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Ghana: Law and Practice

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Ferociter

GHANA

Law and Practice

Contributed by:
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Ferociter

Contents

Ferociter was established to provide legal advisory services with the right blend of law, policy and commercial sense. The firm's practice focuses on six broad areas, including its dynamic energy and natural resources practice. The energy team is made up of seven team members led by Sarpong Odame. Ferociter operates from its head office located at Labone, Accra, Ghana. Within the renewable energy sector, the firm and its partners have significant experience in advising clients on regulatory requirements as well as advising and negotiating on behalf of clients on complex power purchase agreements. The team recently advised Ghandour Cosmetics Limited on its solar asset purchase arrangement with Daystar Power Group. Members of the firm's group have also advised Ecoligo, Nguvu Mining, Manocap Energy UK, Engie, Tysilio and Solar Africa on the regulatory regime for operating within the renewable energy sector in Ghana. The team also has significant experience in corporate law, M&A and project finance work, which are relevant for advising on transactions within the renewable energy sector.

Authors

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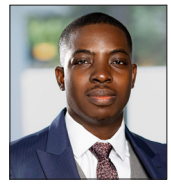

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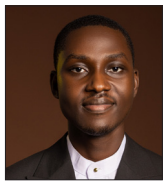

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1. Structure and Ownership of the Power Industry

1.1 Law Governing the Structure and Ownership of the Power Industry

Principal Laws

The principal laws that govern the power industry in Ghana are:

- the Energy Commission Act 1997 (Act 541) (the "EC Act");
- the Renewable Energy Act 2011 (Act 832) (the "RE Act") as amended; and
- the Public Utilities Regulatory Commission Act 1997 (Act 538) (the "PURC Act").

The EC Act established the Energy Commission (EC), which is the principal government agency responsible for the regulation, management, development and utilisation of energy resources and the licensing of entities operating in the energy sector.

The RE Act established the framework for, among others, the development, management, utilisation and supply of renewable energy for power generation. It also provided the EC with the authority to regulate the renewable energy sector and the market participants within the renewable energy supply chain.

The PURC Act established the Public Utility Regulatory Commission (PURC). The PURC is primarily responsible for monitoring and regulating rates charged by utility service providers in Ghana. It is also mandated to promote fair competition among public utilities and to protect the interests of consumers and providers of utility services. Further, the RE Act empowered the PURC to approve rates chargeable for the purchase of electricity from renewable energy sources by public utilities, charges for grid connection and rates chargeable for wheeling of electricity from renewable energy sources.

Structure and Ownership of the Power Industry

The power industry in Ghana is relatively liberal, although the government still maintains a significant market share across the energy supply chain. The power industry can be unbundled into three main parts, namely: generation, transmission and distribution.

Prior to 2005, the generation subsector was solely controlled by the Volta River Authority (VRA), a statutory corporation established under the Volta River Development Act, 1961 (Act 46). The generation subsector has now been liberalised with both public and private participants.

The transmission subsector is, however, under the exclusive control of the Ghana Grid Company Limited (GRIDCo). GRIDCo is an independent state-owned entity that controls the National Interconnected Transmission System (NITS).

The distribution subsector has also seen some liberalisation of three distribution utilities in Ghana, two of which are state-owned and one privately owned.

1.2 Principal State-Owned or Investor-Owned Entities

Electricity Generation Entities

State-owned

The principal state-owned electricity generating company is the VRA. The VRA was established in 1961 and until 2005 was the sole entity operating the generation, transmission and distribution of electricity in Ghana.

The VRA owns and operates the two main hydro plants in the country, the Akosombo and Kpong

Dams, with a total installed electricity generating capacity of 2,532 MW.

The VRA also owns a number of thermal plants, including:

- a 330 MW Takoradi Thermal (T1) Power Station;
- a 340 MW Takoradi International Company Thermal (T2) Power Plant, which is a joint venture (JV) between the VRA and TAQA from Abu Dhabi;
- a 110 MW Tema Thermal 1 Power Plant (TT1PP) now designated Station 2;
- an 80 MW Tema Thermal 2 Power Plant (TT2PP) designated as Station 3; and
- a 220 MW Kpone Thermal Power Station (KTPS).

The Bui Power Authority (BPA) is another state-owned electricity generating entity that manages the Bui Generating Station (BGS), with 405 MW of hydro-generated power, which was commissioned in 2013.

The BPA has taken steps to generate power using renewable energy sources, including:

- its 250 MW solar project, 50 MW of which has been completed and connected to the NITS;
- a 1 MW Floating Solar PV installed on its reservoir to preserve the lake and segment the BPA's power generation; and
- a 30 kW rooftop solar PV that powers all the lighting load at the BPA's Accra office.

Privately owned

There are also a number of independent private power producers (IPPs) in Ghana, namely Takoradi International Company Limited, Sunon Asogli Power, AKSA Energy, Amandi, Cenpower Generation Company Limited, Karpowership Ghana Company Limited and CENIT Energy Limited. Most of these produce electricity from either solar or thermal plants. Private participation has seen diversification in recent years with one IPP producing power from waste.

Karpowership Ghana Company Limited (Karpowership) is the principal IPP in the country, having an electricity generation capacity of 450 MW. Karpowership operates a combined-cycle power plant (Powership) in Takoradi.

Takoradi International Company (TICO) is a joint venture between TAQA and the VRA with a 330 MW T2 combined-cycle power plant, which generates approximately 15% of the country's total capacity.

Electricity Transmission Entities

GRIDCo, established in 2006, exclusively operates the National Interconnected Transmission System (NITS). Prior to the establishment of GRIDCo, the VRA was the entity responsible for the transmission of power within Ghana. GRIDCo's mandate includes transmitting electricity from generators to bulk customers and distributors, operating the wholesale electricity market and, more recently, a diversified objective of providing telecommunications transmission services in partnership with Telcos.

Electricity Distribution Entities

State-owned

The state-owned distribution entities in Ghana are the Electricity Company of Ghana (ECG) and the Northern Electricity Distribution Company (NEDCo).

The ECG is wholly state-owned and is the largest distribution company in the country. It is responsible for the distribution and supply of electricity in six administrative regions in southern Ghana:

Ashanti, Central, Eastern, Greater Accra, Volta, Oti and Western Region.

NEDCo is charged with the distribution of electricity to the Bono, Bono East, Ahafo, Northern, Savannah, Upper East and Upper West regions of Ghana. NEDCo's operations also extend to the northern parts of the Ashanti, Volta and Western regions.

Privately owned

Enclave Power Company Ltd (EPCL) is the only privately owned electricity distribution company in the country and distributes electricity to the Tema Free Zones Enclave in the Greater Accra Region. EPCL has over 100 customers.

1.3 Foreign Investment Review Process

Foreign Investment Restrictions in the Power Industry

There are no restrictions on foreign participation within the power industry. Foreign investors will, however, be required to contribute the minimum capital contributions generally required for foreigners to carry on business in Ghana.

The Ghana Investment Promotion Centre Act 2013 (Act 865) (the "GIPC Act") establishes the Ghana Investment Promotion Centre (GIPC), which is mandated to (among others) register, monitor and keep records of all enterprises in Ghana.

Under the GIPC Act, a foreign person is required to invest a minimum of USD200,000 in cash or capital goods relevant to the investment in the case of a joint ownership of the enterprise with a Ghanaian holding at least 10% equity participation.

Under the Energy Commission (Local Content and Local Participation) (Electricity Supply Industry) Regulations, 2017 (LI 2354) (the "Local Content Regulations"), every enterprise within the electricity supply industry must have a minimum level of local content and local participation. Thus, enterprises within the electricity supply chain cannot be wholly foreign-owned. The local equity participation levels start from 15% and are expected to increase to 51% after ten years of the enterprise's operations. For some subsectors, such as the electricity distribution subsector, the law requires an initial minimum local equity participation of 30%, which is expected to increase to 51% after ten years.

Protections that apply to foreign investment

The GIPC Act was enacted to promote foreign investments within the country. Thus, all foreign investors must register with the GIPC before commencing any business operations in Ghana.

A company registered with the GIPC enjoys the following protections.

- Foreign investors are protected against any form of discrimination and enjoy the same rights, duties and obligations as applicable to Ghanaian citizens.
- A foreign investors' entity is protected against any form of expropriation by the government. Where expropriation of an entity is required for the national interest or public purpose, the entity is guaranteed fair compensation and access to the High Court for the determination of adequate compensation.
- A foreign investor is guaranteed unconditional transferability of freely convertible currency of dividends, or net profits, foreign loan repayments, fees and charges in respect of technology transfer agreements and remittance of proceeds (net of all taxes) in the event of a sale or liquidation.

- In the event of a dispute between the foreign investor and the government, the dispute can be settled in any of the following ways:
  (a) firstly, any national or international settlement dispute mechanism agreed by the disputing parties will apply;
  (b) secondly, the dispute could be resolved through arbitration in accordance with the UN Commission of International Trade Law; or
  (c) finally, the dispute can be resolved in accordance with the UN Commission of International Trade Law.

1.4 Law Governing the Sale of Power Industry Assets

Under the EC Act and the RE Act, a person is restricted from conducting any commercial activity within the power sector without a licence from the EC. According to the law, the licence granted by the EC is non-transferable without the prior written approval of the EC. To that extent, any transaction (asset purchase, share transfer, business amalgamation or merger), which has the effect of transferring the licence or control of the licensee to a different owner or entity, will be subject to the approval of the EC.

The law does not specify the process for obtaining the approval or the timeframe. The market experience has, however, been for the EC to require the acquirer to meet and maintain all the qualifications the previous owner satisfied before it was granted a licence. Usually, it would take the EC a minimum of three months to approve any such transactions.

1.5 Central Planning Authorities

The government, through the Ministry of Energy (MoE), is responsible for the supervision and administration of the energy sector in general. The MoE formulates policies within the energy sector. It also monitors and co-ordinates the activities of the various energy sector agencies and market participants such as the EC, PURC, VRA, NEDCo, GRIDCo and ECG.

The MoE carries out its activities by co-ordinating with the technical agencies such as the EC and the PURC, who are mandated to advise the MoE on national policies for the efficient, economical and safe supply of electricity, having due regard to the national economy. The MoE is required to prepare national plans that would ensure that all reasonable demands for energy are met.

The EC and the PURC are the sector agencies that oversee and administer the electricity supply and the development of transmission facilities in Ghana.

The EC is responsible for technical regulation of the power sector and the licensing of the operators within the industry.

The PURC is responsible for approving rates of electricity sold by distribution utilities to the public, and for the monitoring of the quality of the electricity delivered to consumers.

1.6 Recent Changes in Law or Regulation

The Renewable Energy (Amendment) Act, 2020 (Act 1045) was enacted to amend the RE Act, to enable consumers of electricity to benefit from reduced cost of electricity generation from renewable energy sources through competitive procurement instead of the feed-in tariff scheme. Additionally, the amendment established a net-metering scheme to encourage the self-generation of electricity using renewable energy sources on a power-cost-reduction or climate-

change-mitigation basis, and not for income generation.

The Bui Power Authority (Amendment) Act 2020 (Act 1046) was enacted to amend the BPA Act, and granted the BPA the mandate to execute renewable energy projects on behalf of the State, undertake its own renewable energy activities and undertake clean energy alternatives in the country.

1.7 Announcements Regarding New Policies

The government of Ghana has considered merging the PURC and the EC into one entity. According to the government, the merger would enhance efficiency in regulating the energy sector. This would be a material change in that it would essentially place the licensing and price regulations of the energy sector in the hands of a single entity.

Pursuant to the EPA Act and the Ghana carbon market framework, Ghana has established a Carbon Market Office (CMO) to collect and track carbon mitigation activities under the supervision of the EPA. The CMO maintains the Ghana Carbon Registry. The government of Ghana has set up the CMO to enable Ghana to participate in the international carbon market.

1.8 Unique Aspects of the Power Industry

Since the implementation of the RE Act, 124 provisional wholesale electricity supply licences for utility-scale grid-connected renewable energy projects have been granted. However, only three have been developed.

The EC recently lifted the moratorium it had placed on the issuance of wholesale electricity supply licences and permits for utility-scale grid-connected solar PV and wind power plants since 2020.

2. Market Structure, Supply and Pricing

2.1 The Wholesale Electricity Market

Structure of the Wholesale Electricity Market

The Wholesale Electricity Market (WEM) was established for wholesale electricity trading and the associated provision of ancillary electricity services.

The Electricity Market Oversight Panel (EMOP) established by the EC in accordance with the Electricity Regulation 2008 (LI 1937) supervises the operation and administration of the WEM.

Wholesale electricity is governed by the electricity market rules. GRIDCo determines the price of electricity in the wholesale market, considering factors such as capacity and energy, bilateral contracts it has administered, ancillary services and EMOP administrative expenses.

Wholesale Electricity Pricing

Under the law, transmission charges in the wholesale electricity market must be uniform throughout the country. The spot market price for electricity must be based on the system marginal cost of supply and merit-order dispatch. The price of electricity is regulated by the PURC. Thus, even though GRIDCo determines the price of electricity in the wholesale market, these prices are subject to PURC approval.

The PURC plays an umpire role in balancing the interests of utility service providers and consumers when determining tariffs.

2.2 Electricity Imports and Exports

The importation and exportation of electricity to and from other jurisdictions is permitted in Ghana. Ghana has signed the ECOWAS Energy Protocol, which calls for, among others, its members to establish non-discriminatory conditions for energy imports and exports.

Ghana exports power to its neighbouring countries, including Togo, Benin and Burkina Faso. When necessary, Ghana sometimes imports power from Ivory Coast. Ghana's transmission system interconnects with Togo and Benin via a double-circuit 161 kV transmission line connecting the Akosombo Dam to both countries, and with Ivory Coast via a single circuit transmission line between the Prestea and Abobo substation in the Western Region of Ghana.

The importation and exportation of electricity is done through these interconnections.

Also, Ghana is a member of the West African Power Pool (WAPP). The aim of the WAPP is to integrate the national power systems into a unified regional electricity market to promote electricity trading among ECOWAS member states.

2.3 Supply Mix of Electricity

The electricity supply mix in Ghana is mainly composed of hydroelectric and thermal sources amounting to over 99% of the electricity generated in the country. Renewable energy (excluding hydro) comprises less than 1% of the electricity supply.

2.4 Law Governing Market Concentration Limits

Subject to the principal laws already discussed in **1.4 Law Governing the Sale of Power Industry Assets**, there are no concentration limits regarding the percentage of electricity supply that is controlled in the market by any entity.

Electricity supply in Ghana is undertaken by the electricity distribution entities. As mentioned earlier, there are three distribution companies in Ghana. These companies distribute and sell electricity to a designated area within the country. Thus, they have monopoly within the areas in which they supply electricity.

The EC and PURC oversee the activities of these companies to ensure that the supply of electricity is not undertaken in a discriminatory manner.

2.5 Surveillance to Detect Anti-competitive Behaviour

Under the PURC Act, the PURC must promote fair competition among public utilities. The PURC Act does not, however, provide specific regulation and processes for checking anti-competition. Moreover, the PURC has not developed any regulations to control anti-competition within the power sector. The EC is also required to ensure that uniform rules of practice exist for the transmission, distribution and sale of electricity.

The law does not currently provide any enforcement or sanctioning regime for anti-competition within the power sector. It is expected that the proposed passage of a competition law in Ghana will address anti-competition across various sectors including the power sector.

3. Climate Change Laws and Alternative Energy

3.1 Climate Change Law and Policy

Climate Change Laws

The RE Act was enacted to regulate the development, management, utilisation and adequate supply of renewable energy.

The Renewable Energy Master Plan (REMP) has been implemented with the aim of diversifying the energy mix and reducing the country's dependence on biomass as the main fuel for thermal plants. The REMP considers the use of wind, solar and hydro in the energy sector. A successful implementation of the REMP would lead to carbon savings of 11 million tonnes of CO_2 by 2030.

3.2 The Early Retirement of Carbon-Based Generation

Ghana has updated its nationally determined contribution (NDC) in line with the Paris Agreement. Under Ghana's NDC, the government aims to attain an absolute greenhouse gas emission reduction of 64 $MtCO_2e$ by 2030.

The NDC does not indicate the steps that would be taken to achieve this carbon emission reduction. However, it indicates the goals to be attained in the various sectors. Under the power sector, Ghana aims to:

- promote energy efficiency in homes, industry and commerce;
- promote energy-efficient refrigeration and air conditioning;
- reduce carbon electricity generation; and
- expand the adoption of market-based cleaner cooking solutions.

There are no policies or programmes targeted at providing compensation to entities that own coal-fired generation facilities. The scope of the REMP expands beyond Ghana's initiatives captured in the NDC to support projects in biomass utility scale and other distributed and standalone renewable energy.

3.3 Programmes for the Development of Alternative Energy Sources

The government has put in place programmes and measures to develop the use of renewable energy sources in Ghana. The government seeks to make renewable energy 10% of its energy supply by 2030 and to provide universal access to electricity to the remaining communities that still do not have access.

The RE Amendment Act was put in place to enable consumers of electricity to benefit from reduced cost of electricity generation from renewable energy sources through competitive procurement instead of the feed-in tariff scheme. The competitive procurement enables the government to set limits for the capacity and the budget. Further, the high competition leads to cost efficiency, as opposed to with feed-in tariffs, which can be costly.

The establishment of the Renewable Energy Fund by the government provides financial resources for the promotion, development, management and utilisation of renewable energy sources.

The government has also put in place tax exemptions for market operators within the renewable energy sector. For example, all solar panels imported into Ghana are exempt from VAT, and industrial or energy plants, machinery or equipment are exempt from import duty.

The REMP also proposes additional incentives such as exemptions from import duty on plants and plant parts for generating electricity from renewable energy sources, which, when implemented, will provide additional incentives for market operators.

The above incentives are specified under the law. Thus, a market participant does not require any specific contract with the government to enjoy the incentives.

4. Generation Facilities

4.1 The Construction and Operation of Generation Facilities

The EC Act and the RE Act are the principal laws governing the licensing for the construction and operation of generation facilities within the conventional power and renewable energy markets, respectively. Construction and operation of generation facilities are also subject to applicable environmental protection licensing requirements. The laws provide the basic framework for the application of licences for the construction and operation of generation facilities. In addition to this, the EC issues licence and permit application manuals for service providers in the electricity supply industry, which contain an in-depth procedure on the application process. The most recent manual was issued in August 2019.

There are currently also draft regulations on standards for the design, construction, operation and maintenance of renewable energy facilities before parliament for deliberations. When passed, this will add to the legal framework for the construction and operation of generation facilities in the renewable energy sector.

4.2 Obtaining Approvals for the Construction and Operation of Generation Facilities

An applicant intending to construct and operate an electricity generation facility must obtain a wholesale supply-electricity generation licence ("Wholesale Licence"). The process for obtaining the Wholesale Licence is outlined in the Licence and Permit Application Manual prepared by the EC.

The EC is responsible for granting the Wholesale Licence. The process is subject to a detailed assessment and can be divided into five main stages. The EC will only consider the application when the appropriate fee is paid. Fees paid on submission of an application only cover the specific stage in the licensing process.

Stage 1 – Acquisition of Project Certificate Licence

The entity must first register the project with the EC and obtain a project renewable registration licence, which is valid for two years. This licence allows the prospective entity to participate in any competitive tender in the electricity supply industry, and engage with potential off-takers for the purchase or sale of power, financiers, sponsors and grid operators.

Stage 2 – Acquisition of Siting Permit

A siting permit from the EC is required to ensure that the site selected for electricity generation undergoes due diligence for environmental, power evacuation and safety concerns. Before this permit is granted, the applicant may be required to make a presentation before the EC's siting committee.

Stage 3 – Acquisition of Provisional Wholesale Supply Licence

The applicant then submits an application letter to the executive secretary of the EC, completes the appropriate forms and submits the forms with two copies of the following documents:

- land conveyance agreement;
- Environmental Protection Agency (EPA) permit;
- detailed implementation schedule;
- plant and machinery specifications;
- building permit;
- signed power sale and purchase agreement;
- signed engineering, procurement and construction contract (EPC);
- local content and local participation compliance;
- health, safety and environmental plan;
- safety and technical procedures;
- third-party insurance;
- grid impact study report; and
- proof of payment of 10% of initial licence fee.

The EC may request further information where necessary. An application will be deemed to have been successfully submitted if all relevant supporting documents are submitted and the required fees are paid. The EC will acknowledge receipt of the application within ten days of submission and indicate whether the application fully satisfies the requirements.

A provisional licence is issued subject to the applicant achieving its financial close for the construction. The provisional licence is valid for a period of 18 months.

Stage 4 – Acquisition of Wholesale Supply Licence (Authorisation to Construct)

The applicant must apply to the EC for a full licence on achieving financial close. The EC will cancel the licence without an option to renew if the applicant fails to reach financial close before the expiry of the 18-month period.

The EC will decide on the status of an application within 60 days after acknowledging receipt of the last relevant submission. The EC will usually grant the licence if it is satisfied that the proposed generating plant meets an established power demand, has been procured through a competitive bidding process and meets the EC's requirements for supplying electricity safely and efficiently.

Stage 5 – Approval of Operations

After the construction is fully complete and the facility has been commissioned, the entity must submit a commissioning report to the EC for the approval of operations. It is this approval that enables the entity to commence commercial operations.

As part of the process for obtaining the Wholesale Licence, the applicant must also obtain an environmental permit from the Environmental Protection Agency (EPA). The process can be summarised in six steps.

Step 1 – Registration of the undertaking

The applicant will be required to complete an Environmental Assessment Registration (EAR) form. The EAR form is purchased from the EPA's Regional District Office or Head Office. The EAR form must be submitted with the site plan signed by a licensed surveyor.

Step 2 – Screening, scoping

The applicant will then be required to prepare an Environmental Impact Assessment (EIA) study fully recognising the environmental impacts of the proposal and how they would be mitigated. The process includes a scoping exercise, which

involves widespread consultations with interested and/or affected parties to identify key issues of focus and to develop the terms of reference (TOR) for the EIA study. This must be followed by a scoping report with draft terms of reference for the EIA study. Ten copies of the scoping report must be submitted to the EPA for review and acceptance.

Step 3 – Environmental Impact Assessment

Once a scoping report with the TOR is accepted by the EPA, the applicant must then commission a detailed EIA study. The applicant must then submit 12 copies of a draft EIA Report (known as the Environmental Impact Statement) to the EPA for review.

Step 4 – Submission and review of Environmental Impact Statement (EIS)

As part of the review, copies of the EIS are distributed to various places including the EPA library, the relevant District Assembly and EPA Regional Office, and the Ministry of Energy for a particular undertaking; and a public notice is issued in the national and local newspapers about the EIS publication and its availability for public comments within 21 days. The EPA is mandated to conduct the review of the EIS and make its decision known to the proponent within 50 working days.

Step 5 – Public hearing

In certain cases, the EPA may be required to hold public hearings on the proposed project where:

- a notice to the public results in serious public reaction to the commencement of the proposed undertaking;
- the undertaking will involve the dislocation, relocation or resettlement of communities; and
- the EPA considers that the undertaking could have extensive and far-reaching effects on the environment.

If the public hearing is held, the prescribed time for EPA actions and decision-making on the application may be extended.

Step 6 – Environmental Permit Decision (EPD)

Upon submission of a draft EIS, the EPA conducts a review of the report within 25 working days. The outcome of the review may include one of the following:

- environmental permit to be issued upon finalisation of the report and submission of eight hard copies and an electronic copy;
- revision and resubmission of the draft EIA; or
- environmental permit declined (objection to the project).

4.3 Terms and Conditions Imposed in Approvals for the Construction and Operation of Generation Facilities

The EC imposes terms and conditions on licences granted for the construction and operation of generation facilities. The conditions may include limitations and constraints that are determined and imposed by the EC or statutory requirements stipulated by the EC Act.

Amendment or Relaxation of Terms/ Conditions of Approval

An entity may apply to the EC for a variation of a condition of a licence. The application should be made in writing, setting out:

- the decisions to which it relates;
- the grounds for the application; and
- evidence that the EC should take into consideration.

This application must be lodged with the EC 14 days after receipt of a decision on the grant of the licence.

The EC will stay the execution of the condition while it reviews the application, and will make a decision within 30 days of receipt of the application.

Where an entity is still dissatisfied by the EC's review, it has the right to appeal to the Ministry of Energy and subsequently to the courts. The appeal must be made within 14 days after the written notice of the decision(s) on the review.

4.4 Eminent Domain, Condemnation or Expropriation Rights

How Rights to Surface of Land are Obtained

In Ghana, a proponent does not generally have a compulsory acquisition right for electricity generation. However, the government of Ghana may compulsorily acquire land for public benefit under specified circumstances. This may be in furtherance of a public-private partnership project in the power sector.

A proponent for the construction and operation of a generation facility must obtain a siting permit, which is evidence that the site selected for the construction has undergone due diligence for environmental, power evacuation and safety concerns.

To obtain this permit, the proponent must submit to the EC a conveyance agreement and a land title certificate or a search report from the Lands Commission confirming ownership and availability of the land for the project.

Project summary and facility overview

The proponent must provide a summary of the project, which would include the description of the site and descriptions of the major alternatives considered, and the principal environmental and socio-economic consideration of the preferred and alternative sites.

Review of need for proposed project

The proponent should explain the need for the proposed facility, and the factors it relied on in coming to this conclusion. A statement of the expansion plans of the facility would also be required as well as the proposed schedule covering all applicable major activities and milestones of the project.

Site and route alternative analyses

The proponent should have performed a site study evaluating all practicable sites, routes and route segments for the proposed facility.

Technical data

The proponent must submit information on the location, major features and topographic, geologic and hydrologic suitability of site/route alternatives.

Environmental data

The proponent must disclose all environmental effects of the proposed facility on the site and its surrounding environs.

Compensation

If the construction leads to an interest in land being extinguished, the affected persons are entitled to compensation. Compensation must be fair, adequate and prompt. The quantum of compensation would depend on the use, type and location of the area expropriated.

4.5 Decommissioning a Generation Facility

An entity operating a generating facility must implement measures for undertaking the decom-

mission of the facility. The implementation must conform to both the EC's and the EPA's Guidelines.

As part of the process for obtaining the environmental permit, the EIA must address the possible direct and indirect impact of the undertaking on the environment at the pre-construction, construction, operation, decommissioning and post-decommissioning phases.

This decommissioning plan must be submitted to the EC for prior approval. A licensee must usually prepare and submit a decommissioning plan within 12 months of receipt of a licence, if one was not submitted during the application process.

The decommissioning plan must be reviewed at least once every five years during commercial operations, and the entity must submit a report of the review to the EC within three months following the review. Any proposed amendment to a decommissioning plan should also be submitted to the EC.

The EC must be notified at least 60 days prior to the commencement of a decommissioning. The entity must adhere to the decommissioning plan that was approved by the EC.

A licensee must stop decommissioning when asked to do so by the EC, and can only commence with the written consent of the EC. The licensee is responsible for the full cost of decommissioning.

Where a licensee refuses/fails to decommission a plant in accordance with the approved decommissioning plan or contrary to the orders of the EC, the EC shall undertake the decommissioning itself, but at the cost of the licensee.

5. Transmission Lines and Associated Facilities

5.1 Regulation of the Construction and Operation of Transmission Lines and Associated Facilities

The EC Act and EC Manual together govern the licensing for the construction and operation of transmission facilities, and provide an in-depth procedure on the application process.

Also, the Electricity Transmission (Technical, Operational and Standard of Performance) Rules, 2008 LI 1934 establish the requirements, procedures, practices and standards that govern the development, operation, maintenance and use of the high-voltage national interconnected transmission system.

Finally, the National Electricity Grid Code sets out requirements, procedures, practices and standards that govern the operation, maintenance and use of the high-voltage transmission system.

5.2 Obtaining Approvals for the Construction and Operation of Transmission Lines and Associated Facilities

An applicant intending to construct and operate an electricity transmission facility must obtain an electricity transmission licence.

Under the law, only one electricity transmission licence shall be granted at a particular time in the country. Currently, the licence has been granted to GRIDCo.

An applicant for a transmission facility licence should submit an application letter with the following documents:

- completed application form;
- business registration documents;
- ownership and corporate structure, including information on previous licences held or applied for by a director/promoter of the company;
- information on cross-ownership and ring-fencing in other electricity-related businesses;
- the company's business model;
- details of local content and local participation;
- payment of application fee;
- description of transmission network;
- fire certificate; and
- CVs of key personnel involved in the operational aspect of the business.

5.3 Terms and Conditions Imposed in Approvals for the Construction and Operation of a Transmission Line and Associated Facilities

The conditions for a transmission licence include:

- conditions for the safe, reliable economic dispatch and operation of the national interconnected systems for the transmission of electricity;
- transmission of electricity without discrimination to a wholesale supplier of electricity; and
- that tariffs to be charged for the transmission services are subject to the approval of the PURC.

Amendment or relaxation of terms/conditions of approval are the same as in **4.3 Terms and Conditions Imposed in Approvals for the Construction and Operation of Generation Facilities**.

5.4 Eminent Domain, Condemnation and Expropriation Rights

See **4.4 Eminent Domain, Condemnation or Expropriation Rights**.

5.5 Monopoly Rights to Provide Transmission Services

Under the law, only one entity shall be licensed to undertake transmission services. Thus, GRIDCo is the only entity responsible for electricity transmission services in Ghana.

There is therefore no territorial wrangling among transmission entities, since GRIDCo has the monopoly rights in the entire country.

5.6 Transmission Charges and Terms of Service

The Electricity Transmission (Technical, Operational and Standard of Performance) Rules 2008, LI 1934, as mentioned in **5.1 Regulation of the Construction and Operation of Transmission Lines and Associated Facilities**, govern the provision of transmission services. They lay out the obligations of each participant in the transmission process and indicate the contents of the National Electricity Grid Code.

The National Electricity Grid Code sets out the requirements, procedures, practices and standards that govern the operation, maintenance and use of the high-voltage transmission system.

The PURC is responsible for approving rates by transmission facilities.

The PURC determines transmission charges, and the EC establishes the terms of a transmission service. In setting the transmission charges, the PURC will provide a guideline, taking into consideration the interests of the consumer and of the investor, and the cost of production.

The ultimate transmission charge is therefore approved by the PURC.

5.7 Open-Access and Non-discriminatory Transmission

Transmission service is provided on an open-access and non-discriminatory basis.

GRIDCo provides its services to all parties that request transmission. Electricity generators wishing to be connected to the transmission system must enter into a connection agreement with GRIDCo.

6. Distribution

6.1 Law Governing the Construction and Operation of Electricity Distribution Facilities

The EC Act governs the licensing process for the construction and operation of electricity distribution facilities.

The Electricity Supply and Distribution (Technical and Operational) Rules, 2005 (LI 1816) set out the rules or practices for supply and distribution of electricity. They cover issues such as the reliability of the electricity supply, the system voltage, meter, payments, etc.

The Electricity Supply and Distribution (Standards of Performance) Regulations, 2008 (LI 1935) provide the performance benchmarks for electricity supply and distribution in conformity with the provisions of LI 1816.

6.2 Obtaining Approvals for the Construction and Operation of Electricity Distribution Facilities

An electricity distribution licence is required to construct and operate an electricity distribution facility.

The EC is the entity in charge of granting licences for the construction and operation of distribution facilities. The process is subject to a detailed review and assessment and can be divided into four main stages. The Commission will only assess an application when the appropriate fee is paid. Fees paid on submission of an application shall cover the specific stage in the licensing process.

Stage 1 – Acquisition of Project Registration Certificate

The entity must first register the project with the EC and obtain a project renewable registration licence, which is valid for two years. This licence allows the prospective entity to participate in any competitive tender in the electricity supply industry, and engage with potential off-takers for the purchase or sale of power, financiers, sponsors or grid operators.

Stage 2 – Acquisition of Siting Permit

A siting permit from the EC is required to ensure that the site selected for the generation of electricity undergoes due diligence for environmental, power evacuation and safety concerns. Before this permit is granted, the applicant may be required to make a presentation before the EC's siting committee.

Stage 3 – Acquisition of Construction Permit (Authorisation to Construct)

An application letter is submitted with the documents below. The applicant may be required to give a PowerPoint presentation of their overall project:

- land conveyance agreement;
- Environmental Protection Agency (EPA) permit;
- detailed implementation schedule;
- plant and machinery specifications;

- building permit;
- signed EPC contract;
- local content and local participation plan;
- health, safety and environmental plan;
- safety and technical procedures;
- supply agreements; and
- proof of licence fee payment.

Stage 4 – Operational Approval

At this stage, the applicant submits an application letter and the following documents:

- satisfactory commissioning test report;
- fire certificate; and
- operational experience and expertise agreement or operational and maintenance agreement.

6.3 Terms and Conditions Imposed in Approvals for the Construction and Operation of Electricity Distribution Facilities

See **5.3 Terms and Conditions Imposed in Approvals for the Construction and Operation of a Transmission Line and Associated Facilities**.

6.4 Eminent Domain, Condemnation or Expropriation Rights for the Construction and Operation of Electricity Distribution Facilities

See **4.4 Eminent Domain, Condemnation or Expropriation Rights**.

6.5 Monopoly Rights for Electricity Distribution Entities

To some extent, it can be said that distribution entities in Ghana have the monopoly rights to provide distribution service within a specified geographical territory. This is because the main distribution companies (ie, the ECG and NEDCo) already distribute electricity to specified territories.

The ECG's distribution is focused on the southern part of Ghana, while NEDCo's distribution is for the northern part of Ghana.

This method of distribution was not created as a sort of right for these distribution companies, but rather is a result of the proximity of the institutions to the areas they distribute electricity to. The distribution companies must sell electricity in the areas or zones in which they are licensed to operate without discrimination.

6.6 Electricity Distribution System Charges and Terms of Service

As discussed in **6.1 Law Governing the Construction and Operation of Electricity Distribution Facilities**, the Electricity Supply and Distribution (Technical and Operational) Rules, 2005 (LI 1816) set out the rules or practices for supply and distribution of electricity. They cover issues such as the reliability of the electricity supply, the system voltage, meter, payments, etc.

The Electricity Supply and Distribution (Standards of Performance) Regulations, 2008 (LI 1935) provide the performance benchmarks for electricity supply and distribution in conformity with the provisions of LI 1816.

The rate-setting guidelines for electricity distribution and supply published by the PURC set out the principles, methodology and processes for the approval of electricity distribution and supply tariffs by the PURC.

How the Electricity Distribution System Charges

The PURC oversees the setting of charges and other economic terms in relation to the distribu-

tion system. The PURC has published a four-volume rate-setting guideline for electricity distribution companies. The following are the objectives that must be achieved when setting rates.

- Protecting consumer interest: this entails ensuring that customers get value for their money in terms of price, quality and reliability of service. It also ensures fair apportionment of the total supply to the various classes of consumers.
- Investor/utility interest: the rate should enable the utility company to recover its operational and capital expenditure while also earning a reasonable return.
- Reasonable cost of production: the cost of production is examined to exclude unreasonable or inefficient costs.
- Uniformity of prices and population distribution: tariff structure must incorporate uniform rates for all customers regardless of geographic location.
- Economic development of the country: allowance is made for "special rates" for priority consumers whose activities may enhance economic development.

The EC is the responsible institution for establishing the terms of service of electricity-generating institutions.

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