

Project Mapping

Azito Phase 3

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Environmental & Social Review Summary

Project Number	Company Name	Date ESRS Disclosed
26619	AZITO ENERGIE SA	Mar 30, 2012
Country	Region	Last Updated Date
Cote D'Ivoire	Sub-Saharan Africa	
Environmental Category	Status	Previous Events
B	Active	Approved : May 17, 2012 Signed: Oct 18, 2012 Invested: Mar 7, 2013
Sector		
Gas - Thermal Power Generation		
Industry		
infrastructure		

Department

Gbl Infrastructure & Natural Resources

Project Description

The Project is an expansion ("Azito Phase III") of the Azito Power Plant by converting the plant to combined cycle operation. This conversion essentially involves addition of two heat recovery steam generators (HRSG) and a 139 MW steam turbine, to the existing 2 x 144 MW simple cycle natural gas-fired turbines. The Project is expected to generate about 50 percent more power without using additional gas (gas turbines' exhaust heat generates steam in a boiler to power a steam turbine) and with zero incremental emissions. This switch from simple-cycle power generation to combined cycle will increase energy efficiency of the Azito Power Plant from approximately 29.5 percent to approximately 44 percent (Gross HHV).

Azito Power Plant, as planned in the initial project design in 1998, consists of building, owning, operating and eventually transferring to the State, a gas-fired power station with a total capacity of approximately 420 MW, to be implemented in three phases. In the first phase 144 MW simple cycle gas turbine operation was commissioned in January 1999 and in the second phase the second 144 MW simple cycle gas turbine was commissioned in February 2000. Expansion of capacity through conversion to combined cycle, which was originally planned in the third phase (in 2002) has been delayed but is being undertaken now. The existing gas turbines are designed to operate with natural gas (mainly) and distillate oil (back-up only). However, since initial commissioning of the Plant in 1999, the turbines have exclusively operated on gas. The distillate oil storage tanks (2 x 6000 m³) and related facilities will continue to be maintained for back up operation. Gas for the Plant comes from three sources in Côte d' Ivoire: the Devon fields (Lion/Panthère), the Foxtrot field; and the CNR fields (Espoir/Baobab), with Foxtrot field as the primary gas supplier.

Azito Power Plant is located on a 5 ha plot of land near the Azito village in Yopougon District, approximately six kilometers West of the port of Abidjan in Côte d' Ivoire . The Plant premises are located alongside the Western arm of the Ebrié lagoon and the finished ground level (± 0.00 level) in the Plant is +4.5 m above mean sea level. Béago, a second village is located about 300 m North East from the Plant boundary. The Plant premises are bordered (along the Northern fence) by a gas treatment unit, independently operated by Foxtrot, which provides condensate-free feed gas to Azito Power Plant, and by an electrical switchyard operated by the Compagnie Ivoirienne d'Electricité (CIE – national electricity distribution company) on its Western fence. The existing transmission line (T-Line) is adequate to evacuate power from the expanded capacity.

The Project involves construction of: steam turbine installation and building; HRSG installation; air-cooled condenser installation; control and electrical building; water treatment building/de-mineralization plant; administrative building; and warehouse. The duration of the construction works will be approximately 27 months. The Project does not require any land acquisition, since the facilities will be built over land which is already part of the Azito Power Plant concession. The temporary lay down areas and workers accommodation camps during the construction phase may occupy land outside of the site limit but these will also be within the existing 300 m exclusion zone around the existing power plant. The Project site can be accessed by an existing road. Much of the construction material, and construction and project equipment will be transported on this access route but there is a possibility that construction and project equipment may be transported by barges from Abidjan port.

Overview of IFC's Scope of Review

The review of this Project builds upon the supervision, undertaken since the year 2000, of IFC's previous investment (IFC project # 8503) in Azito Power Plant (the "Plant"). Azito Energie S.A, ("Azito" or the "Company") is owner of the Plant and also the Project proponent. Up until early 2011 Azito reported to IFC regarding the ongoing management of environmental and social performance at the Plant, which had been satisfactory. IFC's recent review in February 2012 consisted of appraising technical, environmental and social information submitted by the Company including:

Environmental and Social Impact Assessment ("ESIA") for the Phase III expansion Project of the existing Azito Power Station in Abidjan, CÔte d'Ivoire dated March 5th, 2012 prepared by Environment Resources Management, including the Environmental and Social Management Plan (ESMP);

Azito Phase 3 Expansion Project Environment and Social Impact Assessment: Scoping Study dated November 2010 prepared by Environment Resources Management;

Environmental Impact Assessment ("EIA") of Combined Cycle Gas Turbine (CCGT) Power Plant Project in Abidjan, CÔte d'Ivoire dated April 1998 prepared by Environment Resources Management;

Noise Abatement Plan for the Azito Power Plant Project in Abidjan, CÔte d'Ivoire dated December 1998 prepared by Environment Resources Management; and

Environmental Impact Assessment ("EIA") of Azito - Abobo Transmission Line and Substation (Addendum to the EIA of CCGT Power Plant Project) dated April 1998 prepared by Environment Resources Management;

The review also included a discussion with: the technical and management professionals from Azito Energie and Azito Operation and Maintenance S.A. ("Azito O&M", the power plant operator); Agence Nationale de l'Environnement (National Environmental Agency or "ANDE"); Cabinet d'Etudes, Conseils d'Assistance et de Formation ("CECAF" - the in country consulting firm involved in the ESIA process); and Environment Resource Management (ERM) team involved in the ESIA process. Further, the review included a visit to the Project site and the Attiéké factory at Azito village, all in Yopougon District of Abidjan city in the Republic of CÔte d'Ivoire.

E & S Project Categorization and Applicable Standard

Identified Applicable Performance Standards

PS1: Social and Environmental Assessment and Management System

PS2: Labor and Working Conditions

PS3: Pollution Prevention and Abatement

PS4: Community Health, Safety and Security

The Project facilities are located within the premises of the existing operational Azito Power Plant hence involuntary resettlement (PS5), impacts on indigenous people (PS7) or cultural property (PS8) are not expected on account of the Project and its operations. Following protests by Azito villagers, relating to the earlier compensation for land take, the matter was settled in December 2007 after Ivorian Authorities and Chiefs of Azito Village signed a protocol for cash compensation and alternate land allocation. The cash compensation has been fully paid by the Government and as per the aforesaid agreement, 25 ha land is required to be allocated by the Government. Further, the nearest protected forest is 10 km from the Project site and nearest national park is 11 km. No IUCN threatened species are found in the immediate vicinity of the Project and in the affected area. The habitat around the Project site is a highly modified habitat hence impacts on biodiversity (PS6) are not expected on account of the Project.

Environmental and Social Categorization and Rationale

The Project involves capacity expansion through conversion of an existing simple cycle power plant to combined cycle through installation of above mentioned facilities within the existing power plant premises. The Project impacts will be time limited (short term during construction) and site limited (within immediate plant area) and it is not expected to result in any new significant long term impacts. Accordingly, this is a Category B project because a limited number of specific environmental and social impacts may result which can be avoided or mitigated by adhering to generally recognized performance standards, guidelines or design criteria. Further, it is possible to readily design and implement engineering and management measures to mitigate the limited adverse impact.

***Information on IFC's Policy and Performance Standards on Environmental and Social Sustainability can be found at www.ifc.org/sustainability*

Environmental and Social Mitigation Measures

Environmental and Social Mitigation Measures

The Company and the Plant operations are materially meeting the requirements of the original investment agreement, and have procedures in place to demonstrate that their activities comply with applicable Ivoirian laws and regulations. Azito Energie has presented plans to address the Project impacts and to ensure that the Project will, upon implementation of the specific agreed measures, comply with the environmental and social requirements - the host country laws and regulations and IFC Performance Standards. Information about how these potential impacts will be addressed by the Company is summarized in the paragraphs that follow and is also provided in the attached documentation.

PS1: Social and Environmental Assessment and Management System

Social and Environmental Assessment

The currently operational Phase I and Phase II installations of the Azito Power Plant were covered by an initial ESIA developed on behalf of the Company in 1998. The 1998 ESIA covered all three Phases proposed for Azito Power Plant as also the Azito-Abobo T-line & substation (associated facility) and included preparation of a Resettlement Action Plan (RAP) to address involuntary resettlement on account of the Azito Power Plant project and the associated T-line, which was prepared by the Government of Republic of Côte d' Ivoire (GORCI). Overall configuration of the Azito Power Plant and the proposed Phase III installations has remained consistent. The ESIA undertaken in 1998 was in accordance with the then applicable IFC Guidelines for the Preparation of an Environmental Assessment, The World Bank Environment, Health and Safety Guidelines for Thermal Power Plants (October 23, 1996), Loi Cadre Portant Code de l' Environnement ' (Côte d' Ivoire Law no 96-766 of October 3, 1996 and Decree 96-894 of November 8, 1996).

The initial permit from ANDE for Azito Power Plant covers all three phases, including Phase III. Since Phase III was not developed as per the original schedule, a fresh ESIA covering Phase III was sought by ANDE. Accordingly, in 2010, Azito Energie commissioned ERM to carry out an ESIA specific to the Project and in accordance with: the Terms of Reference approved by ANDE; IFC Performance Standards; and The Equator Principles. The ESIA was completed in March 2012. The ESIA, based on updated baseline data, identifies the environmental and socio-economic impacts of the Project and recommends mitigation measures to minimize negative risks and impacts. The ESMP (part of the ESIA) outlines mitigation and monitoring measures to address impacts during construction and operation phases including those relating to: emissions to air; ambient noise; water consumption and risk of contamination; temporary land take; waste handling and disposal; socio-economic impacts; construction workers and labor accommodation; community

health, safety and security; and decommissioning. The ESIA will be submitted to ANDE for review by its committee of experts and for public consultation. The feedback received from ANDE, committee of experts and public consultation will be incorporated and final ESIA prepared. Upon submission of this final ESIA, ANDE will consider the ESIA for approval.

Alternatives related to the site location, fuel supply and the no-development option were presented in the ESIA report in 1998. In case of Phase III, the key alternative analysis involved consideration of various alternatives for the main cooling system. In accordance with the alternative analysis recommendation, air cooled condensers have been opted for in the Project.

Social and Environmental Management System (SEMS)

Azito Power Plant is operated by Azito O&M under a Quality, Health, Safety and Environment (QHSE) and sustainable development policy. The QHSE management system implemented at the Plant currently conforms to ISO 9001, ISO 14001 and OHSAS 18001 standards and was first certified by AFAQ in 2003. The Company has obtained a "maturity" level endorsement under the AFAQ1000NR certification (since 2006) process (social responsibility). Azito O&M as part of its current QHSE management system has in place procedures for: emergency preparedness and response; SEHS training and mock drills; monitoring of health, safety and environmental performance; internal and external audit of HSE performance; reporting to senior management and to external stakeholders on HSE performance; and management review. This QHSE management system will be suitably adapted and implemented to cover Phase III operations as well.

Further, as part of the ESIA, the Company has outlined a management program, including responsibility allocation, to ensure that the Project is constructed and operated in accordance with national requirements and IFC Performance Standards. The Company will contractually require the Project's engineering, procurement and construction (EPC) contractors to adhere to applicable social and environmental legal/national requirements and fully implement environmental and occupational health and safety ("EHS") measures defined in Project ESIA. While Azito O&M has in place an appropriate HSE organization, Azito Energie will, for the construction phase, put in place an appropriate HSE organization with roles and responsibilities clearly defined both for the Company and the EPC contractor. This includes Azito Energie deploying at least one fulltime dedicated HSE Manager during construction and the EPC Contractor deploying at least one HSE Supervisor to ensure implementation of the management program. While the EPC contractor is required to ensure adherence to applicable social and environmental requirements, Azito Energie will put in place detailed procedures to review and document EPC contractor compliance with national and ESIA requirements. Further, the Company will put in place procedures to ensure that corrective actions, where required, are implemented in a timely manner. While the management program has been outlined in the ESIA, Azito Energie will require the EPC contractor to develop a detailed HSE Management Plan consistent with the ESIA, IFC Performance Standard and Good International Industry Practices (GIIP).

PS2: Labor and Working Conditions

Employment

Azito O&M currently employs 36 personnel and the plant General Manager at the Plant. Further, Azito Energie has 11 persons in its employment. In addition to Azito O&M employees, 7 security guards, 5 cleaning/housekeeping staff and 5 restaurant/canteen staff, all contract workers, are also employed by Azito O&M. Post the implementation of the Project, the number of Azito O&M employees is expected to increase to approx. 50 persons. Azito O&M communicates the terms of employment through a Handbook (Réglement Intérieur), which is appended to all employees' contracts. Azito O&M terms of employment/working conditions relating to minimum employment age, minimum wage and, overtime and working conditions for contract workers are consistent with

applicable employment/labor laws. Azito O&M is in the process of updating its Employment Policy Handbook to make it consistent with the group human resource policies in addition to the national employment/labor laws. Two delegates, two substitutes and one representative from the national energy sector unions are elected by the employees for entering into discussions with site management on employee issues. These meetings are undertaken on a monthly basis. Azito O&M enters into a Social Contract with the employees, which focuses on employee welfare measures. Azito O&M has a process of annual human resource compliance review and reporting to the Sponsors.

About 600 workers are expected to be deployed at the Project site during peak construction. The Company will follow a “no recruitment at gate” policy and will recruit as per a widely circulated recruitment plan. The EPC contractor has been required to adhere to applicable labor laws and to ensure that its sub contractors also comply with applicable labor laws. The EPC contractor will be required to ensure that it and its sub contractors provide living conditions for their respective workers that are generally consistent with IFC Guidance on Worker Accommodation.

Occupational Health and Safety

Azito O&M addresses health and safety in operations through the QHSE management system certified to OHSAS 18001 standards. Safety signage is provided, use of personal protective equipment is adequate and appropriate procedures for safety awareness and training to employees including contract workers is in place. The Company has a work permit system in place. Azito O&M has accident incident monitoring, investigation, reporting and corrective action processes in place. There have been no lost time incidents at the power plant in past 4 years. To ensure consistent and effective deployment, key safety related processes are also integrated into the Plant's SAP system.

The EPC contractor will develop and implement a Health and Safety Management Plan (H&SMP), acceptable to Azito Energie and Azito O&M. The H&SMP will detail procedures for: provision of personal protective equipment and ensuring their use; training in the relevant hazards, safe working procedures and emergency response; provision of medical care, first aid, health monitoring, vaccinations, pest management and measures for prevention of disease spread; accident/ incident monitoring, investigation, reporting and corrective action; and periodic joint audits and corrective action. Further, during construction, no thoroughfare or access will be permitted in the operational parts of the existing power plant. The construction area will be completely isolated/ hard barricaded from the existing plant to prevent construction personnel from straying into the operational plant site. Access from the operational plant site to the construction area will be controlled through a single guarded gate. The EPC contractor has been required to deploy appropriately qualified supervisor (s) for effective supervision of compliance with the contractual provisions relating to labor working conditions. Further, Azito Energie will put in place appropriate procedures to obtain assurance on EPC contractor (and sub contractor) compliance with the labor working and living conditions requirements agreed in the EPC contract.

PS3: Pollution Prevention and Abatement

The Project is a resource conservation project as it will result in recovery of waste heat from gas turbine flue gas and increase the thermal efficiency of the power plant from approx. 29.5 to 44 percent. Moreover, the Project contributes to water conservation by opting for air cooled condensers.

The potential environmental aspects and impacts from construction activities for the Project include: fugitive dusts; noise; water consumption; hazardous materials and waste handling, storage and transport; sewage and domestic garbage treatment & disposal; surface runoff and sediment load management; and vehicle & vessel traffic. The EPC contractor and subcontractors are expected to control these to acceptable levels through application of standard construction environmental controls. The relevant recommendations and mitigation measures called for in the ESMP will be incorporated into the

construction contract documents.

Air and Greenhouse gas emissions

No new combustion and emission source will be added on account of the Project. Stack emissions with natural gas have remained within the national standards and the then applicable World Bank Group (WBG) Guidelines. Dispersion modeling, covering all three phases of the Plant, was undertaken as part of the 1998 ESIA to assess impact on ambient air quality. In light of the fact that changes to Phase III Project since the 1998 ESIA are limited, the resulting modeling output is considered to be valid even now. The results of the model show that the impacts to ambient air quality resulting from gas-fired turbines in the Phase III plant configuration complies with the then applicable national standards, WBG Guidelines and also the current version of IFC EHS Guidelines (2007-2008). Diffusion tube ambient air quality monitoring data for the year 2001 (after commissioning of both the gas turbines) indicates that baseline concentrations of NO_x and SO₂ remain in about the same range as was predicted in the 1998 ESIA. Further, to minimize impact on air quality during construction: equipment will be maintained in good condition; number of trips of transport vehicles will be minimized; stockpile management to minimize fugitive dust; covered transport of earth or other friable/dust generating construction material; minimizing drop heights in unloading friable construction material; and wheel washing.

The Company will ensure that all air conditioning and refrigeration equipment as also fire safety equipment comply with the Ozone Depleting Substances phase-out plan of GORCI and Montreal Protocol. Total direct greenhouse gas emission (GhG) emission from Azito Power Plant is approximately 0.651 tCO₂e/MWh and is expected to be 0.428 tCO₂e/MWh after expansion. Accordingly, total direct annual GhG emission from Azito Power Plant is 2,040,990 tCO₂e and GhG avoided on account of the Project during operation phase is expected to be about 728,000 tCO₂e.

Noise:

During operation, noise emissions from the Phase III equipment will add to existing sources of noise from the: operational power plant; neighboring Foxtrot gas processing facility; and other noise sources in this peri-urban environment. Baseline noise levels are within national standards and IFC guideline limits during day time but nighttime noise levels exceed the applicable standards and guideline limits. Future ambient noise levels with the Phase III facilities have been predicted. Several noise abatement engineering measures, which will need to be implemented as part of the Project, have been identified in the ESIA so as to ensure that applicable noise standards and IFC/WBG EHS Guideline limits are met at sensitive receptor locations identified in the ESIA (the Azito and Béago villages and other sensitive receptors). The predicted increment in ambient noise associated with the Project compared to the current baseline is expected to be within 2 dBA. Further, the Company will discuss with ANDE, the ESIA findings related to noise from Foxtrot facility including the need for Foxtrot to implement measures so as to meet national standards at the identified sensitive receptors. During construction, potential sources of noise include construction equipment and temporary increases in traffic. Noise from construction equipment and increased traffic has been predicted at the nearest noise sensitive receptors for the noisiest phases of construction. This assessment indicates that the noise impacts associated with Phase III construction are expected to be within acceptable norms. In any case, construction activities will be undertaken only during day time and night time activities will be limited to low noise activities. Further, a process for timely disclosure of information relating to construction schedule and also a community grievance redress mechanism will be put in place in case affected communities have concerns related to noise or other aspects of the Project.

Water consumption

Current water consumption in the Plant is 14 m³/day of industrial water for operations and 7 m³/day for domestic purposes. Potable water requirement is met from the existing municipal supply and the industrial water requirement is met from the existing bore well of 45 m³/hr capacity. To meet industrial water requirements, water is pumped from the bore well to a 1000 m³ buffer tank (used also as fire fighting storage) and after demineralization, for compressor

cleaning. These two sources will also meet the water requirement during construction of Phase III and subsequently during operation. The water needed for the construction phase of the Project is mainly related to the use of domestic water on site, in the temporary camps, and water consumption for the construction works. Water consumption from construction activities will be limited in quantities and in time. At peak construction about 110 m³/day of water will be consumed for domestic purposes and about 10 m³/day for construction, dust suppression and site maintenance. Municipal supply will be able to meet the required domestic water requirement or potable water may be trucked in and stored in tanks or the EPC contractor may be required to put in place a drinking water treatment facility. Incremental water consumption during the operating phase of the Project including for closed circuit steam generation, general use and fire fighting is expected to be 10 m³/day and incremental domestic consumption will be about 3 m³/day. Water from the bore well will be pumped to a new 1300 m³ tank. Both the existing 1000 m³ tank and the new tank will be connected. Studies indicate that salinity intrusion due to groundwater abstraction may not be expected. The Project's impact due water consumption during construction and operation is therefore expected to be low. The Company will undertake benchmark testing of municipal water supply to confirm conformance to national potable water quality standards. Further, the Company will require periodic testing of water against national drinking water standards, in case it is to be trucked in or in case a treatment plant is setup during construction. A demineralization plant of 30m³/hr capacity will be installed to meet the HRSG feed requirements. The Company will implement a program to monitor water consumption, and identify and harness conservation opportunities.

The Azito Power Plant is located within 100 m of the Ebrie lagoon to the East and South. Impacts from construction and operation, if any, on the lagoon will be primarily related to potential contaminated drainage and runoff discharge in the lagoon and spills/contamination during barge based transportation activities. However, the impact on water quality of the lagoon during the construction phase is expected to be limited due to: small footprint of construction area (2 ha); implementation of good practice in site run-off management including through site surface profiling and provision of sediment traps in drains; prevention of untreated sanitary discharge into the lagoon; prevention of leaks or spills through appropriate handling procedures and provision of appropriate hazardous material storage (secondary containment etc.); stockpile management to prevent erosion; re-vegetation of slopes and minimizing stripped areas; and land cleared for construction related activities being restored to its original state. Further, the Company will ensure that appropriate marine transportation good practices are adhered to and lagoon sediment disturbance is minimized.

Currently, compressor washing water, boiler cleaning water and sanitary waste water are combined and treated through a chemical treatment facility. Oily water is treated through an oil-water separator. Treated waste water from biological treatment facility and the oil-water separator are mixed, equalized, pH treated and pumped to an evaporation pond (780 m³ maximum volume). When the evaporation pond gets filled (approximately twice a year), water is tested and if found conforming to Ivoirian guidelines for liquid effluent, is pumped outside the Plant premises on East perimeter and discharged on land about 30 m from edge of the lagoon. Most recent monitoring indicates that treated waste water meets IFC guideline norms prior to discharge and the Company will ensure continuing adherence to IFC/WBG EHS Guideline limits prior to discharge of treated wastewater. Storm water/surface runoff water is collected through the gulleys and surface drains into underground drainage and discharged on the West perimeter of the premises. Rain water collected from building roofs is also connected to this underground storm drainage system. Surface runoff from the transformer secondary containment is treated through an oil-water separator and discharged into the storm water drainage. Backwash of bore well water pretreatment filters is directly discharged to the lagoon. Wastewater during construction will primarily be sanitary wastewater from the construction camp, which will be treated in a mobile treatment plant to meet IFC EHS guideline norms prior to its discharge into the lagoon. During the operation stage, the key addition to waste water will be demineralization plant backwash, which will be neutralized in a dedicated sump and discharged to the lagoon. Significant increase in waste water is not expected on account of Phase III development. Post implementation of the Project, the treatment and disposal scheme for all wastewater, barring demineralization backwash water, will remain the same. The wastewater treatment will be modified to accommodate Phase III and will notably involve rehabilitation and protection of the evaporation pond, installation of a biological treatment unit, a neutralisation pond and an oily water treatment unit. The neutralization sump/tank will be

provided with appropriate corrosion resistant lining.

Hazardous Materials

Hazardous materials at site include: Sulfuric acid (210 l); Caustic soda (60 l); Butane gas (bottles total 140 l); Gasoil/Diesel (200 l); Solvents (30 l); Lubricating oils (2800 l); Transformer oil (400 l); Natural gas (not stored at site but in the system); Diesel Fuel (12,000 m³); Acetylene (18 m³); and oxygen (22.5 m³). Significant increase in quantities of hazardous materials is not expected on account of the Project. The Plant has procedures in place for appropriate storage of these materials, including where required provision of secondary containment and access control. The quantities of sulphuric acid, caustic soda and lubricating oils are expected to increase to 30 m³, 60 m³, and 5 m³ respectively. The construction of additional chemical storage facilities is proposed as part of the Project and the Company will ensure provision of appropriate acid/corrosion resistant secondary containment. The Company will ensure that during construction and operation, good site management practices are observed and that hazardous materials are properly stored and handled at site (i.e as appropriate within secondary containment etc.).

Solid Waste

Low quantities of earthwork expected as excavations required only for foundations and most of the excavated earth will be used for backfilling and site level increase to +4.5 m amsl. No existing structures are to be demolished except surface & underground drains at some locations within the premises and the existing warehouse (which will be rebuilt). Other wastes expected to be generated during construction include: household waste (organic waste at site and from labor camps), plastics, paper, food, packaging, office equipment, cables, scrap metal, paint cans, packaging, tin cans, glass, small amounts of other substances, and hazardous waste (including waste oil, oily rags, filter cartridges, absorbent materials, and batteries). Further, during operation phase also incremental waste generation is expected to be low and will be constituted primarily of packaging and general domestic waste, and low quantities of hazardous waste (primarily oil contaminated material). The Company stores all waste duly segregated, in a designated area and as required within containment. General waste during construction and operation will continue to be (as is the current practice) disposed through an independent waste management Company. This independent waste management company collects the waste periodically from the plant and disposes of it at Abidjan municipal waste dump. Some of the reusable waste/scrap is sold/handed over by the Company to scrap dealers.

Hazardous Waste

The primary hazardous waste during current operations include: the oil collected from oil water separators; sludge and residual solids from oil and grit separator tank; waste water treatment plant sludge; the evaporation pond sludge; and transformer oil from oil water separator. Separated waste oils, separated transformer oil and sludge are pumped by means of dedicated oil and sludge pumps respectively, to the site perimeter to be collected for treatment and disposal by an independent waste management company. This practice will be continued for post Phase III operation stage as well. Some hazardous wastes (e.g. toners, used batteries, bulbs, oil filter etc.), in relatively limited quantity, are being collected and stored on site for several years now because the Company has not been able to identify any accredited waste management company that treats and disposes these types of wastes in the country. The volume of hazardous waste during construction is expected to be of the order of a few cubic meters per month, which will also be disposed through the above mentioned industrial wastes recycling and disposal contractors. In any case, a detailed Waste Management Plan will be developed prior to the start of construction for proper storage and disposal of all wastes generated during construction. Capability to treat and dispose off the different types of waste in accordance with IFC/WBG EHS Guidelines and Ivorian laws will be considered in selection of waste management contractors. A post-construction survey of the construction area will be conducted to confirm that all debris and wastes have been removed and appropriately disposed at the end of the construction phase.

PS4: Community Health, Safety and Security

The entire construction work and project activities will be within the existing facility except some lay-down area and labor camp, which will be located in part of the 300 m buffer zone. In the buffer zone, there is some limited grazing activity being conducted but no material impact on grazing activity is expected. Further, the Company will through access control, barricading, reflectors, signage, community safety awareness programs, and other measures mitigate the risk of accidents for the general public during construction.

Concrete for the foundations will be brought in from a ready mix concrete plant in Abidjan in concrete mixer trucks. Other construction material, mostly structural steel and sheets are expected to be transported to site both by barges and by road. During construction, up to 31 vehicle trips per hour are expected, the majority of which will be HGV's. Transportation of equipment is proposed to be undertaken by road but there is a possibility this could be undertaken by boat or barges from the port of Abidjan, crossing the Ebrié Lagoon. Given the low number of loads compared to the traffic in the lagoon, and the fact that this option is temporary, impact from transportation of material by boat on fishing activities and on the lagoon may be considered low. However, the ESIA recommends measures to minimize community health and safety risk due to movement of vehicles/vessels traffic during construction and operation. Further, the Company will ensure that EPC contractors adopt good EHS practices during construction including: training of equipment operators and drivers in safe driving techniques; implementation of a personnel and materials movement plan to ensure that vehicle movement during construction has minimal impact on daily life patterns of nearby communities; speed controls; alarms; posting traffic marshals at high risk locations; undertaking appropriate measures to reduce fugitive emissions from storage and transport of construction and waste material; periodically monitor noise levels in potentially affected communities/villages; undertaking community awareness programs; informing marine authorities and fishing communities about barge movement plans; and adopting good marine practices during transport of equipment.

Azito village will benefit from influx of labor due to increased demand for attiéké, poultry, fish, farm produce, slaughtering activities, restaurants and recreation which constitute the main livelihood activities undertaken by Azito villagers. However, there may be increased volatility in local prices but this is expected to be short term. The Company will ensure that the worker accommodation conforms to good international industry and benchmark practices including those defined in the IFC/BRD Guidance on Worker Accommodation. Azito Energie will require the EPC contractor to develop a management plan that will include amongst other aspects, measures to minimize risk of community exposure to disease due to influx of laborers including: ensuring that appropriate medical facilities are available for all labor; a periodic health check up program; an awareness program on HIV/AIDS and STI; and measures to control disease vectors.

The Plant will develop and have in place procedures, trained personnel, and equipment for responding to emergencies, including explosion, fire, chemical spills and mishaps, accidental release of petroleum products, and medical emergencies. The Emergency Plans and procedures will be co-ordinated with emergency plans of Foxtrot and of the district authorities. Critical components of the emergency plan will be tested on a regular basis. Full scale emergency training exercises will be held every year including jointly with Foxtrot and district authorities.

Azito Power Plant engages 5 security personnel from a private security agency and four Gendarmes from the state security forces. While the Plant is provided with past records of private security personnel deployed, it will develop and implement procedures for ensuring that: security personnel have clear objectives and permissible actions laid out; security personnel are trained in avoidance of abusive conduct and handling various situations with clear procedures; security incidents are recorded, investigated and corrective action implemented; bona fide complaints against security personnel are

investigated/disciplinary actions implemented; and there is a grievance mechanism for aggrieved members of the community or employees in the event of a violation of the code for security personnel.

Stakeholder Engagement

Stakeholder Engagement

Azito Energie and Azito O&M are committed to engaging with the neighboring communities. Azito O&M has employed a dedicated sustainable development resource to proactively engage with neighboring communities. Further, Azito O&M and the Company have an active community development program in place. The community development program focuses on health, education, gender equality and local economic development. Azito village is the nearest community in the vicinity of Azito Power Plant. Azito village residents are recognized traditional owners of the land on which Azito Power Plant is located. Further, the village of Béago, which though relatively more remote and not affected by the land take for the Plant, is in the downwind direction from the Plant and is sensitive to air and noise emissions.

Azito O&M carries out an annual “satisfaction survey” in the Azito village to identify potential grievances and issues. Overall, the results of these surveys generally indicate a positive perception of the Azito Power Plant. However, in the surveys, nuisance due to noise (particularly in Béago), and an expectation of increased employment through Azito O&M have been expressed several times by the communities. In the most recent satisfaction survey (January 2010), the surveyed population: expressed their support for development of Phase III project; thanked Azito O&M for reduced noise levels; sought support for local producers of attiéké (a traditional activity for women); and requested support for unskilled/low-qualification jobseekers through provision of professional training.

Consultation with affected communities was undertaken in two phases as part of the ESIA for Phase III. The first phase of consultation was undertaken as part of the scoping study in September 2010. The objective was to present the Project, receive feedback from the key stakeholders about the planned expansion and to understand the key concerns that need to be included in the Terms of Reference (ToR) for the ESIA. During this scoping stage, consultation involved essentially discussions with: Azito Village Chiefs (current and former); Azito deputy village chief; Notables from Azito village including senior inhabitants, youth president, village secretary and other notables; Director of Yopougouon Technical Services; and Deputy Director of ANDE. The key concern related to the Project that emerged from the consultations included the potential for increased noise impact on Azito and Béago. Members of the affected community also had questions relating to: potential new impacts on account of the Project; monitoring program in the ESIA post completion; and whether the T-Line will need to be upgraded. Further, an expectation that people from Azito village will be provided employment by Azito Power Plant was expressed in these consultations. In this context, the Company’s representatives clarified that the power station employs only about 30 highly skilled persons and in light of the non availability of such highly skilled professionals in Azito village, it may not be possible to provide employment. Azito O&M team also clarified that they have provided suitable business to a local Company (Azito Multiservices), which employs Azito villagers and that they have a corporate social responsibility program in place.

A second round of consultation was carried out in November 2011. The objective was to inform key stakeholders on the proposed project, the scope of the assessment and to obtain feedback from the stakeholders. A third round of consultations will be undertaken when the Final Draft ESIA has been disclosed. This third round consultation will aim to obtain feedback from the stakeholders on key risks and issues identified in the ESIA and the proposed mitigation measures. This round will take place, once the ESIA report has been submitted to the ANDE, in coordination with the ANDE as part of the public enquiry required under the environmental approval process. During the second round consultations, stakeholders consulted include: Ministry of Environment

(ANDE); Ministry of Energy; Mayor of Yopougon district; Villagers of Azito (including the Azito notability and village chief; representatives of various focus groups); Villagers of Béago; (including Béago notability and village chief; representatives of various focus groups); and a focus group with women at the Azito village attiéké factory, and with the cattle farmers. During the November 2011 site visit, meetings were first organized with the Béago and Azito representatives (village chief and notability) to introduce the Project. For both villages, a second meeting was organized, including an enlarged stakeholder group representing the villages' various socio-economic activities. During these sessions, information about the Phase III Project was provided through an oral presentation (paper version of the presented documentation was provided to the village secretary) and this was followed by a question and answer session.

The Project team (comprised of Azito Energie, Azito O&M, ERM and CECAF representatives) provided appropriate responses to several questions/concerns expressed during the meetings. For all other questions, concerns and expectations, the Project team committed to providing a response in the Final ESIA and/or during the third round of consultations. In any case, all the concerns, information requirements and expectations expressed by the affected communities and key stakeholders will be fully addressed in the Final ESIA. Further, how these concerns have been addressed including the proposed mitigation measures will be communicated to affected communities in the third phase consultations proposed to be undertaken jointly with ANDE. Azito O&M and the Company will through ongoing proactive engagement and through a formal community grievance procedure receive, respond to and address community concerns and expectations.

Local Access of Project Documentation

In addition to the above consultation, the Company will make available for a public review the Final ESIA and ESAP in a culturally acceptable manner and in the host country language at the

Agence Nationale de l'Environnement (ANDE)
Riviera Attoban en face du groupe scolaire Jules Ferry
08 BP 09 Abidjan 08
Côte d'Ivoire

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IFC supports its clients in addressing environmental and social issues arising from their business activities by requiring its real sector clients to set up and administer appropriate grievance mechanisms and/or procedures to address complaints from Affected Communities in relation to environmental and social issues arising from IFC's clients' business activities. Since 2012, IFC's Financial Intermediary clients applying the Performance Standards are

required to develop External Communications Mechanisms to receive and review inquiries or complaints from any interested party regarding the E&S risks and impacts of their operations.

In addition, Affected Communities have unrestricted access to the Compliance Advisor Ombudsman (CAO), the independent accountability mechanism for IFC. The CAO is mandated to address complaints from people affected by IFC-supported business activities in a manner that is fair, objective, and constructive, with the goal of improving environmental and social project outcomes and fostering greater public accountability of IFC.

Independent of IFC management and reporting directly to the World Bank Group President, the CAO works to resolve complaints using a flexible, problem-solving approach through its dispute resolution arm and oversees project-level audits of IFC's environmental and social performance through its compliance arm.

Complaints may relate to any aspect of IFC-supported business activities that is within the mandate of the CAO. They can be made by any individual, group, community, entity, or other party affected or likely to be affected by the environmental or social impacts of an IFC-financed business activity. Complaints can be submitted to the CAO in writing to the address below:

*Compliance Advisor Ombudsman
International Finance Corporation
2121 Pennsylvania Avenue NW
Room F10K-242
Washington, DC 20433 USA
Tel: 1 202 458 1973
Fax: 1 202 522 7400
E-mail: cao@worldbankgroup.org*

The CAO receives and addresses complaints in accordance with the criteria set out in its Operational Guidelines which are available at: www.cao-ombudsman.org

Environmental & Social Action Plan

Related SPI

[Summary of Proposed Investment \(SPI\)](#)

Client Documentation

File Name

File Type

Azito Phase 3 ESAP March 23, 2012

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Azito Phase 3 ESIA March 2012

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Azito ESIA Annexes

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