Appraisal Environmental and Social Review Summary

Appraisal Stage

(ESRS Appraisal Stage)

Date Prepared/Updated: 11/20/2024 | Report No: ESRSA03803

I. BASIC INFORMATION

A. Basic Operation Data

Operation ID	Product	Operation Acronym	Approval Fiscal Year
P178923	Investment Project Financing (IPF)	WAPP GH-CdI Interconnection	2025

Operation Name	WAPP Ghana-Cote d'Ivoire Interconnection Project - Phase 1 WA-REMP MPA

Country/Region Code	Beneficiary country/countries (borrower, recipient)	Region	Practice Area (Lead)
Western and Central Africa	Cote d'Ivoire, Ghana	WESTERN AND CENTRAL AFRICA	Energy & Extractives

Borrower(s)	Implementing Agency(ies)	Estimated Appraisal Date	Estimated Board Date
Republic of Côte d'Ivoire, Republic of Ghana	CI-Energies, GRIDCo, West Africa Power Pool (WAPP) Secretariat	07-Oct-2024	22-Jan-2025

Estimated Decision Review Date	Total Project Cost
28-Oct-2024	316,240,000.00

Proposed Development Objective

The Project Development Objective is to increase electricity trade between Ghana and Cote d'Ivoire, and improve the WAPP network and market operation.

B. Is the operation being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project Activities

The proposed project is part of phase 1 of the West Africa Regional Electricity Market Program (WA-REMP) MPA and is aligned with the World Bank's goals of ending extreme poverty and promoting shared prosperity. By supporting regional power system integration and power trade, the project will enable countries in West Africa to access affordable, reliable and sustainable electricity supply available at the regional level, which is key to their goals of reducing poverty and promoting inclusive development. The project entails the construction of a second power interconnection between

Ghana and Cote d'Ivoire, as well as the associated infrastructure and reinforcement of power transmission capacity at the national level to enable expanded and secure power exchanges. With the new interconnection Ghana and Côte d'Ivoire will be able to share their reserves and thus improve the security of supply on both sides. Since both countries are key net power exporters into the West African Power Pool (WAPP) market, the interconnection is expected to de-saturate power flows on existing infrastructure thereby facilitating increased power trade and at the same time contributing to improve the stability of the WAPP network particularly in the central and eastern areas. The project will comprise of the following main activities: (i) the construction of a 330 kV double-circuit line from Ghana to Cote d'Ivoire; (ii) the reinforcement of selected transmission infrastructure in Ghana and Cote d'Ivoire – transformers, switchgear, other related equipment ; and (iii) assistance to the WAPP for the integration/synchronization of the regional power network and the establishment of the regional power market. Technical assistance will be provided to the project implementing agencies to support project detailed design, contractors' procurement and implementation supervision. Transaction advisory services will be provided to Ghana and Cote d'Ivoire for power trading and extensive technical assistance will be provided to WAPP institutions for capacity building.

D. Environmental and Social Overview

D.1 Overview of Environmental and Social Project Settings

The proposed cross-border interconnection line from the Dunkwa 2 substation (Ghana) to the Bingerville substation (Cote d'Ivoire) will traverse diverse landscapes which include settlements, farmlands, woodlands, grasslands, wetlands and rivers. It includes the construction and operation of a high-voltage double-circuit transmission line between Ghana and Côte d'Ivoire in a Right-of-Way (RoW) having approximately a distance of approximately300 km and a width of 40-meter associated with activities such as geotechnical investigations, tower spotting, assembling and the erection of 640 pylons across the regions of both countries.

In Cote d'Ivoire,it will go through 35 villages in 07 subprefectures, 03 districts (Abidjan, Lagoon, South Comoe) and 4 departments (Abidjan, Alepe, Grand Bassam and Aboisso) all located in the littoral fringe region and the interior plains region just above the coastal fringe with a very humid equatorial climate; Also, the southeast region has a relatively flat and slightly rugged relief, consisting of plains and plateaus covered with open forests or wooded savannahs. There are also lagoons in places with potential mangroves. The climate in the southeast of Cote d'Ivoire is humid because all year round it is hit by hot and humid sea breezes giving rise to two rainy seasons and a dry season. This area lacks access to wide roads but has plenty of smaller gravel roads. In addition to agriculture, which is the main activity of the population in this area, tourism also plays an important role in the economy of the region.

In Ghana, the transmission line route extends over a zone between Dunkwa 2 substation in Bibianiha (Central Region) and Omanpe (Western Region) at the border with Cote d'Ivoire. The project will implicate five (5) municipalities and one (1) district, namely, Upper Denkyira East Municipal Area (Central Region), Wassa Amenfi Central District (Western Region); Wassa Amenfi West Municipal Area (Western Region); Wassa Amenfi East Municipal Area (Western Region) and Aowin Municipal Area (Western North Region) and fifty-two (52) communities all located in varied landscapes with a forest-dissected plateau, elevated around 250 meters above sea level with a semi-equatorial climate associated with temperatures ranging from 20ºC to 35ºC and two rainy seasons. The vegetation within the corridor / RoW primarily consists of secondary and tertiary growth, largely shaped by human activity in agriculture-dominated areas. The ESIA noted that vascular plant species, with notable tree species such as Milicia excelsa, Terminalia ivorensis, and Khaya ivorensis all of which are crucial components of local ecosystems. Per the IUCN Red List, some of these plant species are globally threatened, while others are classified as vulnerable. However, the assessment confirmed that no endangered tree species are located directly within the RoW or at the proposed substation site. The avifaunal assessment identified bird species along the transmission line route and within the project corridor. While most bird species observed are of

Least Concern according to the IUCN Red List, the project route crosses some bird habitats, particularly in the riparian and marshland areas. While project activities could have some impacts on biodiversity, careful planning and incorporation of environmentally friendly designs can significantly reduce risks to the region's birdlife and other fauna. In Ghana, the transmission line avoids settlements and built-up areas, traversing farmlands, greenfield and 42 small scale mining sites. The project in Cote d'Ivoire will, however, pass through a mix of lightly and densely populated areas, affecting a variety of economic activities including farms, farmhouses and community residences. Moreover, land is scarce and land tenure in Ghana and Cote d'Ivoire is complicated with accompanying gender dimensions. Consequently, land-take impacts caused by similar projects are usually compensated in cash rather than in kind, which is also the preference of most project affected persons.

Similar to other countries in the region, Cote d'Ivoire and Ghana are home to a multitude of ethnic groups and cultures, with a high degree of linguistic and cultural diversity. Their young and rapidly growing population presents both opportunities and challenges in terms of education, employment, and social services. Urbanization is increasing, but many people still rely on agriculture and natural resources for their livelihoods. Issues such as political instability, health crises like the COVID-19 outbreak, and the need for improved governance and social inclusion are also significant in the region. Social cohesion remains tenuous. Social stratification can create tensions and resentment between ethnic groups and within these groups.

D.2 Overview of Borrower's Institutional Capacity for Managing Environmental and Social Risks and Impacts

For project components 1 and 2, CI-ENERGIES and GRIDCo will be responsible for the construction and operation of the sections of the cross-border transmission lines that fall within their countries' borders and the reinforcement of national transmission capacity. Each country has agreed to have a specific project implementation team in each of the concerned utilities that will be supported by a common Owners' Engineer to implement the project. Each utility will be responsible for the project activities within its jurisdiction. In Cote d'Ivoire, CI-ENERGIES will use his projects' development department within its existing structure. It is a public utility company that develops the electricity production, transmission, and distribution network. It has implemented one project financed by the World Bank: the Electricity Transmission and Access Project (PTDAE - P157055) under the old safeguard policies and is currently implementing Cote d'Ivoire National Electricity Digitalization and Access PforR (NEDA) operation (P176776). The Bank has supported the setting up of an internal safeguards unit with appropriate staff in CI-ENERGIES and the recruitment of environmental and social development specialists through the PTDAE and NEDA to ensure the project activities are being implemented according to the requirements of the World Bank. Regular client support missions are conducted since the projects' inception, and the implementation of the environmental and social measures is more less on track. However, the proposed project will be implemented by a Borrower with limited institutional capacity to undertake environmental, social and health and safety management in accordance with the newly introduced World Bank ESSs even though they have implemented Bank projects under OPs with satisfaction. Hence, CI-ENERGIES has committed to recruit additional 04 environmental specialists and 02 social specialists to reinforce the existing internal safeguards unit (06 staff, including 03 environmental specialists, 01 social specialist and 02 assistants)) to efficiently handle the preparation and the implementation of this new project among others. This will include tasks related to the preparation, review and implementation of the ESF instruments with the support of the Owner's Engineer in their Environmental, Social, Health and Safety Capacity Building efforts. Beside, the Owner's Engineer of the project will be requested to establish an Integrated ESHS System in compliance with ISO 14001 and ISO 45001:218 or equivalent and recruit an experienced Environmental Specialist, an experienced Social Specialist and an experienced and ISO

45001:2018 or equivalent certified Health and Safety Specialist to adequately carry out their ESHS responsibilities for Cote d'Ivoire and Ghana. In Ghana, GRIDCo, a public utility company, will be the implementing agency. Its project development department will manage the implementation of the project with the support of the above-mentioned Owners' Engineer. GRIDCo has extensive environmental and social management experience acquired during the realization of national and regional transmission line projects, funded by the World Bank and other donors (330 kV Aboadze–Volta Transmission Line Project, 225 kV Ghana–Burkina Interconnection Project, 330 kV Ghana–Togo–Benin Interconnection Project). Internally, environmental and social risk management is coordinated by the Lands and Environment Management Section of the Engineering Department which undertakes the assessment of lands for all GRIDCo's transmission projects; manages all land acquisition and compensation issues for Project Affected Persons; secures Environmental Permits and ensures environmental sustainability for these projects as well as provides survey services for the demarcation of GRIDCo's property boundaries and substations. GRIDCo, keeping with its own practices on such projects, will recruit an experienced Environmental Management and an experienced Social Development Consultants as well as an experienced and ISO 45001:2018 or equivalent certified Occupational Health and Safety Consultant to support its internal safeguards team. Coordination on the project will be achieved through a Joint Implementation Committee (JIC) that will comprise of representatives from the Ministries in charge of finance and energy in the two countries and the WAPP Secretariat. The latter will implement investments and TA envisaged under component 3 of the project through the existing, well-established PIU within the Secretariat with dedicated, qualified environmental and social specialists. They are already serving as the implementing agency for various regional TA programs funded by the World Bank and other multilateral development partners (AfDB, BOAB, EIB).

II. SUMMARY OF ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC) — High

A.1 Environmental Risk Rating — Substantial

The Proposed Environmental Risk Rating is "Substantial", due to the fact that the project will support construction of high-voltage transmission lines creating new environmental footprint in the modified as well as natural landscapes. The environmental risks and impacts are associated with the siting, construction and operations of a typical transmission line and sub-station which are site specific, largely generated during the construction phase of the project, and can be mitigated with measures that are known. Potential risks and impacts are primarily associated with water, soil, increased level of dust, noise and vibration from moving of construction vehicles and machinery, community health and safety risk, waste and hazardous materials management, the aesthetic and visual quality of the surrounding landscape of the project area from the erection transmission towers as well as biodiversity disturbance (potential birds collision or electrocution) and vegetation lost, erosion and sedimentation of rivers (mainly seasonal streams) from earth works and run-off during the construction phase, disruption of traffic flow and increased traffic safety risks during the construction phase and occupational health and safety of workers both during the construction and operational phases. A small portion of the work will take place in hilly areas with limited or no access roads. Vegetation clearance for creating Rights of Way (RoW), earthworks, erection of towers, and stringing of transmission lines, without impacting on biodiversity, will be particularly challenging in these difficult terrains. However, the potential risks and impacts during both the construction and operation phases are mostly temporary and reversible. They can be effectively mitigated through the implementation of Environmental and Social Management Plans (ESMPs). These plans will include measures to avoid/minimise pollution, protect natural habitats, ensure the safety of

workers and communities, and maintain ecosystem integrity. Moreover, the project will incorporate best practices in environmental management, such as the use of advanced technologies to minimize environmental footprints, and the development of robust monitoring and evaluation frameworks to ensure compliance with environmental standards. By addressing these risks proactively, the project aims to achieve a balance between infrastructure development and environmental sustainability.

A.2 Social Risk Rating High

The social risk of the project is rated high based on several factors. First, the project activities would cause severe land-take impacts, leading to the physical and economic displacement . The extent of land acquisition will depend on each country's regulations for rights-of-way, tower foundation areas, and size of associated substations. In this project, land acquisition will occur within a 40-meter wide right-of-way (20 meters from the outer lines on each side), extending approximately 300 kilometers for the interconnection lines (component 1a) and 75 kilometers for the domestic transmission line in Ghana (component 2). Second, given the project's complexity, it will likely end up mobilizing international contractors/consultants for project-related work, leading to an influx of labor into the project areas, including overseas workers, posing public safety and health risks (communicable diseases, STDs, HIV/AIDs, unwanted pregnancies, sexual exploitation, and abuse/ sexual harassment) to the host communities. The increased presence of workers may exacerbate social conflicts and security patterns in project areas . The long corridors (mainly in rural areas) formed by the rights-of-way of the transmission lines, make the management of workers and labor influx challenging. Third, in Ghana, preliminary estimates suggest that the transmission line may pass through 44 illegal gold mining (Galamsey) sites across 7 communities. The extent of these mining sites is still being determined, but they are estimated to occupy approximately 3% of the proposed Right-of-Way. Galamsey activities have devastated forest cover, polluted rivers, and destroyed arable lands. The government considers these activities illegal and has implemented stringent measures, including joint military and police operations, to clamp down on illegal mining. Designing compensation, livelihood restoration, and consultation measures for these areas requires careful planning and consideration to ensure compliance with the ESSs while also taking into account existing government programs, such as the Alternative Livelihood Program and the National Alternative Employment and Livelihood Program (NAELP). Other social risks include client’s limited ESF capacity, gaps between ESSs and national safeguards management system, labor risks (including child labor and occupational health and safety); community health and safety (including SEA/SH); social fragmentation and disruption of traditional livelihoods; conflict/security risks for some sections of the transmission line with the potential to draw in the use of armed security personnel for law enforcement (especially in Ghana); exclusion from decision-making; access to jobs; ineffective stakeholder engagement activities. The program's technical assistance activities may also have social-environmental implications for downstream implementation. The transboundary nature of the interconnection lines would make those issues more challenging.

B. Environment and Social Standards (ESS) that Apply to the Activities Being Considered

B.1 Relevance of Environmental and Social Standards

ESS1 - Assessment and Management of Environmental and Social Risks and Impacts Relevant

The Project will bring about positive economic and social impacts as the proposed activities will increase efficiency and reliability of electricity supply for the population, create employment opportunities in the project areas and

boost the economies of both countries. This will significantly accelerate the sub-region's industrial development, social welfare and improved healthcare by supporting expanded industry, modern agriculture, increased trade and improved transportation as well as indirectly contribute to a reduction in greenhouse gas (GHG) emissions. Furthermore, it will support and fast track the digital within the region. Permanent impacts on the natural environment are expected both under conductors and towers and in the corridors of access roads to be built and retained as service roads after the construction phase. During operation, the transmission and distribution infrastructure may pose potentially risk to birds through collisions and electrocutions; and occupational and community health impacts/risks on workers and local communities such as electrocution during maintenance works, exposure to high electromagnetic fields, etc. The substations may involve disposal and management of liquid and solid waste, such as metal spoils, cables, capacitor, wood, glass, and packaging materials, and potential contamination and degradation of soil and water due to the leakage of fuels and oil spills. The adverse social impacts include: (i) physical and economic displacement due to land acquisition; (ii) child/forced labor and noncompliance with labor requirements; (iii) labor influx into affected communities (increase in communicable diseases, gender-based violence/sexual exploitation and abuse, social conflicts, etc.); (iv) exacerbation of gender issues; (v) disproportionate impacts on members of vulnerable and marginalized/socially excluded groups; (vi) inadequate stakeholder engagement and grievance redress. The environmental and social risks of activities under PPA, Technical Assistance and activities under subcomponent 1b, 3a, 3b, 3c, 3d and 3e are primarily related to labor management (managing consultants), failure to integrate ES issues in relevant TORs, bidding documents, feasibility studies, and stakeholder engagement throughout its implementation. The direct impacts are manageable; however, these may have potentially significant downstream social and environmental implications. To adequately manage these risks and impacts associated especially with Component 1 activities (ie. construction of the new 330 kV double-circuit interconnection line), the Project has updated the two Environmental and Social Impact Assessment (ESIAs) reports for the Ghana and Cote d'Ivoire sections prepared in 2013/14, as well as the Environmental and Social Management Plans (ESMPs), Resettlement Action Plans (RAPs) that were developed for both sections. The ESIA for the Ghana section for instance was finalized in December 2014; the Environmental Permit was issued on March 13, 2015 (which expired on September 12, 2016), while the ESMP (a key requirement of the Permit Schedule) was submitted in March 2017 by GRIDCo to secure an Environmental Certificate in accordance with Ghana's Environmental Assessment Regulations of 1999 (LI 1652). The ESIA and the ESMP for the Cote d'Ivoire section was finalized in June 2018. The management measures designed in those safeguard instruments involved: (i) acquisition and protection of Right of Way and compensation; (ii) occupational health and public/community safety; (iii) traffic management; (iv) archaeological and cultural heritage; (v) mitigation of pollution of air, soil and water, (vi) protection of biodiversity, (vii) waste management, etc. An update of both the ESIAs and ESMPs (which were prepared under the old safeguards policies) has required and involved additional assessments under the ESF following the increase of demography and socioeconomic activities (Specifically, Biodiversity Management Plans (BMP) will be prepared to mitigate all the impacts to affected natural habitats). RAPs, that were prepared in 2017 (for Ghana) and 2018 (for Cote D'Ivoire) under the Bank's safeguard policies, are updated to ensure the compliance with the Bank's ESF as well as the relevant requirements of the WBG's General Environmental, Health and Safety Guidelines (EHSGs), the EHSGs for Electric Power Transmission and Distribution and lessons learned from past experiences in implementing EHS measures in Cote d'Ivoire and Ghana as well as recent guidance and good practice on measures to minimize COVID-19 contamination in the context of construction, civil works, and stakeholder engagement. With respect to Component 2 (strengthening of transmission capacity in Ghana), the project will finance the construction of 75km of the 330 kV Awodua - Dunkwa Transmission Line. The ToRs for environmental and social documents (ESIA, RAP) has been prepared by GridCo and cleared by the Bank. The preparation of these documents is on-going. Since component 1

activities will be co-financed with the European Investment Bank (EIB) (on Cote d'Ivoire side), all EIB-funded activities will be implemented in compliant with ESF requirements. If necessary, mitigation measures will be updated in the corresponding E&S documents according to the ESCP. The Project will finance Technical Assistance for project management, institutional capacity building, preparation of feasibility studies, commercial agreements, and establishment of the Liquidity Enhancement Revolving Fund (LERF). These activities have minimal or no social or environmental impacts but may involve providing support to institutions in carrying out or overseeing activities that have potentially significant downstream social and environmental implications. These activities will be managed in accordance with the World Bank ESF and relevant OESRC's Advisory Note for Technical Assistance. Appropriate E&S elements will be included in the ToRs and deliverables (e.g. study reports, LERF operation regulations, etc.) per ESF requirement. Each Borrower has prepared an Environmental and Social Commitment Plan (ESCP), a Stakeholder Engagement Plan (SEP). Three ESCPs have been developed, including two for Ghana and Cote d'Ivoire and one for TA activities to be implemented under the WAPP Secretariat. The ESCP includes a timeline and a commitment to prepare relevant instruments and set out the substantive measures and actions that will be taken by the Borrower to meet environmental and social and health and safety requirements. The ESIAs, SEPs and ESCPs will be disclosed by appraisal completion. Other instruments (LMPs, BMPs, RAPs, ESIA and CHMPs) will be submitted for the Bank's review and clearance prior to Board approval or during the project implementation. All environmental and social documents will be disclosed per ESF requirements.

ESS10 - Stakeholder Engagement and Information Disclosure Relevant

To ensure that the views and interests of all stakeholders in each country, including those of communities around the project implementation areas, are considered, each Borrower has prepared a Stakeholder Engagement Plan (SEP). During the preparation of SEPs, various consultations sessions have been conducted in Cote d'Ivoire (November 2023-June 2024), and in Ghana (January, 2024). Each SEP includes security measures for consultation and stakeholder participation and a project-level grievance mechanism (GM). The latter specifies measures and provision for SEA/SH and could rely on the existing GM in the project areas (where relevant). Each SEP clearly defines and lists categories of stakeholders i.e. those that have a direct/indirect interest in the project: i) the Ministries of Finance and Energy, ii) national agencies in charge of E&S assessment and management, iii) project implementation agencies in each country, iv) local associations and NGOs and v) members of the private sector and those that could be affected directly by the project activities: i) local communities, ii) farmers, iii) women's groups, youth, iv) internal displaced persons, v) vulnerable groups such as women heads of households, vi) men and women living alone without support and vii) unemployed women and youths.. Each SEP includes a project-level grievance mechanism (GM) that specifies measures and provision for SEA/SH. Development of the SEPs have taken into account consultations that were previously conducted for the ESIA and RAP reports. Strategies will be developed as part of implementation of the SEPs to manage any unmet expectations of project affected communities that arose from the delays in executing this project with the previously established timeline. The respective 2017 and 2018 RAPs for the Ghana and Cote d'Ivoire sections for instance stated that the communities felt the project surveyors exhibited poor behavior when entering communities, creating dissatisfaction for the project. In Ghana, other concerns also bordered on distrust for GRIDCo as compensation for previous land acquisitions in other project in the area had still not been paid. The SEPs have therefore leveraged on the wealth of information gathered during the previous ESIA and RAP studies to ensure effective SEP planning and operationalization of an effective GM system at the sub-project levels. The SEPs will be consulted upon, validated nationally, approved by the Bank and disclosed per the World Bank's requirements.

ESS2 - Labor and Working Conditions Relevant

ESS2 is relevant for this project. Project workers will include direct, contracted workers and primary supply workers. Each Borrower will prepare Labor Management Procedures (LMP) consistent with the national provisions and regulations of each country concerned by the project and ESS2 requirements. The LMPs will address key issues relating to working conditions and the management of workers' relationships, protecting the workforce, respect of the minimum age for work, measures to prevent forced labor and occupational health and safety requirements, nondiscrimination, and equality of work opportunity, workers' organizations for better work conditions as well as relevant guidance for the employment of youth through the project's job placement activities. The LMPs will be submitted for the Bank's review and clerance prior to the project's effectiveness date. Consistent with each developed LMP, a grievance mechanism (GM) to register and address project labor and work condition issues, must be established and made functional prior to the commencement of civil works. The LMP will also take into account any issues included in the updated ESIAs of both countries.

ESS3 - Resource Efficiency and Pollution Prevention and Management Relevant

ESS 3 is relevant for this project. Assessment of risks and impacts and proposed mitigation measures related to relevant requirements of ESS 3, including raw materials, water use, air pollution, hazardous materials, and hazardous waste is included within scope of updated ESIAs/ESMPs, as relevant. The transmission line projects are not expected to be a significant user of energy, water, and raw materials. This is further assessed in the updated ESIAs. Regarding waste, if the generated waste is considered hazardous, the Borrower will comply with existing requirements for management (including storage, transportation and disposal) of hazardous waste including national legislation, the EHSGs for Electric Power Transmission and Distribution and applicable international conventions. Where such requirements are absent, the Borrower will adopt GIIP. The waste management principles will be included in the contractors' bidding documents and measures included in the Contractors' ESMPs prior to the implementation of project's interconnection activities. GHG emission sources of the project may include (i) land clearing for constructions of transmission lines and substations; (ii) Sulfur hexafluoride (SF6) fugitive emission from transmission equipment; (iii) embodied emissions in construction materials and (iv) energy use in construction. The gross greenhouse gas (GHG) emissions from the project has been estimated during project preparation. The updated ESIAs for the Ghana and Cote d'Ivoire sections estimated respectively the total CO2 at 283 085 and 177 902 TeqCO2. Also, the "Carbon Assessment" method, developed by the French agency ADEME dealing with energy efficiency, was adopted for calculating the increase in CO2 at that time. The updated ESIAs adopt current estimation methods acceptable to the World Bank.

ESS4 - Community Health and Safety Relevant

ESS4 is relevant to the project. The project is expected to generate health and safety risks/impacts to communities in the project corridors, such as impacts associated with exposure to dust, noise and vibration, electric magnetic field, an increase in traffic, as well as transmissible diseases or violent behaviors related to labor influx or the use of security force. The ESIAs have assessed the risks associated with Electric and Magnetic Fields according to international standards and ensure that inhabitable structures remain outside the Right of Way. While project associated traffic movements are expected to be moderate, there is the likelihood of traffic congestion at the onset of construction activities, during the transportation of construction materials, which will exacerbate traffic along the densely populated sections of the project haul route. It is expected that the project may lead to a moderate influx of

people in search of employment in the project area during construction activities. While it is expected that contractors come with a team of skilled personnel to carry out the specialized tasks, unskilled or semi-skilled workers may be required to prepare the base of the transmission towers. The ESIAs for the Ghana and Cote d'Ivoire sections indicated that the proponent intends to utilize local manpower as much as possible during the construction phase. Only about 25% of the construction workforce will be recruited from outside the local communities. All highly skilled workers from outside the communities may be accommodated at work/construction camps, the locations of which are yet to be determined. The risk of labor influx is expected to subside after the completion of the civil works. Nevertheless, moderate labor influx associated with increased disposable income locally may increase the risk of exposing the communities to transmissible infections such as Covid19 and HIV/AIDS. Other potential risks are the rise in cases of SEA/SH and other type of tensions or violence with the local communities. A preliminary SEA/SH risk assessment has been undertaken using the World Bank's SEA/SH risk assessment tool to assess the SEA/SH risk that may be associated with the project's activities and countries context. Based on the assessed risk level for each country, SEA/SH Action Plans will be developed and implemented throughout the project cycle life. Codes of Conduct that incorporate mitigation measures to address SEA/SH shall be prepared and included in the contractors' bidding documents and principles included in the C-ESMPs. The project's GM will be designed to register the project's related complaints in each country. It will include guidance regarding how to address and properly document complaints including those in link with SEA/H-related complaints during project implementation. Additional assessments have been done during the ESIAs' updating and appropriate measures included in expected ESMPs, ESCP (through capacities building activities to reflected in ESCPs) and later in the Contractor ESMPs (C-ESMPs). In Ghana, there are small scale miners (Galamseyers), mostly illegal, operating within sections of the proposed project Right of Way. Their activities are not only devastating the environment and threatening cash and food crop farming within their operational areas, but it is also incompatible with the proposed civil works and the transmission system. Moving them out of the RoW may lead to conflicts that may require the intervention of security forces. GRIDCo is also likely to use security personnel in Right of in Right of-Way protection operations to ward-off illegal miners and other encroachers during the operational phase of the project. Security arrangements (if any) will be based on a security risk assessment and a security risk management plan designed and implemented proportionate to the nature and significance of the identified security risks and the project's operating environment, taking into account both GIIP and national law.

ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement Relevant

ESS 5 is relevant for this project. The expected activities under sub-component 1a (construction of the Ghana–Cote d'Ivoire 2nd Interconnection and associated substations), and component 2 (strengthening of transmission capacity in Ghana) will likely require the acquisition of land and clearing of the right of way that could lead to restrictions on land use, land acquisition, loss or disruption of income or livelihood activities, and physical and/or economic displacement both for individuals or groups of people. For subcomponent 1a, the clients are updating two Resettlement Action Plans (RAPs) previously prepared by WAPP in 2017 (for Ghana) and 2018 (for Côte d'Ivoire). According to these RAPs, the Côte d'Ivoire section crosses three regions and affects 709 PAPs, including one palm factory. Land use along the proposed transmission line corridor is mainly both small-scale subsistence farming and large-scale plantations. Indications are that during the planting (rainy) season the area traversed by the interconnexion project is intensively cropped with cocoa as the main crop planted in the region. The Ghana section spans five contiguous administrative districts in the Central and Western Regions. Forty-four (44) Illegal gold mining (Galamsey) pits, both active and abandoned, are scattered near seven (7) communities within the project's Right of Way (RoW). They are estimated to

occupy approximately 3% of the proposed 5 square kilometer RoW needed for the project. Ghana has proposed a alternative livelihood approach to mitigate the adverse impacts on mining activities in the project RoW. The RAP will demonstrate how this community –based Alternative Livelihood Program meets the requirements of ESS5 in the seven (7) affected communities. For Component 2, a new RAP will be prepared and submitted during the project implementation. The ToR for this RAP has been prepared by GridCo and cleared by the Bank (on July 24, 2024) and preparation is on-going. All RAPs will be subject to the public disclosure and will require review and clearance by the World Bank prior to implementation.

ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources Relevant

The construction and maintenance of the interconnection transmission line RoW, especially those aligned through forested and wetland areas, may result in temporary alteration and disruption to terrestrial and river habitat and biodiversity, including impacts on mammals, reptiles, amphibians and avian species. According to the findings of the ESIAs, the local ecosystem includes a rich, although modified, vegetation. It contains species such as: vascular plant species, with notable tree species such as Milicia excelsa, Terminalia ivorensis, and Khaya ivorensis. Per the IUCN Red List, most of these plant species are globally threatened or classified as vulnerable. However, the assessment confirmed that no endangered tree species are located directly within the RoW or at the proposed substation site. The avifaunal assessment recorded several bird species along the transmission line route and within the project corridor. Birds of the order Passeriformes are the most represented in the corridor both in terms of species richness and population. We also find Accipitriformes, Coraciiformes, Caprimulgiformes, Piciformes, Strigiformes and Suliformes which represent the least represented bird orders. The project route traverses bird habitats, particularly within riparian and marshland areas. According to BirdLife International (2023) and IUCN (2023), none of the species recorded in these areas are included in the list of species whose protection is of global or national interest. Furthermore, no endangered species have been identified in these habitats. RoW construction activities will alter habitats, regarding the characteristics of existing vegetation, topographic features, and installed height of the transmission lines. Examples of habitat alteration from these activities includes fragmentation of forested habitat; loss of wildlife habitat, including for nesting; and visual and auditory disturbance due to the temporary presence of machinery, presence of construction workers, permanent transmission towers, and associated equipment. Power transmission lines, and associated access roads and facilities, will require construction of corridors crossing aquatic habitats that will temporary disrupt watercourses and wetlands and require the removal of riparian vegetation. In addition, sediment and erosion from construction activities and storm water runoff may increase turbidity of surface watercourses, although most water bodies within the Ghana section have been devastated by illegal mining activities. Regular maintenance of vegetation within the rights-of-way will be necessary to avoid disruption to overhead power lines and towers. Unchecked growth of tall trees and accumulation of vegetation within rights-of-way will result in several impacts, including power outages through contact of branches and trees with transmission lines and towers; ignition of forest and brush fires; corrosion of steel equipment; blocking of access to equipment; and interference with critical grounding equipment. The updated ESIAs include standalone Biodiversity Management Plans to minimize biodiversity impacts and identify avoidance and mitigation measures. Furthermore, the updated ESIAs have recommended the reuse of the old access roads opened during the construction of the first interconnection HV line between Cote d’Ivoire and Ghana in 2010.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities — Not Currently Relevant

This Standard is considered not relevant as there are no Indigenous Peoples/Sub-Saharan Historically Underserved Traditional Local Communities in the potential project area that fulfill the four characteristics indicated under ESS7.

ESS8 - Cultural Heritage — Relevant

ESS8 is relevant to this project. Previous ESIAs developed for the construction of the transmission line and associated substations have identified some cultural heritage sites in the selected corridors. These include sacred groves, bodies of water, burial places, sacred forest that are significant to local communities and places of worship. The updated ESIAs which include specific Cultural Heritage Management Plans (CHMPs) and those that will be developed for component 2 will also need to consider these impacts and risks on cultural heritages. A complete inventory of cultural heritage within the RoW will be conducted and the mitigation hierarchy will be applied on the management of the project's potential risks and impacts. Cultural heritage may also be encountered during construction phase (such as during the clearance of Right of Way, excavations of foundations, material extraction, access road construction). Chance finds procedure will be specified in the updated and new ESIAs as well as subsequent ESMPs, and chance find clause will be included in works contracts requiring contractors to stop construction if cultural heritage is encountered during construction and to notify and closely coordinate with relevant mandated country and local authorities for the salvaging and restoration of such cultural heritage.

ESS9 - Financial Intermediaries — Not Currently Relevant

No financial intermediaries are involved in the project.

B.2 Legal Operational Policies that Apply

OP 7.50 Operations on International Waterways	No
OP 7.60 Operations in Disputed Areas	No

B.3 Other Salient Features

Use of Borrower Framework — No

This project will not use the Borrowers' Environmental and Social Frameworks in the assessment or in the development and implementation of investments.

Use of Common Approach — No

NA

C. Overview of Required Environmental and Social Risk Management Activities

C.1 What Borrower environmental and social analyses, instruments, plans and/or frameworks are planned or required by implementation?

By the completion of appraisal

- 02 Stakeholder Engagement Plans for Côte d'Ivoire, Ghana.
- 02 Environmental and Social Commitment Plans for Côte d'Ivoire, Ghana.
- 01 Environmental and Social Commitment Plan, including elements of labor management and stakeholders engagement for WAPP.
- Environmental and Social Impact Assessments (ESIAs) prepared for the interconnection line, substations and transmission strengthening infrastructures in Côte d'Ivoire, Ghana.

Post Appraisal and during implementation

- 02 Resettlement Action Plans (RAPs) prepared for the interconnection line, substations in Ghana and CoteD'Ivoire; and 01 Resettlement Action Plan for transmission line in Ghana.
- 02 Labor Management Procedures (LMPs) for Côte d'Ivoire and Ghana
- 02 Cultural Heritage Management Plans (CHMP) for Côte d'Ivoire and Ghana.
- 02 Biodiversity Management Plans (BMP) for Côte d'Ivoire and Ghana.
- Security Risk Assessment and Management Plan (Ghana)

III. CONTACT POINT

World Bank

Task Team Leader:	Frederic Verdol	Title:	Lead Energy Specialist, Program Leader
Email:	fverdol@worldbank.org		
TTL Contact:	Tu Chi Nguyen	Job Title:	Senior Energy Economist
Email:	tnguyen19@worldbank.org		
TTL Contact:	Maame Tabuah Ankoh	Job Title:	Senior Energy Specialist
Email:	mankoh@worldbank.org		
TTL Contact:	Tamaro Kane	Job Title:	Energy Specialist
Email:	tkane@worldbank.org		

IV. FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

V. APPROVAL	
Task Team Leader(s):	Frederic Verdol, Tu Chi Nguyen, Maame Tabuah Ankoh, Tamaro Kane
ADM Environmental Specialist:	Alphonse Emadak
ADM Social Specialist:	Nghi Quy Nguyen