# Energy

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# Ghana

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## Overview of the current energy mix, and the place in the market of different energy sources

Ghana's energy mix consists of a combination of hydroelectric, thermal (predominantly fuelled by natural gas, heavy fuel oil, light crude oil and diesel fuel oil)[1] and renewable energy[2] sources.[3]

Thermal and hydroelectric sources represent approximately 99% of the generation capacity in the country. In 2021, the total power generated was 22,051GWh, with 7,521GWh (34.1%) from hydro sources and 14,408GWh (65.3%) from thermal sources.[4] The remaining 122GWh of power generated, approximately 0.55%, was sourced from other renewable sources, a doubling of the 2020 share of 0.28%.[5]

Hydroelectricity is generated from three power plants: the Akosombo and Kpong Generation Stations, operated by the state-owned Volta River Authority ("**VRA**"); and the Bui Generation Station, operated by the state-owned Bui Power Authority.

Thermal power is generated from a combination of private and public sector outputs operated by VRA and a variety of Independent Power Producers ("**IPPs**"). Three state-owned and six[6] privately owned plants generate energy from the eastern enclave of the National Interconnected Transmission System (the "**national grid**"), while two state-owned and three privately owned plants generate power from the western enclave of the national grid.[7]

Solar and wind energy generation accounts for less than 1% of total power generation in Ghana. The country is, however, taking steps to diversify and increase the weighting of solar, wind and nuclear energy in its energy mix, as described further below.

Generation capacity in Ghana continued to outweigh demand in 2021 as a result of emergency measures taken between 2014 and 2017 to address major energy shortfalls that occurred over the period. By the end of 2021, Ghana had an installed power generation capacity of 5,481MW, with a dependable capacity of 4,975MW[8] and a peak demand of 3,246MW. This demand constitutes an increase of approximately 5% over 2020.[9]

## Changes in the energy situation in the last 12 months that are likely to have an impact on future direction or policy

<u>The energy transition and the establishment of the National Energy Transition Committee</u>

In November 2021, Ghana was among 197 nations that adopted the Glasgow Climate Pact in following the conclusion of the most recent UN Climate Conference, COP26.[10]

As a member state of the United Nations Framework Convention on Climate Change, Ghana originally submitted its Nationally Determined Contribution ("**NDC**") target in

September 2015, committing to lowering its greenhouse gas emissions by at least 15% by 2030.[11] Ghana reaffirmed this commitment and updated its NDC in accordance with the Paris Agreement in September 2021, shortly before COP26.[12] Ghana committed to implementing 31 mitigation and adaption actions across seven economic areas, which it noted it expected to generate an absolute greenhouse gas emission reduction of 64 MtCO2e. These measures include the scale-up of renewable energy penetration by 10% by 2030.[13]

The Government's Renewable Energy Master Plan was published in 2019 to support the original NDC strategic goal. That master plan – described in more detail in the 2020 version of this chapter – commits to increasing the proportion of non-hydro renewable energy in the national energy generation mix from 42.5MW to 1363.63MW and to accumulating carbon savings of about 11 million tonnes of $CO_2$ by 2030. However, it has not been updated since 2019.

Nevertheless, in December 2021, the Government established the National Energy Transition Committee ("**NETC**").[14] The NETC is currently conducting a nationwide consultation on Ghana's energy transition in order to develop a national energy transition plan, a policy document on steps the country can take to successfully navigate global energy transition.

Ghana has been a vocal advocate of the need for a *just* energy transition that does not prevent Ghana from capitalising on its own natural resources or from obtaining the funding necessary for hydrocarbon developments. In 2021, the Government of Ghana announced its intention for the Ghana National Petroleum Corporation ("**GNPC**") to acquire a 37% stake in the Deepwater Tano Cape Three Points (DWTCTP) block and 70% of the South Deepwater Tano (SDWT) block from Aker Energy and AGM Petroleum Limited, respectively. In the memorandum presented to Parliament in respect of the transaction, the desire to avoid stranded or underdeveloped assets in response to the global energy transition was a key motivation behind the transaction.[15]

The new energy transition plan will need to carefully balance the sometimes competing objectives of development and lowering emissions and take into account the interests of all stakeholders.

Ongoing impact of the conflict in Ukraine

In common with many countries, Ghana is continuing to feel the impact of the ongoing conflict in Ukraine.

From a broad economic perspective, as the International Monetary Fund has noted, "*the global economic shock caused by the war in Ukraine is hitting Ghana at a time when the country is still recovering from the Covid19 pandemic shock and with limited room for manoeuvre. These adverse developments have contributed to slowing economic growth, accumulation of unpaid bills, a large exchange rate depreciation, and a surge in inflation*". As of July 2022, the year-on-year inflation rate in the country stood at 31.7%, according to the Ghana Statistical Service,[16] and the Ghanaian Cedi had depreciated 25.5% to the dollar year-on-year.[17]

In the energy sector specifically, the conflict in Ukraine has been a double-edged sword.

Although it is a hydrocarbon exporter, Ghana relies heavily on imports of refined petroleum products for its domestic consumption, particularly as production at Ghana's only refinery, the Tema Oil Refinery, has been interrupted since 2018. The availability – and cost – of these products has been severely affected by the conflict in Ukraine and the consequent sanctions on Russia. To help mitigate these supply challenges, the Government and the Bank of Ghana have implemented the Special Forex Auction Mechanism.[18] This multiple-price forward foreign exchange auction is intended to minimise the uncertainty of the future availability of foreign exchange and aid price discovery, especially for the general pricing window within the downstream petroleum sector.[19] Under the mechanism, the Bank of Ghana auctions an amount of foreign exchange (USD100 million for the April 2022 window) on the local interbank foreign exchange market exclusively to licensed Bulk Oil Distribution Companies ("**BDCs**").[20] In order to participate, BDCs must provide evidence of a contract indicating volumes and cost of petroleum products and their payment due date. BDCs are required to deposit all sales proceeds into an escrow account with their bidding banks for the window in which they participate in an auction.

On the other hand, this tightening of supply has led to the highest oil prices seen for many years and a recovery for oil and gas producers in the country, which has led to some increased appetite for investment and some increased activity. For example, Tullow has continued the multi-year drilling programme that it commenced in April 2021 and pledged "*a great deal of activity at our flagship Jubilee field with investment in new infrastructure and new wells to grow production in the near term*…",[21] and both Tullow and Petro SA exercised their pre-emption rights in respect of Occidental Petroleum's sale of its Ghanaian assets to Kosmos Energy to increase their holding in the Jubilee and TEN fields.

Nevertheless, challenges remain, and international sanctions on Russia are causing difficulties in the industry. In August, Aker Energy announced that it would postpone the submission of its development plan for its Pecan field, amid concerns about the impact of sanctions on Russian major, Lukoil, which holds a 38% interest in the block.[22]

Increased focus on gas

The energy transition agenda and Ghana's NDC commitments are leading to an increased focus on gas in-country, given its role as a lower-carbon transition fuel.

In July 2022, for example, Genser Energy Ghana Limited, a licensed IPP, announced that it had secured funding to undertake various gas midstream projects in Ghana, including a 100km natural gas pipeline to Kumasi, Ghana's second-largest city, a 200mmscfd gas conditioning plant at Prestea, Ghana and a Natural Gas Liquid storage terminal at the Takoradi Port.[23] The availability of cheaper and readily accessible piped natural gas in Kumasi and the central belt of Ghana via the new pipeline is intended to help contribute to Ghana meeting its national climate change targets on emission reduction if industries switch from fossil fuels to natural gas as a low-carbon intensive fuel. This follows the commencement of development of the Tema LNG facility in 2021, which we discussed in last year's chapter.

Fitch Solutions predicts that Ghana's gas production will grow by 2.0% in 2022, driven by non-associated gas from the Eni-operated Sankofa/Gye Nyame fields and increased gas offtake by the Government of Ghana from the Tullow-operated Jubilee and TEN fields.

A key part of achieving this increased offtake will be the finalisation of new offtake arrangements. The gas delivered from the Jubilee and TEN fields since 2015 has been free to Ghana as agreed under the Foundation Volume Gas Sales Agreement (FVGSA) currently in place between Tullow, its partners and the GNPC. This arrangement required the contracting parties to deliver 200bcf of "foundation gas" and this obligation is close to being satisfied. In its most recent annual industry report published in August 2022, the Ghana Upstream Petroleum Chamber noted that the 200bcf of foundation gas is expected to be fully delivered by the end of 2022.

Tullow has announced that it is in discussions with the Government of Ghana and the Ghana National Gas Company to finalise the Post Foundation Volume Gas Sales Agreement, which would allow the development of the approximately 2tcf of associated and non-associated gas resources it has identified at Jubilee and TEN.

Energy demand recovery

In last year's edition, we noted that domestic energy demand had initially declined during the impact of the COVID-19 pandemic and the three-week lockdown period imposed in April 2020. However, since then, domestic energy demand levels have been on a steady rise. By the end of 2020, demand levels had surpassed the 2019 system peak demand by 10.2%. System peak demand for 2021 increased further to 3,246MW, representing an increase of 5% over 2020 peak demand.[24] Installed generation capacity also increased by approximately 2% between 2020 and 2021.[25] Electricity consumption in Ghana is now expected to grow at a year-on-year average rate of 3.1% from 2022 to 2031.[26]

Development of transmission infrastructure

One contributing factor to the forecasted increase in energy demand should be an improvement in Ghana's transmission infrastructure.

In June 2022, the U.S. Government's Millennium Challenge Corporation ("**MCC**") and the Government of Ghana announced the completion of the five-year, USD316 million MCC-Ghana Power Compact, following the inauguration of the Kasoa Bulk Supply Point.[27] Under this arrangement, the MCC-Ghana Power Compact invested in new power infrastructure and reforms intended to provide more reliable, affordable electricity to Ghanaians. This included the construction of four power substations: the Pokuase BSP; the Kasoa BSP; the University of Ghana Medical Center Primary Substation at Legon; and the Ellen Moran Primary Substation at Kanda.

Such an improvement would be very welcome. In 2021, the total system transmission losses were 1,076GWh, an increase of some 21% over that in 2020 and, at 5% of the electricity transmitted, above the 4.1% target benchmark set by the Public Utilities Regulatory Commission ("**PURC**").[28]

## Developments in government policy/strategy/approach

Energy sector reform programme

The Government continues to implement the Energy Sector Recovery Program ("**ESRP**"), initiated in May 2019 with the goal of improving financial sustainability within Ghana's energy sector. The ESRP is being implemented in three phases over the course of five years. The first phase, which began in 2019, included the setting up of an Energy Sector Recovery Task Force, tasked with reducing shortfalls in energy sector revenue caused by inefficient management. The second phase, which is currently in progress, aims to resolve the difficulties posed by the take-or-pay generation capacity arrangements and the oversupply of gas by matching supply and demand, renegotiating terms with IPPs, completing gas infrastructure, and tackling pricing and policy actions to reduce gas tariffs in the power sector. The third phase, stated to take place before 2023, is to be developed by the Energy Sector Recovery Task Force for review and approval by the Cabinet.

During the first phase of the ESRP, in 2019, the Government imposed a moratorium on the signing of new power purchase agreements ("**PPAs**") and gas supply arrangements and suspended all ongoing negotiations on such agreements until further notice or unless properly exempted by the Government on a case-by-case basis.[29] The Government concurrently announced that it would no longer accept unsolicited proposals in relation to the supply of power or gas.

Since then, the Government has successfully renegotiated terms with six IPPs (Karpower, Cenpower, Early Power, Twin City Energy, AKSA Energy and Cenit). According to the

Government, the renegotiated agreements are expected to produce savings estimated at USD13.2 billion over the life of the PPAs. This is to be achieved through a combination of reduced capacity and energy charges.

However, not all renegotiations have been successful. Ghana Power Generation Company Ltd, an IPP that entered into a PPA with the Government during a period of major power disruptions in June 2015, obtained an arbitration award of USD134 million with interest of USD30 million against the Government in early 2021, for early termination of its PPA, as discussed in last year's chapter.

The general moratorium on execution of new PPAs also remains in place.

In June 2019, E.S.L.A. PLC, a special-purpose vehicle ("**SPV**") established with the purpose of resolving energy sector debts, announced the successful issuance of a 10-year Ghana Cedi bond to mature in 2029. In March 2020, E.S.L.A. PLC announced the reopening of a 12-year Ghana Cedi bond to mature in December 2031. At the end of 2021, the value of outstanding bonds amounted to GH¢8,700.6 million.[30] Proceeds from the bonds are to be used to settle part of the outstanding debts and other obligations due to suppliers and other creditors within the energy sector.

Review of electricity tariffs

The PURC, which is responsible for setting utility tariffs in Ghana, has announced an upward adjustment of 27.15% to the average end-user electricity tariffs. Small and medium-scale businesses, however, will pay lower tariffs than the residential consumer class. The Electricity Company of Ghana had earlier proposed an increase of 148% in tariffs for the year 2022, citing high costs of operation. The tariff review was influenced by the rise in the cost of power, affected by the growth in demand as well as inflation and the Ghana Cedi/U.S. dollar exchange rate. According to the Ghana Statistical Service, the general price level in July 2022 was 31.7% higher than July 2021.[31]

The Petroleum Hub Development Corporation

In September 2021, the Petroleum Hub Development Corporation ("**PHDC**") was inaugurated and tasked with setting up an integrated petroleum and petrochemicals hub in Jomoro in the Western Region of Ghana, for the processing of crude oil and raw natural gas into petroleum and petrochemical products for the purpose of trading, storage, transportation, and distribution.[32]

Key infrastructure of the Petroleum Hub will include: three refineries with a total of 900,000bpsd minimum; five multipurpose petrochemical plants with a 90,000bpsd capacity to produce fertilisers, lubricants, and cosmetics; tank farms with 10 million cbm of storage capacity; and at least two jetties and four discharge points to be built across three phases.[33]

The total estimated investment required is USD60 billion. Investments for key infrastructure will be solely private sector investments while ancillary infrastructure will be done through joint ventures between PHDC and the private sector.[34]

Sustainable Use of Natural Resources and Energy Finance programme

The Energy Commission (in collaboration with Agence Française de Développement ("**AFD**") and the Ghana Commercial Bank ("**GCB**")) has developed a "Technical Assistance Facility" to support renewable energy project preparation and training for partner institutions on climate-smart technologies.[35] The Technical Assistance Facility forms part of a larger initiative, the Sustainable Use of Natural Resources and Energy Finance programme ("**SUNREF**"), which aims to mobilise Ghanaian financial institutions to finance private sector investments in green technologies in Ghana.[36] Partner financial institutions provide green loans, investment grants and technical assistance to finance small and medium-scale renewable energy projects in Ghana. The SUNREF Ghana programme promotes the development of a low-carbon and resilient economy by financing solar rooftops, electric vehicles, green buildings and other investments for individuals and companies.

In April 2022, AFD and GCB signed a USD13.7 million Credit Facility Agreement and a EUR1 million Grant Financing Agreement from the European Union, to support local businesses towards the development of energy efficiency and renewable energy projects under SUNREF.[37]

Drive Electric Initiative

The Energy Commission is also collaborating with the Ministry of Energy to promote electric vehicles as a means of creating demand and driving the productive utilisation of excess electricity in Ghana's production mix under the Drive Electric Initiative.[38] The initiative was launched by the Government in October 2019 pursuant to the Sustainable Development Goals. The Energy Commission held its maiden "E-Mobility Conference and Exhibition" in September 2021. The Minister of Energy stated during the conference that the Ministry of Energy is working with Ghana's Ministry of Finance to remove import duties for fully electric vehicles to accelerate the adoption of electric vehicles.[39] As at August 2022, the Electricity Company of Ghana in collaboration with a private developer has installed four public charging systems for electric vehicles.[40]

## Developments in legislation or regulation

Petroleum (Local Content and Local Participation) (Amendment) Regulations, 2021 (L.I. 2435)

In February 2022, the Petroleum Commission introduced proposed amendments to the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204) through the Petroleum (Local Content and Local Participation (Amendment) Regulations, 2021 (L.I. 2435).

Under the existing regulations, if a non-indigenous Ghanaian entity wished to provide goods or services to a contractor, a subcontractor, licensee or other allied entity in the upstream industry (or the Ghana National Petroleum Commission itself), it is required to incorporate a joint venture with an indigenous Ghanaian company in which the indigenous Ghanaian company holds at least a 10% equity participation.

The new amendment adds an additional provision, which provides that, notwithstanding the requirement referred to above, the Petroleum Commission may direct that:[41]

- an indigenous Ghanaian company enters into a "channel partnership agreement" or a "strategic alliance arrangement" with a non-indigenous Ghanaian company; or
- a non-indigenous Ghanaian company enters into a "channel partnership" or "strategic alliance arrangement" with an indigenous Ghanaian company,

where (in each case), the Petroleum Commission is of the opinion that such channel partnership or strategic alliance will deepen local content and local participation and maximise technology transfer to the indigenous Ghanaian company.

The amended regulations define:[42]

- a "channel partnership agreement" as "*an arrangement between an indigenous Ghanaian company and a non-indigenous Ghanaian company including a distributor, a vendor, a retailer, a consultant, a system integrator, an original equipment manufacturer or a value-added reseller to market and sell the products, services or technologies of the non-indigenous Ghanaian company in the country*"; and

- a "strategic alliance arrangement" as "*an arrangement between a non-indigenous Ghanaian company by which the responsibilities of each partner are clearly defined and the partners agree to share resources to undertake a specific mutually beneficial project whilst each retains their independence*".

For the purposes of the amended regulations, an indigenous Ghanaian company is a company wholly owned by a Ghanaian citizen, with Ghanaian citizens holding at least 80% of executive and senior management and 100% of the non-managerial positions.[43]

In addition, the amended regulations now include a schedule of specific goods and services reserved exclusively for indigenous Ghanaian companies and a schedule of commodity chemicals, the supply of which is reserved exclusively for indigenous Ghanaian companies.

In explaining the rationale for the proposed amendments, the Petroleum Commission noted that despite the improvements resulting from the passage and implementation of the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), a value chain analysis of the petroleum upstream sector revealed a deficit in the labour market of essential skills, know-how, and the lack of capacities and capabilities of local companies to support petroleum activities, as well as the domination of non-indigenous firms in critical sectors of the value chain.[44] The Petroleum Commission hopes that the formation of a channel partnership or strategic alliance arrangement will result in a deeper involvement of indigenous Ghanaian companies in day-to-day operations and a greater transfer of skills and know-how, rather than the indigenous Ghanaian company simply being an inactive minority shareholder of the joint venture.

<u>Ratification of resolution establishing the African Petroleum Producers' Organization</u>

In June 2022, Ghana's Parliament ratified the resolution establishing the African Petroleum Producers' Organization ("**APPO**"). The APPO aims include promotion of co-operation among its member countries in hydrocarbon exploration, production, refining, petrochemicals, manpower development, acquisition and adaptation of technology.[45] The organisation serves as a platform for harmonisation of efforts, collaboration, and sharing of knowledge and expertise among African oil-producing countries.[46]

The ratification of Ghana's membership affords the country access to the Africa Energy Investment Corporation ("**AEICorp**"), for mobilising private sector funds towards the development of Ghana's Petroleum Hub through eligible African and international financial institutions.[47]

As a member, Ghana will have the right to participate in the critical decision-making of the organisation, access investment through AEICorp, and leverage the organisation to fund the development of Ghana's emerging petroleum industry for optimal benefits.

<u>Proposed downstream local content regulations</u>

For a number of years, there have been proposals for the introduction of local content and participation regulations for the downstream oil and gas sector, which have continued to be discussed in 2022.[48] This major shift in policy may see importation of refined petroleum products into Ghana and their distribution and sales within the country being exclusively reserved for Ghanaian businesses. No specific timelines have been set as yet for the passage of these regulations as consultations are ongoing.

Amongst other things, the draft proposed regulations for local content in the downstream petroleum sector require all goods and services to be procured from indigenous Ghanaian companies where possible and limit the award of bulk supply contracts for petroleum products, goods and services to the power generation, upstream petroleum, construction, quarry and mining industries to indigenous Ghanaian companies.[49]

The current draft regulations do include a saving provision that appears to intend to allow the continued operation of pre-existing, foreign-owned petroleum service providers, provided that their ownership at the passing of the proposed regulations remains the same;[50] however, the effectiveness of this provision remains uncertain.

### Judicial decisions, court judgments, results of public enquiries

*Springfield Exploration and Production Ltd ("**Springfield**") v. Eni Ghana Exploration and Production Ltd ("**Eni**") and Vitol Upstream Ghana Ltd ("**Vitol**")* [2021] DLHC10548

Eni is the operator of the Sankofa field, located in the Offshore Cape Three Points block, which began production in 2017. Vitol also holds an interest in the Offshore Cape Three Points block, along with the GNPC. Springfield is the operator of the Afina field, located in the West Cape Three Points 2 block. The Afina field is not yet producing. Springfield completed a 3D seismic data valuation and drilled one exploration well, Afina-1x, in 2018.

In April 2020, the Minister of Energy issued a directive under section 34 of the Petroleum (Exploration and Production) Act, 2016 ("**Act 919**") requiring the Sankofa field and the Afina field to be unitised, on the basis of a purported finding that the accumulation of petroleum in the Afina and Sankofa fields is connected, extending across both blocks, and requiring Eni, Vitol, and Springfield to enter into a unitisation agreement accordingly.

In July 2020, Springfield commenced proceedings against Eni and Vitol in the Accra High Court, seeking, amongst other things, an order compelling Eni and Vitol to comply with the Minister of Energy's directive to unitise the Sankofa and Afina fields and develop them as one unit, and an order requiring income, profits and other funds due to Eni and Vitol from exploration and production at the Sankofa field to be paid to Springfield. This substantive case is ongoing, and no substantive judgment has yet been issued.

In October 2020, on the basis that the Minister of Energy considered that no significant progress had been made by the parties to voluntarily agree the terms of a unitisation, the Minister of Energy issued a further directive to Eni, Vitol and Springfield imposing terms and conditions for the unitisation.

Eni and Vitol contested both of these directives, including on the grounds that Springfield had not provided sufficient data or supporting evidence to substantiate a finding that: the Sankofa and Afina fields were in dynamic hydrocarbon communication; the Afina discovery was commercially recoverable (in particular, that commercial flow rates could be achieved); or unitisation would be the appropriate strategy for development to ensure optimum recovery.

In April 2021, Eni and Vitol issued judicial review proceedings in Ghana to challenge the legality of the Minister of Energy's directives.

On 25 June 2021, the Commercial Division of the Accra High Court issued a decision following an application by Springfield for interim relief in respect of Springfield's own proceedings, as described above, which ordered that 30% of all revenues accruing to Eni and Vitol from exploration and production activities from the Sankofa field must be preserved and paid into an interest-bearing escrow account until the substantive case is determined.

Having unsuccessfully appealed the High Court's preservation ruling, Eni and Vitol, on 16 August 2021, filed a notice of arbitration under the UNCITRAL rules pursuant to the arbitration provisions of the Offshore Cape Three Points petroleum agreement.

Eni and Vitol assert that the Minister of Energy's directives to require unitisation (amongst other matters) constitutes a breach of the stabilisation regime under the Offshore Cape Three Points petroleum agreement and a breach of Ghanaian and international law, including that it is contrary to the procedure for unitisation set out in Act 919 and the Petroleum (Exploration and Production) (General) Regulations, 2018 (L.I. 2359) passed thereunder.

Eni and Vitol are seeking damages together with a declaration that the unitisation directive and subsequent related directives by the Minister of Energy represent a breach of its petroleum agreement with Ghana and orders preventing all parties from taking further action to implement the unitisation.

On 21 October 2021, the judicial review application referred to above was dismissed on the basis that the Minister of Energy's directives did not fall short of Ghana's constitutional standard for administrative justice (i.e., the directives were not unfair, arbitrary, and unreasonable).

On 20 June 2022, Springfield filed an injunction application seeking to restrain the Ghana National Petroleum Authority, Ministry of Energy and Ministry of Finance from making further payments to Eni and Vitol for gas supplied to the state from the Sankofa field. The Accra High Court granted the application and directed the injuncted parties to file accounts of all payments they have made to Eni and Vitol to the court.

* * *

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NanaAma Botchway is the founder and managing partner of N. Dowuona & Company. She has advised on significant investments and divestments in Ghana and other parts of Africa, including the GBP117.7 million acquisition of a multinational utility-scale solar company by Europe's largest renewable energy generator, advising on the proposed acquisition of a Ghanaian oil exploration company by a major international oil company as part of a USD8 billion African asset acquisition, and conducting due diligence on the restructuring of a USD135 million loan to a multinational oil and gas service company. Additionally, she has advised companies on regulatory and commercial considerations for operating in Ghana's upstream oil and gas and power generation industries. She also advised the IFC in connection with the Ghana Power Compact with the Millennium Challenge Corporation.

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Alex Calloway is an innovative transactional lawyer with a wealth of experience advising multinational corporates, private equity funds, and other investors on complex and high-value acquisitions and disposals, joint ventures, and other global transactions.
In the energy sector, Alex has advised on transactions with a total value of over USD70 billion, including advising: TotalEnergies on its acquisition of Maersk Oil & Gas for USD7.45 billion, settled in Total shares and assumed debt, and its acquisition of Chevron Denmark; Occidental Petroleum on its USD57 billion acquisition of Anadarko and the sale of its interests in the Jubilee and TEN fields to Kosmos Energy (for USD550 million) and the Ghana National Petroleum Corporation (for USD200 million); Neptune Energy on its USD3.9 billion acquisition of ENGIE E&P International; ArcLight Capital Partners on its USD900m acquisition of the SIRGES and FUKA gas pipelines and the St Fergus Gas Terminal; and Rolls-Royce on the sale of its energy gas turbine business to Siemens for GBP1 billion.

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Elorm Kwame-Kota Zormelo is an associate at N. Dowuona & Company. His recent work includes conducting due diligence on the GBP117.7 million acquisition of a multinational utility-scale solar company by Europe's largest renewable energy generator, advising on the proposed acquisition of a Ghanaian oil exploration company by a major international oil company as part of a planned USD8 billion African asset acquisition, and conducting due diligence on the restructuring of a USD135 million loan to a multinational oil and gas service company. In addition to this, he has advised various companies on regulatory requirements for operating in Ghana's upstream oil and gas industry, including local equity participation and content requirements for foreign investors, and has advised on the regulatory and commercial considerations for establishing electricity power generation companies in Ghana.

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