ghana’s national energy transition framework and what it means for businesses and investors

n. dowuona & co

framework

Last year, we published a series of articles considering the outcomes of the 26th UN Climate Conference, COP26, and their likely impact on Ghana and its energy industry in particular.

Ghana was one of the keenest African participants at COP26, sending a record number of delegates, and shortly before the summit, Ghana reaffirmed its Nationally Determined Contribution commitment to lower its greenhouse gas emissions by at least 15% by 2030.

At COP27 in November, Ghana was again a major participant, with the President, Nana Akuffo Addo, delivering a keynote speech.

Alongside the conference, the President launched Ghana's National Energy Transition Framework (the "Framework") developed by the National Energy Transition Committee. The Framework is the product of a year-long consultation programme. It presents a set of long-term policy recommendations to help Ghana achieve its NDC commitment by decarbonising the energy sector and reaching net-zero emissions by 2070 while ensuring socio-economic growth and using Ghana's natural resources.

This article takes a closer look at the Framework and what it means for Ghana's energy transition and for businesses looking to capitalize on opportunities in the sector.

policy background – the baseline model

For a number of years, Ghana has had a patchwork of policies in place that are intended to help reduce greenhouse gas emissions and increase the share of renewable energy. These include, amongst others:

- the Renewable Energy Master Plan (February 2019);
- the Strategic National Energy Plan (July 2019, covering 2020-2030);
- the Ghana Integrated Power Sector Master Plan (November 2019);
- the Gas Master Plan (December 2015); and
- the National Infrastructure Plan by the National Development Planning Commission (NDPC) (originally, October 2017).

These policies set out a number of ambitious targets. For example, the Renewable Energy Master Plan (REMP) sets a target to increase the proportion of renewable energy (as defined in the Renewable Energy Act, 2011 (Act 832) at the time, which included hydropower not exceeding 100 MW) in the national energy generation mix from 42.5 MW in 2015 to 1363.63 MW in 2030 and the Strategic National Energy Plan (SNEP) targets renewable energy (again as defined in Act 832 at the time) constituting 10% of the energy mix by 2030.

"At COP27, in November, Ghana was once again a major participant, with the President, Nana Akuffo Addo delivering a keynote speech. "

policy background – the baseline model

But there is still some way to go until these targets are hit. Based on the 2022 National Energy Statistics, thermal and large-scale hydroelectric sources still represent approximately 99% of the generation capacity in the country, with only 122GWh of power generated, approximately 0.55%, being sourced from non-hydro renewable sources. Although Ghana's Energy Commission has issued well over 100 licenses for the development of renewable energy projects, only a handful have been developed to date, with many struggling for funding and with technical, commercial and implementation challenges.

In addition, as the Framework itself notes, none of these existing policies were formulated with the specific net-zero target in mind.

Accordingly, the National Energy Transition Committee used these existing policies as the baseline and modelled their impact to form its "No Policy Intervention Scenario" (NPI) and put together the Framework to enhance this existing policy regime.

"In addition, as the Framework itself notes, none of these existing policies were formulated with the specific net-zero target in mind. "

the national energy transition framework

The Framework is a long-term plan, which covers the years 2022 to 2070 and combines existing policies with new measures to achieve a "just and equitable" transition.

In his foreword to the Framework, the President expressly acknowledges that "Ghana is not oblivious to the need to balance her commitment to net zero, and the urgent need to transform her economy through the exploitation of the natural resources with which she has been endowed" and the Framework seeks to achieve that balance. The Government has shown a clear intention to not abruptly abandon the exploitation of the country's oil and gas resources, which are deemed critical to the economy.

To achieve this just and equitable transition, the Framework's specific objectives are to:

- identify viable pathways for the country to transition towards carbon-neutrality within a secure and efficient energy sector;
- harness the opportunity for a fair and equitable energy transition as the country relies on carbon-intensive industries for economic growth;
- evaluate the impacts of energy transition on the economy;
- develop medium to long-term targets and policies for achieving a carbon-neutral economy; and
- estimate the cost of implementing the framework and identify financing options for the realization of the stated objectives.

This Framework highlights four key policy options for consideration to achieve these goals.

the national energy transition framework

1. decarbonization

The central pillar of the Framework is decarbonization, with the target set to decarbonize the energy sector and transition to 100% clean energy by 2070. To do so, the Framework recommends a number of steps, including requiring greenhouse gas emitting industries to establish tree plantations to offset emissions, encouraging fossil fuel companies to invest in renewable energy projects, promoting the use of electric vehicles and hydrogen fuel and increasing the share of renewables in the energy generation mix amongst other things.

Perhaps most interestingly for existing energy businesses operating in Ghana, the Framework echoes the Government's previous messaging on the increasing relevance of natural gas as a transition fuel, both for electricity generation and industrial heating and transport. This focus reflects the global recognition of the role that natural gas needs to play in the energy transition – for example, the European Commission's endorsement of natural gas as a "transition" fuel under its sustainable finance taxonomy in February last year.

This should be good news for Ghana. The country sits on significant gas reserves. Based on the latest figures from the Ghana National Petroleum Corporation, Ghana's gas reserves in producing fields stands at approximately 1,395.74 bcf and there have been a number of promising exploration discoveries in recent years. In 2019, for example, Eni announced its Akoma gas and condensate discovery in Cape Three Points Block 4, estimating a volume of between 550 and 650 bcf of gas and 18 to 20 mmbbl of condensate. With gas demand growing as a result of its use as a transition fuel, in its most recent Ghana Oil & Gas Report, Fitch predicts that Ghana's gas demand will grow at a year-on-year rate of 5.2% in 2023, with production growing alongside at around 2% year-on-year.

In addition to gas, the framework also recommends scaling other renewable sources such as nuclear energy and hydrogen fuels in.

2. energy access and security

The flip-side to the coin for a just energy transition is energy access and security. The Framework recognizes that Ghana's energy industry cannot be decarbonized at the expense of broadening access to energy and increasing security and reliability of supply. The Framework recommends ways to achieve both objectives. These include: expediting oil and gas exploration and production to fund the development of clean energy technologies, promoting the use of LPG especially in rural areas to reduce dependency on wood fuel and promoting sustainable woodlot as biomass fuel. The Framework also specifically called out the need to exploit Ghana's lithium, graphite and other critical green minerals to develop the clean energy industry. A recent World Bank Group report suggested that production of lithium will need to be significantly ramped up by more than 450% by 2050 to meet demand from energy storage technologies.

the national energy transition framework

This is a big opportunity for Ghana to broaden and grow its historically gold focused mining sector. Just last month, Atlantic Lithium, the AIM listed lithium focused mining company that is aiming to develop Ghana's first lithium producing mine announced an upwards increase to its mineral resource estimate for its flagship Ewoyaa lithium project, up to 35.3 mt at 1.25% Li_2O.

3. Energy Efficiency

Thirdly, the Framework recommended an increased focus on energy efficiency. Its recommendations include intensifying the promotion of energy efficiency programmes, ensuring the use of the most efficient lamps for various lighting needs, encouraging the use of clean cookstoves, promoting the construction of energy efficient buildings and promoting energy efficiency in small and medium scale enterprises.

4. Cross-cutting

Finally, the Framework noted the need to decentralize the energy transition implementation process and take a "cross-cutting" approach, across sectors, stakeholders and between the private and public sector. The Framework recommended establishing an energy transition fund; incorporating energy transition into the curricula of academic institutions as well as promoting alternate livelihood programmes for persons affected by the energy transition.

challenges to implementation

The Framework presents a bold set of targets for Ghana's energy transition and an ambitiously broad set of recommendations to achieve them. But implementing these recommendations will be challenging. And the biggest challenge of all is funding.

Globally, there is a significant shortfall in funding for the energy transition in Africa. Of a cumulative USD 546 billion total global climate finance provided in 2018, only USD 14 billion was spent in Sub-Saharan Africa. In Ghana specifically, the Framework estimates that Ghana a staggering amount of USD 562 billion will be required to implement the Framework through to 2070. Given Ghana's ongoing economic challenges, sourcing this funding will not be an easy task.

The Framework recognises this and proposes that financing strategies will need to include the mobilisation of both public and private finance; establishing public-private partnerships to co-finance the development of transition infrastructure and renewable energy projects; and facilitating access to domestic financing for small and medium enterprises, particularly in the end-use technologies sector.

challenges to implementation

However, the market for private sector funding is global. Ghana will need to be globally competitive to attract private sector funding for energy transition infrastructure, renewable energy projects, and the gas developments necessary to facilitate its use as a transition fuel. To do so, we will need to overcome a number of hurdles, including:

1. Lack of infrastructure:

Ghana currently has a significant lack of necessary energy transition infrastructure. The Framework notes that around USD 76 billion of investment is required for electricity transmission and distribution infrastructure and UDS 14.5 billion for additional gas infrastructure, including an upgraded distribution and transmission network. In its recent 2020 Ghana Upstream Petroleum Industry Report, the Ghana Upstream Petroleum Chamber noted that significant improvements in gas transmission infrastructure would be required before Ghana's existing producing fields could produce additional gas.

2. Inadequate grid capacity:

In particular, electricity transmission infrastructure needs significant investment. Currently, the country produces more power than it can actually use. This was the key driver of the Government's implementation of the Energy Sector Reform Programme (the ESRP). The ESRP was initiated in May 2019 to deal with the challenges posed by oversupply from Independent Power Producers (IPPs), who had signed take-or-pay based Power Purchase Agreements (PPAs). In 2021, for example, 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). Ghana's GRIDCO generally lacks the budget and financial capacity to build the necessary infrastructure for the transition alone, and this is exacerbated by outstanding debts in the sector: according to its recent State of the Agencies report, GRIDCO was owed approximately GH¢ 2.7 billion by Ghana's the two major power distribution companies.

"The Framework presents a bold set of targets for Ghana's energy transition and an ambitiously broad set of recommendations to achieve them. But implementing these recommendations will be challenging. And the biggest challenge of all is funding."

challenges to implementation

2. Continued moratorium on renewable energy projects:
During the first phase of the ESRP, in 2019, the Government imposed a moratorium on the signing of new 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. This moratorium is currently ongoing, and the Government has confirmed that it will no longer accept unsolicited proposals in relation to the supply of power or gas.

3. Perception of challenging legal and regulatory environment:
in recent years, as Fitch's latest Oil & Gas Report notes, Ghana's energy sector has been plagued by increased investor perception of an unclear, unstable and challenging regulatory environment.

- On the upstream side, for example, international investors have expressed concerns about the ongoing unitization dispute between Springfield Exploration and Production, on the one hand, and Eni and Vitol on the other. The Government's perceived role in this dispute, which led ENI to file a Notice of Arbitration against the Government in London under the UNITRAL rules. In addition, several upstream operators are engaged in ongoing tax disputes with the Ghana Revenue Authority (GRA). In February alone, Kosmos was reported to be challenging a claim that it had underpaid taxes and fiscal obligations. Tullow announced that it had filed requests for arbitration regarding two disputed tax assessments received from the GRA.
- In its recent position paper "An Overview Of Key Issues In Ghana's Upstream Legal And Regulatory Environment", the Ghana Upstream Chamber raised concerns about an increasing "disregard for stabilization clauses and arbitrary impositions, [which] undermine the sanctity of respective Petroleum Agreements and are a disincentive to further investment".
- In the power generation sector, the Government has faced a number of disputes in relation to the early termination/cancellation of PPAs as part of the ESRP. For example, in early 2021, 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 USD 164 million (including interest) for early termination of its PPA.

4. Removal of regulatory incentives:
In addition to the moratorium on unsolicited projects mentioned above, the renewable generation market has also been affected by the amendment of the Renewable Energy Act, 2011 (Act 832) in 2020 by the Renewable Energy (Amendment) Act, 2020 (Act 1045). This amendment replaced the feed-in-tariff incentive regime established in the original Act 1045 with a competitive procurement scheme and limited the previous renewable energy purchase obligation on distribution companies and bulk consumers to only apply to electricity distribution utilities.

challenges to implementation

5. Country-risk and access to capital:

Even for 'bankable' energy transition projects, access to affordable capital can be difficult; in particular, due to Ghana's country risk-profile stemming from its broader economic challenges. After the Government indicated that Ghana would suspend payments on certain international bonds, alongside its domestic debt exchange programme, as part of its restructuring plan to secure IMF funding, Fitch Ratings cut Ghana's international long-term local currency issuer rating to "Restricted Default" and its locally-issued bond rating to "Default". These issues are compounded by the fact that most sources of funds are foreign currency, which makes energy transition projects vulnerable to foreign exchange risk. In the power sector specifically, IPPs may be reluctant to invest in renewable power projects when the Electricity Company of Ghana (ECG) reportedly stands in arrears of USD 1.2billion as of October 2022 on payments to IPPs for electricity bought from them.

6. Challenging local content requirements:

Ghana's energy sector has extensive local content requirements. For example, under the Petroleum (Local Content and Local Participation) Regulations, 2013 (LI 2204) and the Energy Commission (Local Content and Local Participation) (Electricity Supply Industry) Regulations 2017 (LI 2354). However, it can be challenging for operators to identify suitable and qualified local partners and suppliers of relevant goods and services.

"Ghana will need to be globally competitive to attract private sector funding for energy transition infrastructure, renewable energy projects, and the gas developments necessary to facilitate its use as a transition fuel."

The good news is that each of the challenges outlined above can be addressed and that doing so presents a real opportunity for businesses in Ghana.

opportunities

1. **PPP opportunities for transition infrastructure:**

First and most importantly, the huge need for private funding presents a significant opportunity for privatization in the energy transition. As mentioned above, the Framework advocates establishing Public Private Partnerships (PPPs) to co-finance the construction, development and deployment of transition infrastructure. This goal is echoed in the Government's 2023 budget, published in November last year, which emphasized Ghana Government's intention to "continually engage the private sector through PPPs to acquire more private capital to establish climate resilient infrastructure projects".The recent introduction of the Public Private Partnership Act 2020 (Act 1039) (the PPP Act) should help facilitate the implementation of PPPs. In addition, the Government announced in the 2023 budget that in 2023, the Ministry of Finance expects to facilitate the passage and dissemination of the implementing regulations contemplated under the PPP Act. These regulations – and the stakeholder consultation that we hope will lead up to their implementation – presents a real opportunity to further strengthen Ghana's PPP regulatory regime and to resolve the outstanding questions in the new PPP Act.

In the last 12 months, we have already seen several PPP projects launched to take advantage of this opportunity. For example:

- In June 2022, the U.S. Government's Millennium Challenge Corporation (MCC) and the Government of Ghana announced the completion of the five-year, USD 316 million MCCGhana Power Compact, under which 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.
- In July 2022, Genser Energy Ghana Limited 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.
- In February this year, the Ghana National Gas Company (GNGC) announced that it had signed a project implementation agreement with its partner consortium, Integrated Logistics Bureau Limited, Jonmoore International, Phoenix Park Limited and African Finance Corporation, about the construction of a second Gas Processing Plant (GPP Train 2) at Atuabo in the Western Region an estimated cost of USD 700 million. This second train is intended to increase the country's processing capacity of raw associated gas from the Jubilee and TEN fields.

For further information on the new PPP Act and the legal regime applicable to infrastructure projects in Ghana more generally, please see our guide to Project Finance Laws and Regulations, Ghana 2022 published by International Comparative Legal Guides, available here.

2. Incentivization for near-term exploitation of hydrocarbon resources:

The Framework and the President's acknowledgement that Ghana must achieve a "just transition" by balancing her commitment to net zero with a need to continue to exploit its natural resources to transform the economy could lead to an increased push to capitalise on these resources.

The Ghana Upstream Petroleum Chamber has advocated for a shift away from "business-as-usual" to drive exploration and development in the near term and avoid stranded assets in the long term.

We agree and believe gas represents a particularly attractive opportunity. Increased production can be 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. In its most recent Ghana Oil & Gas Report, Fitch estimates that Sankofa/Gye Nyame fields can produce an additional 50mmscfd (about 18.3 bcf a year) of gas without other investments and that Jubilee and TEN can produce about 100 to 200 mmscfd (about 36.5 to 73 bcf a year). However, this would require significant investments in gas processing and the right offtake market.

opportunities

Just before Christmas last year, Tullow and its partners signed an interim gas sales agreement with the Government of Ghana for 19bcf gross of Jubilee gas. The finalization of this offtake arrangement should help support investment in these fields, including the USD 300 million of expected capital expenditure Tullow announced in January this year, as will the new GNGC gas processing plant mentioned above.

With ENI recently announcing in February that "during the year, we were able to finalize agreements and activities to fully replace Russian gas by 2025.... ramp[ing]-up volumes from Algeria, Egypt, Mozambique, Congo and Qatar", the opportunity is there for Ghana too. We hope the Government will support this process by coordinating stakeholders to improve domestic gas optimization as part of the Ghana Gas Masterplan.

3. Development of critical green minerals:
As mentioned above, the Framework recommends the development of Ghana's lithium, graphite and other critical green mineral industry. Atlantic Lithium's recent activities show that investor appetite exists when market conditions are right.

In our article last year, we predicted that after Ghana's state-owned Minerals Income Investment Fund (MIFF) increased the state's interest in its gold assets, transition materials could be the next frontier, which has proved correct. In February this year, the MIIF announced that it had started negotiations on investing up to USD 30 million in Atlantic Lithium.

For a more detailed look at the Environmental, Social and Governance concerns regarding lithium extraction in Ghana, see our recent article here.

4. Resolution of regulatory uncertainty:
Of course, to achieve the investment necessary to ramp up the near-term exploitation of Ghana's hydrocarbon resources and to develop its critical minerals industry, Ghana will need to address the investor concerns regarding its regulatory and fiscal environment, as mentioned above. However, we believe there is an excellent opportunity to do so in the year ahead.

A hearing regarding the request for arbitration filed by Tullow regarding an assessment of branch profits remittance tax is scheduled for October 2023.

Reaching a landing on branch profits remittance tax could provide the breathing room necessary to renew the Petroleum Commission's previous efforts to engage with Ghana's upstream operators on stabilisation and the role of Ghana's different regulatory agencies, especially the GNPC and the Petroleum Commission.

If this issue can be resolved, together with a resolution of the unitisation dispute between Springfield Exploration and Production and Eni and Vitol, this would go a long way to addressing investor concerns.

5. Regional Liquidity Support Facility:
At the end of last year, the Government announced that it had signed a memorandum of understanding with the African Trade Insurance Agency (ATI) to participate in the Regional Liquidity Support Facility (RLSF). The RLSF is a joint initiative of ATI, the German KfW Development Bank and the Norwegian Agency for Development Cooperation (NORAD). It provides counter-guarantees and cash collateral to provide IPPs with short-term (up to 6 months) liquidity in case of non-payment of the utility off-taker - i.e. the ECG in Ghana. The RLSF facility is only available for specific supported power generation projects: solar PV, hydro, onshore wind, geothermal, biomass, or cogeneration. Given the ECG's ongoing liquidity challenges – and arrears of USD 1.2 billion to IPPs, as mentioned above – the availability of this facility should address one of the major commercial impediments to new renewable generation projects.

6. Updated local content regulations:
In June last year, the Petroleum (Local Content and Local Participation) (Amendment) Regulations, 2021 (LI 2435) were introduced to amend the existing Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204).

"Ghana must address investor concerns regarding its regulatory and fiscal environment."

These amendments addressed some critical challenges with the existing upstream local content regime. In particular, the requirement under the current regime for a non-indigenous Ghanaian company that intends to provide goods or services in the sector to incorporate a joint venture company with an indigenous Ghanaian company and afford that indigenous Ghanaian company an equity participation of at least 10%. The amendments have introduced an alternative to the joint venture structure through "strategic alliances" and "channel partnerships" instead.

These amendments included an extensive stakeholder engagement programme, including training sessions and consultation with industry groups. The flexibility provided through these amendments should make it easier for international companies operating in the upstream sector to comply with the local content requirements and for local Ghanaian companies to participate in the alternative partnership structures now contemplated. In addition, we hope the forward-looking and flexible approach taken in adopting these amendments can be a model for considering any changes required in other sectors relevant to the Energy Transition, including power generation and mining, particularly in developing critical minerals.

conclusion

The Framework provides a welcome set of long-term recommendations for how Ghana can achieve a "just transition" and meet its net zero commitments without sacrificing the need to attain socioeconomic through the exploitation of Ghana's natural resources or the potentially competing objectives of expanding energy access and security.

To implement these recommendations, Ghana will need to attract significant private sector investment and to do that, we will need to overcome several hurdles as set out above. However, each of those hurdles can be overcome. The need to do so presents opportunities for resilient and innovative businesses to thrive and contribute to a net-zero emission future for the country and the planet.

Alex Calloway, International Transaction Advisor

Alex is English law qualified and acts as International Transaction Advisor – UK Counsel at n. dowuona & company. Prior to joining n. dowuona & company, he spent 11 years at the international law firm Freshfields Bruckhaus Deringer. As a member of the Global Transactions team, Alex advised on numerous market-leading cross-border deals, including transactions involving 37 jurisdictions across Africa and some of the most significant global transactions in recent years.

Ama Aboagye Da Costa, Associate

Ama is an associate at n. dowuona & company. Her areas of focus are banking and finance, energy, dispute resolution and corporate and commercial. Her recent work with the firm includes advising a multinational fintech company on payment systems regulatory compliance in Ghana, participating in the due diligence processes for the acquisition of a publicly listed insurance corporation with subsidiaries in Ghana and advising an international company on a loan security claim. She also routinely participates in various due diligence activities for investor clients of the firm.

Ama obtained her LLB from the University of Ghana, Legon and a professional certificate from the Ghana School of Law. She is admitted to practice law in Ghana.

@ndowuonaandcompany
www.ndowuona.com