, maize etc., that would be harvested within a year or several times a year. Thus, except for the occasional tree within the corridor that will have to be removed, the impact of the line on current land use would be minimal.

During the construction stage, sections of farms located within the line corridor would be affected. Farmers whose crops may not be ready for harvesting would feel the major impact. Also, perennial tree crops such as sheanut (Vitellaria paradoxa), wood lots, dawadawa (Parkia biglobosa), mangoes, etc would be destroyed within the RoW. This would result in loss of crops to the owners. In all, a total of 139 economic trees would be

affected. Since the valuation of affected properties was done in the dry season, there was no cultivation of crops. This would not have any impact on the compensation, since it has been indicated that crop cultivation would be permitted within the line route corridor. Crops that are cultivated along the stretch include millet (sorghum), yam, groundnut and other cereal.

Buildings both residential and non-residential as well as other structures within the RoW would be removed. This is to make way for construction to be carried out. Surveys carried out indicated that eighty seven (87) housing units will have to be demolished for the implementation of the project. Some vacant lots of land were also identified, which would belong to clans/families and some individuals. These lots have been captured in the list of affected properties and their owners have been identified for compensation purposes.

5.4 IMPACTS ON POPULATION

The project is not expected to have any significant adverse impacts on the size of the population within the communities. At its peak, the project will require about 140 workers. Out of this number, 60% - 70%, which will usually be unskilled labor may be employed from among the local communities. The skilled workers from outside the communities will be about 40 in number. While there is no traditional or legal provision against women engaging in construction work, it is common to find that the workers are mostly males but, in this case, their numbers are such that this would not alter the gender balance within the communities to any appreciable extent.

The ethnic composition of the affected persons shows that most of them are indigenous of the affected communities and this will not be significantly altered during the duration of the project implementation phases.

5.5 IMPACTS ON EMPLOYMENT AND INCOMES

The project is expected to provide direct job opportunities for about 120 to 140 persons from the local communities during the construction phase.

These would be non-skilled labourers who will be required for non-specialized tasks such as bush clearing and concrete works. A few skilled positions such as carpenters and masons will also be required. The project is expected to have an overall positive impact on the communities, as some income would be earned and some technology or skills transfer would also take place. Apart from these direct jobs, the project would also create indirect job opportunities like food vending and sale of petty items to the workers, which would be taken up mostly by women in the communities.

During the operation and maintenance phase, contractors who will carry out line maintenance and vegetation clearing on behalf of GRIDCo would employ some of these people and this would be an additional benefit. Employment created by the project and the incidental indirect jobs created, such as petty trading and food vending, will help to boost the levels of incomes. This impact, though positive, will only be of a rather limited duration.

5.6 CULTURAL AND RELIGIOUS IMPACTS

The implementation of the proposed project has the potential to impact significantly on cultural properties, historical sites and buried artifacts particularly during the construction phase. Issues regarding cultural properties and the possibility of cultural and/or archaeological chance finds are considered to be significant and would require mitigation.

Through consultation, however, the line route has avoided all such cultural and religious property. Rather, what emerged was that some of the potential project-affected people have household idols that would require some pacification rites prior to relocation. The custodians of these idols have been consulted on the requisite pacification rites. These are attached as Annex 5.

5.7 IMPACTS ON HOUSING

Details of the 87 affected housing units are provided in Annex 3. Three (3) households want their houses replaced, while the remaining ones prefer to receive cash compensation.

Apart from Zorbisi near Bolgatanga, settlements in these areas are mostly rural, taking the form where there are a group of buildings accommodating various members of an extended family (see Annex 6, Pictures of some affected houses). Compensation values have been computed for all these buildings, and will be paid to the owners during the implementation of this Resettlement Action Plan. By opting to take cash compensations, these affected persons may purchase land and build new houses elsewhere, but this is indeterminate at this stage. Zorbisi is the only peri-urban community; the rest are all rural communities, where land for housing is available for sale on freehold. In Zorbisi, compensees may choose to buy land and build their houses or rent accommodation from other home owners. Either way, their compensation packages would suffice.

6. METHODOLOGY FOR RAP IMPLEMENTATION

6.1 IDENTIFICATION AND ELIGIBILITY OF PROJECT-AFFECTED PERSONS

The provisional line route for the proposed 225 kV Bolgatanga – Ouagadougou Interconnection project has been updated since October 2008 from a previous survey that was completed in 1990. The transmission line is to be constructed within the corridor that will traverse the Bolgatanga Municipality, Kassena-Nankana and the Kassena-Nankana West Districts for a distance of about 39.3 km. Theoritically, the total land area to be taken up by the RoW will be approximately a 40m wide a strip running along the entire proposed 39.3 km route, i.e. 1.57 km2 (0.04 km x 39.3 km) of land area. The land lying within the RoW will be subject to provisions of the Wayleaves regulations, which prohibit a number of activities in the RoW, including mining, construction of buildings and cultivation or farming.

The line route has formed the basis of an Environmental and Social Impact Assessment (ESIA) study, the resulting report of which has been approved by the Ghana EPA. Properties that fall within the corridor have been identified through consultations with local government authorities, community members and property owners. These properties have been enumerated and valued by a certified property valuer using approved methods and values. (These values would be validated by the Estate Department of the VRA before the implementation of the RAP.) This enumeration and valuation were done during the dry season when all food crops had been harvested. Therefore, these were not valued. It is anticipated that the construction of the line will be implemented during the dry season, during which period all food crops would have been harvested. Conventionally, farmers will be allowed to harvest any crops within areas to be acquired prior to the securing of the RoW and undertaking of any physical activity.

A list of affected properties and their owners has been prepared, and this will form the basis of the compensation and involuntary resettlement

activities for this project. It must be emphasized that the total cost of compensation may vary eventually as a result of speculative development by some people who have land within the provisional line corridor. Some of the economic trees may also have grown in size since the inventory was taken.

6.1.1 Eligibility criteria

This section provides the criteria to be used to determine the eligibility of project-affected persons for compensation and other resettlement assistance.

The buildings and trees within the line route corridor have been enumerated and documented. Most of the owners of these properties have been identified. The census indicates the cut off-date for eligibility for compensation. In consultations with the community members, it was indicated that any development within the corridor after the cut-off date may not be eligible for compensation.

During the implementation of the RAP, the owners of the affected properties would be required to show some proof of ownership, to be eligible for compensation. In determining eligibility, affected persons may be classified in one of the following groups, depending on the type of right they have to the land they occupy:

- Owners who do not have title deeds but they have a ‘customary’ legal claim to it.
- Owners who do not have formal legal rights to land at the time of the census but have a claim to such land or assets. This group of people mostly comprises those who may have bought land or other immovable property but have not yet completed the process of acquiring title deeds.
- Those who have no recognizable legal right or claim to the land they are occupying. These are mostly encroachers into state land or those who might occupy customary land without permission or recognition by the local authority (chief).

The displacement of persons through the involuntary acquisition of land results from the following,

i) Relocation or loss of shelter;
ii) Loss of assets or access to assets; or
iii) Loss of source(s) of income or means of livelihood, whether or not the affected persons must relocate to another place.

Displaced persons, therefore, are those persons who, as a direct consequence of a project would either:

a) Physically relocate or lose their shelter
b) Lose their assets or access to assets, or
c) Lose a source of income or means of livelihood, whether or not they physically relocate to another place.

The term “project-affected persons” (PAPs) describes persons who have been identified during the inventory to be affected by the transmission line project. PAPs include:

- Persons whose property are partly or wholly affected (permanently or temporarily) by the proposed project;
- Persons whose premise and/or agricultural land is in part or totally affected (permanently or temporarily) by the proposed project
- Persons whose crops (annual and perennial) and trees are affected partly or totally by the proposed project.

6.2 MORATORIUM AND PROPERTY VALUATION

6.2.1 Moratorium/Cut-off date

The valuation of affected properties was done in October 2009, while the ESIA for the project line route corridor was approved on January 25, 2011. That effectively approved the line route corridor and is thus the cut-off date. However, it is documented elsewhere in this report that the Consultant in community consultations indicated to community leader and members that any new physical developments within the line route corridor after the enumeration will not be considered. Thus all developments after January

25, 2011, when the line route was approved via the ESIA approval would be considered as encroachers.

The VRA has also developed a Land Acquisition and Resettlement Policy (LARP) Framework for establishing the criteria by which displaced persons will be deemed eligible for compensation and other resettlement assistance. The procedure includes provisions for meaningful consultations with affected persons and communities, local authorities, and it specifies grievance mechanisms.

The VRA Resettlement Policy Framework which was prepared under the Ghana Energy Development & Access Project is provided as Annex 2. The VRA LARP outlines the difference between World Bank policy requirement and that of the Ghana Government. As per the project TOR, wherever there are any differences, the World Bank requirements take precedence over the local regulatory framework. To ensure best practices, the VRA has largely adopted the principles outlined in the World Bank Operational Procedures 4.12 and this has formed the basis for preparing this RAP. In this regard the following principles and objectives would be applied:

- Acquisition of land and other assets will be minimized as much as possible.
- All PAPs residing or cultivating land along an alignment or segment of alignment to be rehabilitated or constructed under the project are, as of the date of the baseline surveys, entitled to be provided with compensation sufficient to assist them to improve or at least maintain their pre-project living standards, income earning capacity and production levels. Lack of legal rights to the assets lost will not bar the PAP from entitlement to such rehabilitation measures.

The compensation to be provided should be at replacement cost (market value) for houses and other affected structures and or agricultural land for land of equal productive capacity acceptable to the PAP. Plans for acquisition of land and provision of compensation will be carried out in consultation with PAPs to ensure minimal disturbance. Entitlements will be

provided to PAPs no later than one month prior to expected start up of works at respective project site.

6.2.1 Property Valuation

The Land Valuation Division (LVD) unit prices have been used as a guide to determine the compensation for agricultural crops and residential properties. The methodology for the calculation of crop compensation rates takes into account both the market value of agricultural produce, and the reestablishment period of perennial crops. It must be noted the computation of these values were based on applicable rates prepared by the LVD. To ensure that the affected people are paid fair values, these rates will be calculated to reflect actual replacement and market values of the crops or other assets to be lost and also to meet the World Bank Standards. The categories of affected assets are provided in Table 4 below.

Table 4 Categories of Affected Assets

Asset Category	Type of Loss	Affected Persons	Compensation Strategy
Agricultural land	Restricted access and use due to RoW acquisition	Families, individuals, tenant farmers, lessees	Cultivation may continue subject to height restrictions
Residential land	Loss of title and use	Families, individuals	Cash compensation or replacement of land
Physical structures	Living quarters	Families, individuals	Cash compensation or replacement of physical structure and relocation assistance
Cultural assets	Family shrines/gods in affected homes	Families, individuals	Pacification rites for relocation
Annual crops	Loss of income from yield(s)	Tenant farmer, land owner, sharecropper	Cash compensation based on type, age and productive value
Economic trees	Loss of income	Land owner, tenant farmer, sharecropper	Cash compensation based on type, age and productive value
Incomes and Livelihood	Income from wage earnings	PAP	Cash compensation equal to temporary period of interruption of economic activity.
Environment-related	Environmental losses due to vegetation clearing, etc	Communities/Natural environment	Rehabilitation and re-vegetation

6.2.2 Property valuation principles

Property valuation principles take into account the type of asset under each category since each type has peculiar valuation characteristics. Thus, in valuing assets, the following principles were used as a guide:

- Valuation of assets was undertaken by qualified valuation professionals.
- Valuation of assets is arrived at as replacement cost plus transaction costs. Depreciation of structures and assets should not be taken into account.
- Cash compensation levels should be sufficient to replace the lost land and other assets at full replacement cost in local markets.

6.2.3 Entitlement policy

All project-affected persons (PAPs) are entitled to the following types of compensation and rehabilitation measures;

a) PAPs losing residential land and structures

- The mechanism for compensating loss of residential land and structures will be Cash compensation reflecting full replacement cost of the structures without depreciation.
- If the residential land and/or structure is only partially being affected by the Project and the remaining residential land is not sufficient to rebuild the residential structure lost, then at the request of the PAP the entire residential land and structure will be acquired at full.
- Replacement cost, without depreciating.
- Tenants, who have leased a house for residential purposes will be provided with a cash grant, and will be assisted in identifying alternative accommodation.

b) PAPs losing agricultural land and crops.

- PAPs will be compensated for the loss of standing crops and fruit or economic trees at a fair market price.
- PAPs whose lands are temporarily taken by the works under the Project will be compensated for their loss of income, standing crops and for the cost of damaged infrastructure.

c) No squatters, encroachers or illegal users were identified in the corridor (see annexes 3, 4 and 5 reporting the results of property inventory and valuation procedure in the corridor. All the identified owners are also the users of the various properties).

6.3 PAYMENT OF COMPENSATION

In line with the legal regime in the Ghana and in conformity with international standards, all properties such as buildings, lands, and crops shall be duly compensated for, in accordance with the provisions of the law, at the appropriate replacement values in line with VRA/LVD procedures, in addition to its compliance with World Bank Standards on involuntary resettlement. Referencing of all properties, both crops and buildings was conducted by a valuation professional and a certified Valuer in collaboration with officers of the Land Valuation Division (LVD) and monitored by Estate Surveyors from VRA. The inspections were carefully and meticulously done to ensure that all affected properties and their details are captured by both the LVD and VRA teams.

Assessment of the values as indicated in the report was done by the Consultant and the valuation advice forwarded to VRA. The VRA also carries its own internal assessment of the fair amounts to be paid to each of the affected owners. The PAP's also having the right, to engage private valuation consultants to advice on the values of their affected properties. The cost of such services is however not borne by the PAPs but by the acquiring agency and in this case, the VRA.

To this end, a Property Impact Report, which identifies all affected properties, owners and estimated prevailing market replacement values,

has been prepared and shall be updated to meet current market values prior to project implementation period. Payment would be in line with VRA's policy framework on land acquisition and compensation.

Once the physical assets affected are inventoried and valued, VRA in collaboration with the LVD determines its offer to each affected person. The Form F, which lists the assets affected, will be delivered to the PAPs at a village meeting convened in their localities. The inventory of assets lost is given or read to the PAP, who signs the Form F to signify agreement with the physical inventory. In the instance of a disputed inventory, the PAP may request a reassessment or may, in exceptional instances, commission an independent assessment. A copy of the Form F is attached as Annex 1.

Compensation will be paid by VRA to each PAP at a meeting in each of the affected villages. The VRA representative provides the list of affected assets and the global compensation amount to the PAP (or reads it to the PAP if illiterate) to ensure that there is continued agreement on the compensation sum. In those instances where residences and other structures are affected, VRA will enlist the assistance of community leaders to assist in the identification of acceptable, alternative plots, if necessary. All residential relocation takes place within the PAP's current town or village, and usually requires moving back a relatively few meters out of the RoW. Full payments are made for residential plots or developable parcels of land in line with the provisions of the Lands (Statutory) Wayleave Act 1963, Act 186. For areas encumbered by the towers spots, full payment is made for those portions. Farmlands are also paid for, in so long as the owners can justify that they qualify for compensation.

6.4 GRIEVANCE PROCEDURES

This section describes mechanisms available to affected people for complaints about aspects of their treatment under project activities. Grievances are likely to arise in one or more of the following cases:

a) Where the value of assets is disputed,
b) Where the amount of compensation is disputed and

c) Where the identity of the person to be compensated is disputed.

There are three ways in which grievances shall be resolved. These are:

- **Grievance Redress Committee**: There shall be a grievance redress committee comprising representatives from the fifteen affected communities, the three District Assemblies and the project implementers. This committee shall hear disputes regarding displacements and cases shall only be referred to arbitration or the law courts when the Grievance Redress Committee is unable to resolve an issue.
- **Arbitration**: Arbitration shall be an option for grievance redress where the parties involved agree to resolve their dispute through arbitration. The Arbitration Act 1961 (Act 38) makes provisions for aggrieved parties to agree to settle disputes out of court or to make a written agreement to submit a present dispute, or future disputes to arbitration. The parties are at liberty to name an arbitrator in the agreement. Where an arbitrator is not named in the agreement, the agreement should designate a person who would appoint an arbitrator.
- **Courts of Law**: It should be noted that arbitration only works where the parties to a dispute agree to resolve a difference through arbitration. Where there is no consent, then a court of jurisdiction may be used to resolve a dispute.

Grievance resolution usually starts with the project implementers (VRA) having personal interactions with the complainant and the Real Estate staff of the Project Implementation Unit of VRA. For complex issues, complainants are invited for a sit-down discussion with one or more responsible persons (local notables), typically in the presence of family members or “witnesses” of one sort and another. These grievances are logged on a form, which provides for tracking the process of resolution. For especially sensitive or potentially serious complaints, the responsible officer takes notes and sometimes writes a report for record purposes. Where complaints have to do with irregularities in measurements/tree counts or

disputes in compensation payments, the grievance committee notes such complaints and conduct a verification exercise to confirm the allegation or otherwise.

An agreement is proven by the complainant's continued participation in the resettlement planning and implementation process and/or not taking the issue further. If the informal process is not resolving an issue, complainants are urged to make their complaint in writing. Illiterate or non-literate persons do prepare letters using professional letter-writers. A detailed record of each written complaint and response/resolution thereof kept as part of the grievance resolution records.

In more complex cases, the VRA routinely seeks the advice, and, where appropriate, intervention of traditional authorities and members of the Resettlement Negotiation Committee to help resolve disputes. In Ghana, mediation is largely preferred to litigation, and the VRA makes use of these and other mediation models to help resolve disputes. However, impacted persons/households have the right under Ghanaian law to take their grievances for resolution in the court system, to the Commission on Human Rights and Administrative Justice and to the Department of Social Welfare.

For the sake of transparency and to ensure that the PAPs have confidence in the grievance resolution mechanism Grievance Committees will be formed for all the settlements. Members of the committees will be nominated by the PAPs themselves, including opinion leaders, and chiefs, where necessary. The role of the grievance committees as set up is outlined below:

- To witness the collation of the field data during the survey and crop count exercise
- To take stock of all tree counts on the field for the early resolution of any disputes.
- To sign the Form Fs indicating that the tree counts recorded are a true representation of the counts

- To investigate any anomalies/complaints brought by any PAPs and report to the project officials for verification, if their findings confirm the grievance of the PAP.
- To have in their possession copies of the government rates adopted in the valuation and cross-check figures on any disputes presented to the committee.
- Report formally any anomaly detected during the RAP implementation period for early resolution.

6.5 RESETTLEMENT MEASURES

The procedures used by VRA to ensure that all persons affected by the proposed transmission line project are catered for in line with World Bank's Operational Procedures 4.12 are as outlined below:

- Referencing of all properties, both crops and buildings, by officers of the Land Valuation Division (LVD) to be supervised by Estate Surveyors from VRA.
- Assessment of the values would be done by the LVD and the valuation advice forwarded to VRA.
- The assessed report would be vetted and corrections effected where necessary to ensure that the amounts are accurate and fair to the Authority. These would then be processed for payment.
- Offers would be made to the claimants on the basis of the LVD's advice.
- Claimants dissatisfied with the offer have a right to petition for reconsideration. In this regard, such claimants are required to submit counter proposals supported by valuation prepared by private property valuers of their choice.
- The private valuers' reports are considered by VRA in conjunction with the LVD to ensure that claimants are treated fairly.

- Where necessary any aggrieved person would be invited to negotiate and arrive at acceptable figures.
- Where the parties, after all the negotiations, are not satisfied then they can seek redress at the court.

A provisional inventory list of the affected properties has been compiled. The inventory includes baseline information, compensation figures and other entitlements of each PAP. The inventory of all affected properties, both buildings and economic trees, is provided as part of Annex 3. Annex 6 shows pictures of affected buildings and structures within the corridor.

6.6 CLOSURE

In view of the fact that the RAP will need to be implemented before the commencement of the construction phase of the project, there will be the need for a closing date. This will normally be at least one month before the commencement of construction. However, PAPs who would not have been satisfied with the process or their compensation and/or resettlement package would have to resort to the grievance procedures outlined above for closure.

6.7 PUBLIC DISCLOSURE

The whole process of compensation and resettlement will be conducted in a transparent and open manner. It would be publicized in national newspapers and local radio stations. However, the confidentiality of PAPs will be respected in that their names and compensation sums would not be disclosed nor published.

7. PUBLIC PARTICIPATION

Public participation plays a key role in ensuring information flow on a project that entails involuntary resettlement as an impact, and it has been an integral part in the preparation of this RAP. Institutional and community consultations have informed the ESIA study and the preparation of this RAP.

Consultations with stakeholders have been consistent through the process, focusing mainly on:

- Identification of the affected communities along the transmission line right of way.
- Description of all stakeholders who were involved in the consultation process
- Agreeing on the participation mechanisms to facilitate the consultation process focusing on the following indicators;
    i. Assessment of project impacts;
    ii. Resettlement strategy;
    iii. Compensation rates and eligibility for entitlements;
    iv. Timing of relocation;
    v. Development opportunities and initiatives;
    vi. Development of procedures for redressing grievances and resolving disputes;
    vii. Mechanisms for monitoring and evaluation and implementing corrective restoration.
- Agreeing on a grievance redress framework (both informal and formal channels) that will be put in place by the subproject proponent setting out the timeframe and mechanisms for resolution of complaints about resettlement.

The relevant policies and the regulatory conditions that must be considered for the successful implementation of the project have been gathered and reviewed as part of the RAP process (Section 3.3), and appropriate

consultations with the relevant agencies have been undertaken. Projects resulting in physical or economic displacement have special consultation responsibilities. It will be necessary for the PAPs to be fully involved in the selection of relocation sites (where necessary), various modes of compensation and development options as early as they come into reckoning. Participation as a generic term usually encompasses two distinct dimensions:

i. *Dissemination and consultation* – involving the exchange of information, and;
ii. *Collaboration or participation* – involving varying forms of joint decision making.

Consultations have involved joint discussion between representatives of the project promoters and the affected population. This has served as a vehicle for communication between the potential PAPs and the project promoters.

A number of statutory agencies have also been engaged in consultations to assist in defining more clearly the limit and scope of the project's impact. These have included the three local government authorities, i.e. Bolgatanga Municipal, the Kassena-Nankana and the Kassena-Nankana West District Assemblies, the regional office of the Lands Commission, the Ghana Civil Aviation and other relevant bodies. Community members have also been engaged in discussions to take on board their concerns and comments, as well as expectations from the proposed project.

The initial approach has entailed the identification of potential PAPs as per the proposed line route, and other relevant stakeholders. This has involved field visits to the line route and the communities within its area of influence, and statutory bodies whose inputs and consent are required in the permitting process.

Stakeholders consulted included Chiefs and elders of the fifteen affected communities, the Bolgatanga Municipality, Kassena-Nankana and Kassena-Nankana West District Assemblies and key public agencies as Forestry Commission, Land Valuation Division and the Ghana Civil Aviation Authority.

7.1 COMMUNITY CONSULTATIONS

Separate consultation meetings have been held with all the fifteen affected communities to inform them about the proposed project and to take on board their concerns and expectations. It was sufficiently explained to them the nature of the acquisition, potential impacts, compensation procedure, the role of the communities and any relevant information in connection with the project. Sufficient time was given for exhaustive discussions. The outcome of these consultations has informed the RAP. Data on the community consultations is provided in Table 5 below.

Community consultation meetings were open to the public. Institutional consultations involved the statutory bodies and the NGO that was consulted.

Table 5 Community Consultations and Comments

No.	Locality	Comment/Concern/Question	Mitigation/Action to be Taken
1	Bolgatanga Municipality • Zorbisi • Sokabisi community • Yikene • Sumbrungu • Kulbia • Anateem	- Would compensation be paid for multiple properties owned by the same individual?	- Each property will be enumerated and compensated for, irrespective of the owner.
		- When would construction begin, and would affected people be given enough time to relocate?	- Adequate time will be given for all affected people to relocate before construction begins.
		- Previous land acquisitions by VRA in the area have not compensated for. There are doubts that it will be different this time.	- The process will be more transparent this time round. Adequate compensation shall be paid promptly.
		- In view of land scarcity for farming and settlement, affected persons will have to relocate elsewhere, adversely affecting communal cohesion.	- All project-affected persons will be resettled prior to commencement of construction.
		- No prior information about survey works in the community resulting in tensions over land.	- This is a regrettable error that will not be repeated.
		- Need to employ people from local communities.	- As much as possible, local labour will be given priority.
		- Why is electric power being exported to Burkina Faso while some local communities do not have power?	- This project is for the West African region (ECOWAS), while a local component is being planned by VRA.

No.	Locality	Comment/Concern/Question	Mitigation/Action to be Taken
2	Kassena-Nankana East District • Kandiga • Doba • Nayagnia • Pinyoro • Pungu	- In view of land scarcity in the area, affected persons need to be adequately compensated. - Team of surveyors for the project exhibited poor community entry techniques which created disaffection for the project. - Would economic trees be compensated for? - Why would VRA not construct houses and relocate PAPs prior to commencement of project?	- All project-affected persons will be resettled prior to commencement of construction. - This is a regrettable error that will not be repeated. - Economic trees will be compensated. - PAPs who prefer to have their houses replaced will have houses at the determined value.
3	Kassena-Nankana West District • Nyangua • Tekuru Kizito • Baduno • Paga Zenga	- Resettlement should be made prior to the rainy season - Some properly acquired lands are not covered by any documentation.	- Resettlement will be done at a period convenient to all parties, as much as possible. - The Lands Commission and local chieftains will assist in determining ownership of lands.

7.2 INSTITUTIONAL CONSULTATIONS

The Bolgatanga Municipal, Kassena-Nankana and Kassena-Nankana West District Assemblies which jurisdiction the proposed transmission line project is expected to traverse have all been consulted. Table 3 above outlines their respective comments. Particular they all made commitments to assist in the process (including identification of affected persons and properties) to ensure that the affected persons in their Districts were compensated appropriately.

Other consulted institutions included the Upper East regional office of the Environmental Protection Agency (EPA), the Upper East Regional Coordinating Council, the Lands Valuation Division of the Lands Commission, the Ghana Civil Aviation and telecommunication companies that operate in the project area.

7.2.1 Bolgatanga Municipal Assembly

Consultations were held with Mr. Yakubu Andani Abukari, the Municipal Coordinating Director, in which he pledged the commitment of the municipal authority to the project and intimated that the prompt payment of adequate compensation will be important in ensuring the success of the project.

7.2.2 Kassena-Nankana District Assembly

Discussions were held with the District Chief Executive, Mr. Emmanuel Achegeweh and the Planning Officer, Mr. Collins Ohene. They indicated their preparedness to assist in identifying project-affected persons. Of major concern were the needs to ensure extensive public education in the affected communities, and to ensure the prompt payment of fair and adequate compensation to project affected persons.

7.2.3 Kassena-Nankana West District Assembly

The District Chief Executive, the District Coordinating Director and the District Planning Officer were engaged in discussions. While pledging their support for the project, they indicated their requested that the team should pay another visit, during which the team will be introduced to the Chief of Paga, who will assist in disseminating information about the project within the communities.

7.2.4 Lands Valuation Division of the Lands Commission

The newly constituted Lands Commission which now includes the erstwhile Lands Valuation Board has also been consulted. Mr. Eben Dusam, the Regional Lands Officer, intimated that it will be necessary to involve the Lands Valuation department of the Commission in the determination and payment of compensation values.

7.3 GHANA CIVIL AVIATION AUTHORITY

Ghana Civil Aviation Authority (GCAA) has long acquired a site for an airport near Anateem, about 3.5 km from the Bolgatanga-Navrongo road. Airports have more than just land surface influence, as aircraft landing and take-off involve airspaces far outside their terrestrial limits.

Consultations have been held with the deputy director of Safety Regulation (Air) of GCAA, Daniel Acquah, at the GCAA's head office Accra, during which a 'no objection' response was given to the project. However, special safety measures such as highly visible markers and insulated separators of International Civil Aviation Organization (ICAO) standards (bright orange) will have to be installed on the lines if the lines will be anywhere within the airport's landing and take-off area, since strong winds and vibration could cause the lines to touch each other and short-circuit itself. This will also warn pilots of the presence of the transmission lines.

7.4 TELECOMMUNICATION COMPANIES OPERATING IN THE PROJECT AREA (VODAFONE, MTN, TIGO, AND ZAIN)

Since December 2009 when consultation letters were sent to the telecommunications companies, no official responses have been received yet. In August 2010, follow-ups have been done at their various head offices in Accra. However, only two of the companies have responded namely Vodafone Ghana, and Zain Ghana (now Airtel). Vodafone Ghana, in a letter signed by Eric Valentine, Deputy Chief Technical Officer and Head of Networks, indicated a 'no objection' to the project, and that it will have no effect on their telephony operations. Airtel Ghana also indicated that the closest towers to their masts are A29 (2.08 km), A31 (4.30 km) and A38 (2.81 km). These would have no interference effect on their network operations.

The other networks have not as yet responded. Mobile telephony in Ghana employs frequencies in excess of 9,000 Hz while the frequency of the power to be transmitted will be at 50 Hz. The wide disparity between the two frequency ranges gives little concern for interference in any form. The spatial separation between the dish receivers on the masts, some as high as 100 metres, and the towers at 35 metres maximum buttresses the point of no interference between the transmission lines and telecommunication infrastructure. This is emphasized by the co-existence of VRA's extensive transmission network and the scattered nature of telecommunication masts across Ghana.

7.5 WITNESS NGO (GIA/NABIO AGRO-FORESTRY DEVELOPMENT ORGANIZATION, GNADO)

Over time, non-governmental organizations (NGOs) and community-based organizations (CBOs) have played advocacy roles for individuals and communities with inadequate representation, such as rural communities, women and children. Their roles in ensuring transparency and equity have gained prominence.

The Gia/Nabio Agro-forestry Development Organization (GNADO) is an environmental and natural resource-inclined non-governmental organization that was selected in the project area, and briefed about the proposed project. They have committed to assist in information dissemination and support the project-affected persons in ensuring that they receive fair and adequate compensation in a prompt manner. GNADO as an environmental NGO has been consulted with regard to perceived impacts of the 225kV Bolgatanga-Ouagadougou Interconnection Project on the natural and environmental resources along the corridor on the line route. The Programme Officer, Julius Awaregya, indicated that it is important for clearing of vegetation to be limited as much as possible in the execution of the 225 kV Bolgatanga – Ouagadougou Transmission Line project.

Table 6 below is a summary of the institutions consulted and their concerns/comments expressed. Institutional consultations were conducted between November and December 2009.

Table 6 Summary of Institutional Consultations and Concerns/Comments Expressed

INSTITUTION	NAME	POSITION	COMMENTS/ CONCERNS RAISED	MITIGATION MEASURE(S)
Kassena-Nankana District	Ben Awine Collins Ohene	Deputy District Coordinating Director Planning Officer	Compensation matters should be addressed promptly and carefully	The VRA Estate Department will facilitate prompt payment of adequate compensation.
Kassena-Nankana West District	Thomas Dalun, Alhassan Ibrahim	District Chief Executive District Coordinating Director	Compensation matters should be addressed promptly and carefully	The VRA Estate Department will facilitate prompt payment of adequate compensation.

INSTITUTION	NAME	POSITION	COMMENTS/ CONCERNS RAISED	MITIGATION MEASURE(S)
Bolgatanga Municipal	Yakubu Andani Abubakari	Municipal Coordinating Director	Appropriate compensation should be paid to PAPs on time	The VRA Estate Department will facilitate prompt payment of adequate compensation.
Regional Coordinating Council	Mark Woyongo Samuel N'Lary	Regional Minister Chief Director	Will the project stabilize power supply in the region? Hopes the project will strengthen integration within ECOWAS members.	Project solely for power supply to Burkina Faso
Lands Valuation Division of the Lands Commission	Eben Dusam	Regional Lands Officer	Need to involve Lands Valuation department of the commission in the determination and payment of compensation.	Lands Valuation department will be involved in the payment of compensation.
Environmental Protection Agency	Mrs. Zenabu Wasai King	Regional Director	Need to ensure that all stakeholders are consulted.	Exhaustive consultations will be held with all stakeholders.
Telecommunication Companies • Vodafone • MTN • Zain • Tigo	• E. Valentine • J. Buaragre • F. Akolgo • R. Samari	• Dty Chief Tech. Off. • Engineer • Customer Service • Customer Service	No objection Closest structure to the line is 2.08 km No interference with the line	

INSTITUTION	NAME	POSITION	COMMENTS/ CONCERNS RAISED	MITIGATION MEASURE(S)
Ghana Civil Aviation Authority	Daniel Acquah	Deputy Director, Safety Regulation (Air)	Need for re-routing of a section of the line from Zenga (A29) to Nayagenia (A39) through Kazigo, and fitting this section with marker balls in ICAO-approved colour (Aviation orange)	The relevant section of the line has been re-routed. Marker balls with the stated specifications will be strung on the line at the indicated sections.
Gia/Nabio Agroforestry Development Organisation (GNADO)	Julius Awaregya	Programme Officer	Need to limit vegetation clearing as much as possible.	Vegetation clearing will be limited to areas where it is necessary only.

8. ORGANIZATIONAL RESPONSIBILITIES IN RAP IMPLEMENTATION

8.1 GENERAL ORGANIZATION FOR IMPLEMENTATION

The general organization of the resettlement action plan will be based on inputs from the following institutions:

i. VRA will be entirely responsible for the plan, and will implement it with its own teams and means;
ii. Lands Valuation Division will participate in the final valuation of the properties on behalf of the Government of Ghana
iii. Upper West Regional Coordinating Council will be responsible for the formation of the Wayleaves Selection Committee for the acquisition of the RoW
iv. External valuators will assess the process on technical, socio-economical and financial aspects, should that be necessary, on the request of any of the PAPs, or of VRA.

8.2 VRA ESTATES DEPARTMENT

VRA will constitute a project implementation unit (PIU) to implement all projects under the WAPP Coastal Transmission Backbone (WAPP CTB) Projects, under which jurisdiction the 225 kV Bolgatanga – Ouagadougou Interconnection Project falls. The PIU will be led by the WAPP CTB Project Director and supported by key personnel from VRA as well as external consultants. The WAPP CTB Project office is located in VRA's offices in Akuse.

In pursuance of the objective of ensuring compliance with the commitments made in the RAP, a Project Environmental Coordinator (PEC) responsible for compensation and acquisition will be appointed from Real Estates & Security Department (RE&SD) to coordinate resettlement of the WAPP CTB Projects. The PEC will serve as a liaison between RE&SD and other key departments.

The Director, RE&SD as well as other key officers of RE&SD will ensure that thorough work is provided by the PEC to the project. The PEC will report on projects through the Manager, Corporate Estates to the Director, RE&SD who will in turn report on all resettlement issues concerning the project to other departments. The Project Environmental Coordinator (PEC) will also be responsible for monitoring and compliance from the Environment & Sustainable Development Department, and will provide general assistance in the compensation and acquisition process. Vehicles, office space and various office equipment will be made available for the smooth implementation of resettlement issues. These can be found either in the WAPP CTB Project office or in the office of the RE&SD in Accra.

It is noteworthy that the transmission functions of the VRA have been transferred to the Ghana Grid Company (GRIDCo) as per the dictates of the Volta River Development Act, 2005, Act 692. However, for the purposes of this project, the VRA will operate on behalf of GRIDCO. Therefore, GRIDCO shall be responsible for operating the transmission after commissioning.

8.3 UPPER EAST REGIONAL COORDINATING COUNCIL

The Upper East Regional Coordinating Council will be responsible for composing the Wayleaves Selection Committee, and organize the committee's meetings. It will also participate in the monitoring and in the external valuation should it be required.

8.4 LANDS VALUATION DIVISION (OF THE LANDS COMMISSION)

The LVD has a responsibility in the process of land acquisition and transfer of titles as the final owner of land to be acquired. The Division would also witness the whole process of compensation and resettlement. It would also participate in the monitoring and in the external audits

8.5 GHANA COMMERCIAL BANK (GCB)

As the leading state bank, the GCB has a nationwide network that will facilitate money transfers from any part of the country to the other. The GCB will provide banking services for the payment of compensation to PAPs.

Figure 2 below illustrates an organizational diagram showing the relationship between the various units.

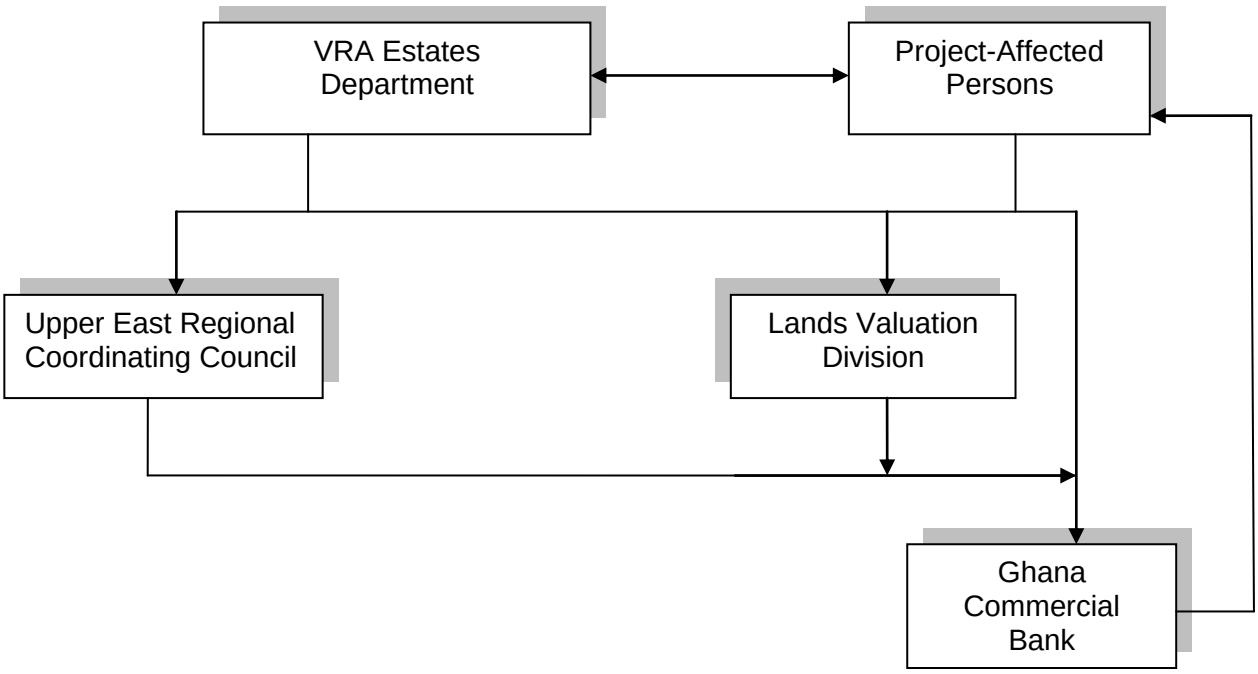


Figure 2: Relationship between the units responsible in RAP implementation

9. IMPLEMENTATION SCHEDULE

The implementation of the RAP will mark the beginning of the closure process for compensation and involuntary resettlement associated with the 225 kV Bolgatanga – Ouagadougou Interconnection Project. It is anticipated that the majority of the compensation payments would be completed prior to commencement of physical construction. At this stage of the project, the line route corridor as described in the ESIA report has been approved. This RAP will be implemented during the construction phase of the project and will continue for three years after the commissioning of the transmission line.

9.1 SCHEDULE OF IMPLEMENTATION ACTIVITIES

A number of activities will be undertaken under the implementation of this RAP. Table 7 below illustrates these activities and their proposed time schedules.

Details of these activities are given under Section 6 of this report. The VRA Resettlement Policy Framework which was prepared under the Ghana Energy Development & Access Project (LARP) and outlines the details of the implementation schedule for such projects. It is provided as Annex 2.

Table 7 Schedule of implementation activities

No	Activity	Status/Proposed Time	Responsibility (ies)	Project Stage
1	Identification of Property Owners	Done	Environmental Consultant	Pre-Implementation
2	Moratorium and Property Valuation	Done	Land Management Unit of Engineering Department, GRIDCo	Pre-Implementation
3	Payment of Compensation and Transfer of Titles	On approval of RAP	Land Management Unit of Engineering Department, GRIDCo	Pre-Implementation
4	Grievance Procedures	During payment of compensation	Land Management Unit of Engineering Department, GRIDCo	Pre-Implementation
5	Resettlement measures	During payment of compensation	Land Management Unit of Engineering Department, GRIDCo	Pre-Implementation
6	Monitoring	Throughout payment of compensation	Land Management Unit of Engineering Department, GRIDCo	Pre-Implementation
7	Closure	After payment of compensation to all satisfied PAPs. Some court cases by dissatisfied PAPs may not have been resolved yet	Land Management Unit of Engineering Department, GRIDCo	Implementation
8	Public disclosure	After Closure	WAPP, World Bank	Pre-Implementation
9	Demolition of affected structures	Commencement of Construction Activities	Engaged Contractor	Implementation

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10. BUDGET

For this Resettlement Action Plan to be executed and managed to its logical conclusions, a budget will need to drawn for the implementation. The figures have been computed for the affected physical structures and economic trees.

A property enumeration and valuation procedure has been employed in valuing all affected properties, using the Land Valuation Division rates as reference point. Eighty seven (87) housing units, some vacant lots of land, and a hundred and thirty nine (139) economic trees have been identified to fall within the approved line route. Their respective owners have been identified and consulted with regard to whether they would want their properties replaced or would want monetary compensation. (However, the owners of the vacant lots are yet to be identified in spite of announcements on two local radio stations inviting them for discussions. They are presumed to have migrated southward). The majority indicated that they would prefer monetary compensation. Details of the mitigation of resettlement issues are presented in the Resettlement Action Plan, which is a separate document submitted to the WAPP. Presently, a total of nine hundred thousand, nine hundred and fifty three Ghana cedis, fifty pesewas (GHC 900,953.50) have been determined as compensation to be paid for affected properties, comprising GHC 887,110.00 for houses and buildings, GHC 11,603.50 for economic crops and trees, GHC 2,240 as compensation for land lost to tower bases, and GHC 11,536.00 for pacification costs for the relocation of family shrines and idols. In view of the time lapse between when these valuations were done (October 2009) and when the ESIA was approved (January 25, 2011), it may be necessary for these values to be reviewed accordingly. Should the compensation payments occur at a significantly later date, GRIDCo may need to revise the figures in tune with current inflation rate.

Other activities that will also need to be factored into the budget would include constructional damage, probable cost of destruction to crops during construction phase, contingency costs, and cost of construction and other relevant permits.

11. MONITORING AND EVALUATION

11.1 OBJECTIVES

Monitoring and evaluation are key components of every plan, and the implementation of this Resettlement Action Plan would be monitored and evaluated as part of the whole program under VRA responsibility/obligations. Arrangements for monitoring the implementation of resettlement and evaluating its use will be developed as part of project preparation and used during supervision.

The VRA has tremendous experience in monitoring and evaluation of projects, from its many years of operation. Established monitoring criteria and procedures are in placed to verify the predicted impacts of the project and adjust the mitigation measures where necessary. Monitoring and evaluation units would be set up, adequately funded and staffed by specialists in resettlement for the RAP implementation. In-house monitoring by the implementing agency may need to be supplemented by independent monitors to ensure complete, objective resettlement.

VRA/GRIDCO will be operating the transmission facility after commissioning which allows for various evaluations and monitoring actions to be undertaken over a sufficient period of time.

The general objectives for the monitoring and evaluation procedures are:

- Monitoring of specific situations of economic/social difficulties arising from the Compensation/Resettlement process.
- Evaluation of the compliance of the actual implementation with objectives and methods as set in this document, and of the impact of the Compensation/Resettlement program on incomes and standard of living.

11.2 MONITORING

Monitoring allows for a warning system for project managers and a channel for the affected persons to make known their needs and their reactions to

resettlement implementation. The objectives of the monitoring are therefore the following:

- To identify affected persons who might get into specific difficulties as a result of the Compensation/Resettlement process;
- To provide a safety mechanism and appropriate responses addressing these situations.

Projects with relatively limited resettlement impacts commonly require an in-house monitoring system within the project agency. VRA relies on its staff in the RE&SD, Environment and Sustainable Development (E&SD), Engineering Services Department and the WAPP CTB Project office to keep track of land acquisition, compensation, and grievances.

VRA maintains a complete set of administrative records on asset inventories, payment receipts, and complaints. VRA representatives hear complaints on an informal basis and report administratively on project progress. Land Valuation Board maintains the file for the legal agreements on physical assets to be taken (Form F).

For this project, the Project Environmental Coordinators and other members of the WAPP CTB PIU shall ensure that monitoring programs are instituted and carried out and relevant records are kept to ensure compliance with sound environmental and social practices recommended in this report. Comprehensive record keeping and documentation shall be maintained.

Parameters to be monitored shall include:

- Clearing of vegetation cover at tower tracks, construction accesses, and right-of-way shall be monitored under the following activities:
  a. Clearing of farm lands
  b. Clearing of right-of-way (vegetation cut only to about 1.25m height)
  c. Clearing of tower corridor track (graded width 2.5m-3m)
  d. Clearing access roads (graded width 3.5-5m)

- Socio-Economic/Cultural Issues
  a. Identifying all affected persons

b. Assessment of compensation
c. Payment of compensation (adequate amounts, timely payments)
d. Employment and job creation
e. Shrines and Sacred Groves
f. Archaeological chance finds
g. Impact of HIV/AIDS

In the event of any chance archaeological find, the procedures as outlined in the National Museum Decree, 1969, (NLCD 387) will be followed.

11.3 EVALUATION

As in all VRA projects, the objectives for the evaluation of the resettlement program shall be;

- Reference General assessment of the compliance of the implementation of the Resettlement Action Plan with objectives and methods as set in this document;
- Assessment of the compliance of the implementation of the Resettlement Action Plan with laws, regulations and safeguard policies as stated in this document;
- Assessment of the consultation procedures used in the individual, institutional and community levels;
- Assessment of fair, adequate and prompt compensation and resettlement procedures as they have been implemented;
- Evaluation of the impact of the Compensation/resettlement program on incomes and standard of living, with focus on the “no worse-off if not better-off” requirement;
- Identification of actions to take as part of the on-going monitoring to improve the positive impacts of the program and mitigate its possible negative impacts if any.

Documentation for the evaluation will be the following:

- This Resettlement Action Plan, including possible amendments required as a result of the final consultation process.
- The 1992 Constitution of the Republic of Ghana
- The WB/IFC Safeguard Policies, including OP 4.12 “Involuntary Resettlement”

11.4 METHODOLOGY

Evaluation of VRA’s resettlement program is usually done by mission teams of the various funding agencies, in collaboration with members of the PIU. Evaluation is done on as a required basis and not as part of a formal project implementation requirement.

The evaluation methodology for this project shall follow the same format as previous projects and shall consist of the following:

- Identification of the project-affected persons, designed to take into account all situations, including the following categories, with appropriate criteria crossing and sample significance tests:
  - Physically Displaced People resettled under this RAP;
  - Affected people not physically displaced;
  - Both female and male heads of households;
  - Households of various sizes, with various tenure forms, various size of land holding and various levels of impact;
  - Vulnerable people.
- Enumerators will survey the sampled households for socio-economic purpose; a questionnaire will be developed with, among others, the very same indicators as were used in the initial socio-economic survey; satisfaction indicators will be developed as well;
- Questionnaire treatment will aim at evaluating satisfaction indicators and income/standard of living indicators;
- Situations of specific vulnerability will be put into specific focus, and the methods for addressing them will be assessed;

- Consultation with independent parties will also be part of the evaluation procedures; these parties will include the Local Governments at all levels, and relevant departments of the Central Government.

11.5 INDICATORS

Following the approval of the ESIA, a comprehensive database of PAPs based on the census and socio-economic survey has been compiled. The socio-economic survey has addressed specific details of all PAPs, including monetary incomes from affected properties. These have not been done at the Property Impact Assessment stage because at that stage it was not yet certain whether or not the provisional line route as described in the ESIA would be approved.

During the socio-economic survey carried out for this RAP, the direct questions on monetary incomes may have led to overestimated responses motivated by expected increases in compensation. But other objective indicators have been included in the questionnaire such as the possession of radios or transport equipments, together with indicators of the pattern of expenditures and eating habits. The aggregation of quantitative indicators originating from direct questions on monetary incomes and indirect welfare indicators has allowed for cross-checking of data about standards of living.

ANNEXES