

# GHANA RENEWABLE ENERGY POLICY SCAN

Critical insights and questions for localisation and decent employment



**Just Energy Transition:**  
Localisations, Decent Work, SMMEs, and Sustainable Livelihoods

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# LIST OF ABBREVIATIONS

<b>1D1F</b>	One District One Factory
<b>BAC</b>	Business Advisory Centre
<b>C&amp;I</b>	Construction and installation
<b>CNG</b>	Compressed Natural Gas
<b>DEP</b>	District entrepreneurship programme
<b>DP</b>	Development partner
<b>FBO</b>	Faith-based organisation
<b>GCF</b>	Green Climate Fund
<b>GEA</b>	Ghana Enterprise Agency
<b>GEF</b>	Global Environment Facility
<b>GHG</b>	Greenhouse gas
<b>GSA</b>	Ghana Standards Authority
<b>ICE</b>	Internal combustion engine
<b>ILO</b>	International Labour Organisation
<b>MDB</b>	Multilateral development bank
<b>MESTI</b>	Ministry of Environment, Science, Technology and Innovation
<b>MMDA</b>	Metropolitan, Municipal and District Assemblies
<b>MRV</b>	Measurement, Reporting and Verification
<b>NBSSI</b>	National Board of Small-Scale Industries
<b>NDC</b>	National Determined Contribution
<b>NDF</b>	National Development Framework
<b>NDPC</b>	National Development Planning Commission
<b>NEP</b>	National Energy Policy
<b>NETF</b>	National Energy Transition Framework
<b>NETIP</b>	National Energy Transition Investment Plan
<b>NGJS</b>	National Green Jobs Strategy
<b>O&amp;M</b>	Operations and maintenance
<b>PFI</b>	Participating financial institution
<b>PPP</b>	Public Private Partnerships
<b>PV</b>	Photovoltaic
<b>PWDs</b>	Persons with disabilities
<b>R&amp;D</b>	Research and Development
<b>RE</b>	Renewable energy
<b>REMP</b>	Renewable Energy Master Plan
<b>RET</b>	Renewable Energy Technology
<b>SMME</b>	Small, medium and micro enterprises
<b>STEM</b>	Science, Technology, Engineering and Mathematics



**SECTION  
ONE:  
Introduction**

# SECTION ONE: INTRODUCTION

## 1.1 CONTEXT

The push for a just energy transition in Ghana necessitates a holistic approach that considers not only the deployment of renewable energy (RE) technologies, but also the social and economic impacts on individuals and local businesses, irrespective of the size.

This requires a deep understanding of the interconnectedness between three crucial concepts: localisation, decent work, and gender inclusion. However, discussions around these concepts often occur in silos, ignoring the synergies among them. As these elements are crucial for advancing a just energy transition, it is imperative to explore their interlinkages and determine how they can be collectively integrated into RE development policies to drive inclusive growth.

The concerns of a just energy transition cannot be achieved on the basis of mere inclusion of RE, or the deployment of renewable energy to reduce greenhouse gas emissions. There must be deliberate policy actions that guide the successful implementation of renewable energy systems to meet the specific aspirations of poverty reduction and SMME integration in energy systems. Ghana has outlined policies with specific ambitions and targets for renewable energy integration, localisation, decent work, SMME improvement, and gender equality. A critical question emerges about how these policies are linked, to ensure that renewable energy integration could be another conduit for localisation, decent work and gender inclusivity.

## 1.2. SCOPE

To address this question, this paper undertakes a comprehensive scan of policies related to the seemingly independent areas of energy, SMME/industrial policy, and gender. The analysis focuses on delineating key government policies in these thematic areas, examining their linkages with localisation and decent work, and identifying critical policy gaps. This approach aims to provide a clearer understanding of how these

interconnected concepts can be aligned to strengthen renewable energy production networks and promote inclusive and sustainable development.

## 1.3. METHODOLOGY

This policy scan employs a desktop review approach to assess the integration of localisation, decent work, and SMMEs' participation in RE production networks in Ghana. The methodology follows a structured process:

**01 Identification of relevant policies:** Relevant government policies that focus on RE, localisation, and gender inclusion were identified. These key policy documents were sourced from official government publications, legislative records, and strategic frameworks.

**02 Policy review and analysis:** The objectives, focus areas, and proposals of the identified policies were reviewed systematically, to understand their relevance and implications for the RE sector. Special attention was given to provisions addressing:

- Localisation of RE technology and services;
- Promotion of decent work conditions, including labour rights and job quality; and
- Gender mainstreaming and equitable participation across the production network.


**03 Thematic linkage assessment:** Policy proposals were examined to establish linkages with the three core thematic areas of this study:

- Localisation: Strategies for enhancing domestic content and participation in RE production networks.
- Decent Work: Initiatives aimed at ensuring fair wages, safe working conditions, and social protections.
- Gender: Inclusion of policies that address gender disparities and promote women's engagement in RE sectors.

## 04

**Gap Identification:** The adequacy of policy proposals in meeting the requirements for localisation, decent work, and gender mainstreaming was assessed. This involved identifying:

- Missing elements in policy frameworks.
- Inconsistencies or lack of clarity in objectives.
- Insufficient focus on key aspects critical for the integration of SMMEs and promotion of decent jobs.



# SECTION TWO: CONTEXT OF ENERGY SECTOR DEVELOPMENTS

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Over the past decades, Ghana has produced various policies for the energy sector, highlighting the role of RE integration as part of the country's climate mitigation plans. However, the country faces the difficult task of optimising the mix of its abundant gas resources and the need to meet renewable energy integration targets, as outlined in its policies.

The growing power demands of households and industry persuaded the government to increase energy supply, to address supply shortfalls. Further, investments in the West African Gas Pipeline projects, and the commercial discovery of associated and non-associated gas in its oil basins set the tone for the expansion of thermal energy in Ghana's energy mix to increase supply capacity. These events in the history of the energy sector influenced policy reforms, which served as guidelines for developing novel energy resources. However, since Ghana signed the Paris Climate Agreement, energy policy formulation has been mindful of renewable energy and climate change adaptation and mitigation strategies.

## 2.1. LOCALISATION

Localisation is not a foreign concept in Ghana's energy and extractive sector; it is often known as 'Local Content'. Various regulatory bodies in the upstream oil and gas, mining and power sectors have developed local content policies to increase Ghanaian participation in these areas. For example, the Petroleum Commission developed regulations to improve local participation in the oil and gas production network three years after the country commenced commercial oil production (Government of Ghana, 2013). In the mining sector, the Minerals Commission also developed local content regulations, which identify vital areas in the mining sector reserved for Ghanaian participation. And the power sector has local content regulations, developed by the Energy Commission, including for local participation

across the RE production network (Government of Ghana, 2017).

A common thread across these sectors is the need to increase Ghanaian participation in various aspects of their production network. Critical components of these local content regulations include, among other things, Ghanaian ownership and control, capacity building, and skills and technology transfer. Thus, localisation is not a recent concept, but has etched itself into various sectors of the economy.

## 2.2. DECENT WORK

Decent work is critical to the United Nations' Sustainable Development Goals (SDG Goal 8). The International Labour Organisation (ILO) further reiterates that decent work is not just a goal but a key driver for sustainable development. The organisation defines decent work as "productive work for women and men in conditions of freedom, equity, security and human dignity". This definition focuses on ensuring that work generates adequate output and contributes to livelihood improvement for both men and women, thus ensuring inclusivity. The ILO's definition of decent work also focuses on including the employees' right to express their concerns, participate in decision making and be free from forced labour or coercion, hence the "conditions of freedom".

Decent work improves the purchasing power of individuals and families. It also ensures increased revenues to governments, through effective revenue mobilisation outcomes (International Labour Organisation, 2017). The ILO's agenda on decent work hinges on four pillars: promoting jobs and enterprises, guaranteeing workers' rights, extending social protection, and promoting social dialogue. Governments can use these pillars to shape policies prioritising just, equitable, and sustainable livelihoods.

The ILO's approach to decent work aligns with gender equality, women's empowerment, and addressing youth employment challenges. In addition to enhancing purchasing power, decent work reduces gender-based

economic disparities and offers opportunities for marginalised groups. Integrating gender and youth considerations into the concept shapes policies for equitable, sustainable livelihoods and inclusive growth. Within the just energy transition context, the ILO emphasises the importance of skills development and education, to facilitate the transition of workers from high-carbon to low-carbon sectors (International Labour Organisation, 2020).

## 2.3. GENDER INCLUSIVITY

The inclusion of gender inclusivity focuses on equal opportunities for both men and women in workplaces. It denounces the traditional stereotypes that reserve specific jobs for a particular gender, and creates spaces for inclusive participation of men and women in the job market. For example, the Science, Technology, Engineering and Mathematics (STEM) clinics for females provide avenues for young girls to generate interest in science-related programmes, which traditionally are left for males. Gender inclusivity ensures the protection of men and women in the work environment, providing adequate support to meet their physical, emotional, and material needs, while contributing to productivity.

The concepts of decent work, localisation and gender inclusivity in Ghana are inextricably linked. In addition to gender inclusivity as a critical aspect of decent work, localisation and local content policies not only aim at improving the extent of Ghanaian ownership, but also focus on ensuring that skills development and overall employee productivity take centre stage as local capacities are built. These include ensuring that, within various aspects of the economy, there are equal benefits for men and women.

## 2.4. ROLE OF ENERGY TRANSITION

The new wave of energy transition and subsequent technological advancements can create employment and promote decent work. Climate change adaptation can lead to job generation via sustainable infrastructure and climate-smart agricultural methods. And mitigation efforts also foster job creation by investing in green technologies and effective waste management approaches (van der Ree, 2019). Job creation occurs at various stages of the production network of RE technologies, ranging from research and development to manufacturing, installation, operation, and maintenance

(Heinbach, Aretz, Hirschl, Prah, & Salecki, 2014). However, to maximise the job creation benefits from renewable energy technologies, effective policies must be anchored in the principles of decent work and the renewable energy production network.

## 2.5. ROLE AND CHALLENGES OF SMMEs

The scope of the renewable energy production network varies significantly, based on investment requirements and availability. For instance, a fully integrated solar photovoltaic (PV) production network requires investments in manufacturing facilities to extract pure silicon from silica, develop wafers, and produce and assemble solar cells. The effectiveness of these investments relies on a thorough evaluation of the production network's dynamics, which can be improved through regional trade agreements (Boakye & Ofori, 2022). However, there are other production networks which do not demand substantial investments and can be readily managed by small, medium and micro enterprises (SMMEs), offering the potential for advancing industrialisation.

SMMEs in Ghana are engines for growth and development. These enterprises comprise over 90% of businesses and account for about 76% of persons engaged in the active workforce (Ghana Statistical Service, 2017). However, SMMEs are challenged with financial, technical and operational capacities (Abor & Quartey, 2010). Relevant policies could limit these challenges and unearth their potential for inclusive growth and decent work. Therefore, facilitating their participation, through capacity development and support, in the renewable energy production networks can boost their growth and enhance job creation.



**SECTION  
THREE:  
POLICY REGIME**

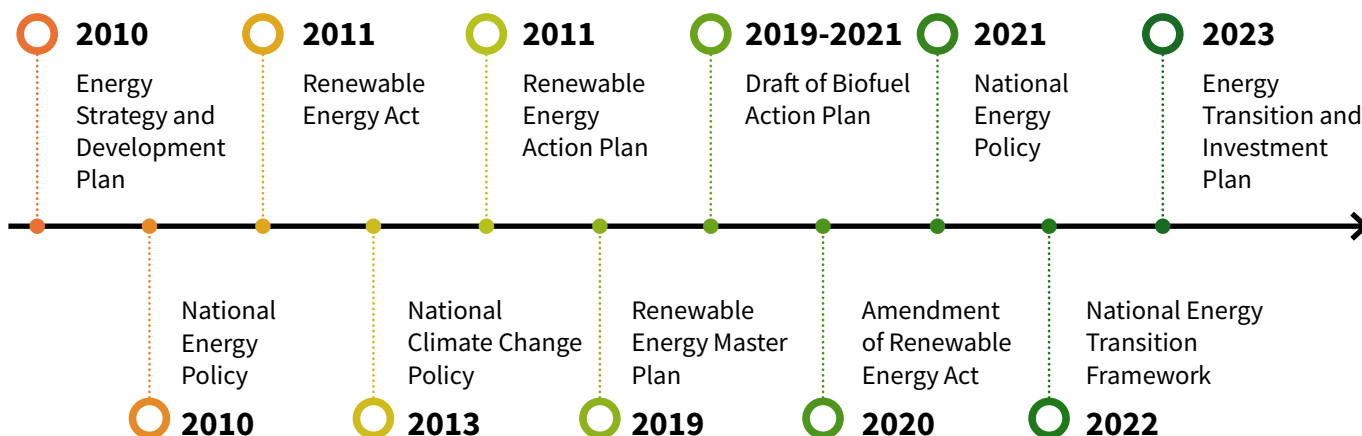
# SECTION THREE: POLICY REGIME

## 3.1. ENERGY POLICY

The goal of recent energy policies has been to ensure socio-economic development through sustainable extraction and use of Ghana’s energy resources. Over time, Ghana has developed several policies focusing on RE deployment and climate action.

Figure 1 outlines 11 policies, frameworks, and laws to address, in one way or another, RE integration. Appendix A provides a summary of these policies. In this text we provide details of four key policies - the National Energy Policy (2020), the RE Master Plan, the National Energy Transition Framework and the Energy Transition and Investment Plan.

Figure 1: List of policies and frameworks that highlight RE integration in Ghana



### 3.1.1. National Energy Policy

The National Energy Policy (NEP) was developed in 2021 to replace the 2010 National Energy Policy, to compensate for the evolution of the petroleum and electricity sub-sectors. The policy recognises the need to increase energy supply sustainably to meet the growing demand, in the context of the global energy transition. The NEP represents a comprehensive framework for managing and developing Ghana’s energy resources to support the country’s larger development goals. The policy targets 2030 to achieve the indicated goals, in line with the target of the Paris Agreement. The NEP focuses on seven core areas:

1. Power generation, transmission and distribution
2. RE
3. Nuclear power
4. Petroleum (upstream and downstream)
5. Energy transition
6. Energy efficiency and conservation
7. Cross-cutting areas (health safety security and the environment, gender, local content and local participation, and research and development)

To accelerate the achievement of universal access to electricity in the country, Ghana’s NEP aims to integrate

a planning system that reliably and cost-effectively meets its growing electricity demand. It focuses on achieving cost-competitive electricity generation, and developing transmission and distribution systems that facilitate efficient and affordable power generation and transmission. Additionally, the NEP has targeted strengthening the electricity distribution system, to enhance the competitive electricity retail market. The policy aims for an efficient electricity pricing system to benefit local consumers and the export market.

The policy highlights specific directions for generation, transmission, and distribution subsectors. For example, it takes note of the high cost of thermal electricity generation and intends to implement a supply plan that utilises competitive bidding for all future electricity supply procurements. Additionally, the policy seeks to develop a standard power purchase agreement template that various power suppliers can use across the industry. For the transmission sub-sector, the policy notes the delays in payment of transmission service charges and the inability of the system to handle generation for larger, variable, RE sources. To address these issues, the intention of the energy policy is to build robust oversight mechanisms and develop a strategy for dealing with intermittent generation from RE sources. In the distribution sector, the policy seeks to increase energy access, improve revenue collection, and strengthen the reliability of the distribution network.

### ► **Linkage with decent work and localisation in RE production networks**

The NEP seeks to increase the contribution of RE to the country's overall energy mix through efficient production, transportation, and distribution, as well as end-use efficiency and conservation. This policy direction seeks to leverage the country's solar irradiation potential and the increasing availability of solar PV technologies.

The NEP makes some provisions for localisation and SMME involvement. One of the goals for the RE sector under the policy is to increase the contribution of RE to the national energy mix. One of the key policy objectives under this goal is the government's recognition of the need to promote local manufacturing of RE technologies. The policy recognises the need for substantial value addition from local companies. Although this policy directive does not explicitly mention SMMEs, there is an inherent advantage for SMMEs to participate along the production network in manufacturing RE technologies.

The policy scan identified two major approaches to further the policy objective of promoting local manufacturing. First, the government recognises the inadequacy of local content and local participation in the RE industry. To address this challenge, the NEP intends to promote local content by encouraging local private investment in the RE industry. As part of attempts to achieve this policy objective, the government published the local content and participation regulations (Government of Ghana, 2017)) in 2017 to provide an enabling environment to ensure the maximum use of financial capital, expertise, goods and services locally in the electricity supply industry.

The regulations aim to create employment, promote local businesses, and ensure value retention in-country. For the RE sector, they seek to promote local capacity and increase the competitiveness of local RE equipment manufacturers. They make provisions for equity participation, requiring manufacturing entities of RE equipment to have a minimum equity participation of 40% by an indigenous Ghanaian company. They also target participation levels by 2025, for example 80% local participation in the manufacture of solar cells and 90% local participation in the manufacture of solar PV technologies.

The second approach is based on the government's acknowledgement of a significant skills gap in developing and deploying RE technologies. Skills training and capacity development are essential traits in mobilising a strong workforce across every sector of the economy. So it is unsurprising that the government is undertaking technical and vocational training and providing certification regimes for RE technicians and engineers, as key policy directives for promoting local participation in the RE sector.

Indirect support for localisation and SME involvement is evident in various policy directions. Establishing a RE Authority can create initiatives supporting local businesses and SMEs. Furthermore, capacity-building initiatives for financial institutions, the operationalisation of the RE Fund, and the development of low-cost financing schemes create a supportive environment for local businesses and SMEs to invest and participate in RE projects.

Addressing specific issues relevant to localisation and SMEs, the policy includes renewable resource assessment and mapping to provide crucial data for planning and developing local RE projects. It also makes provisions for increased public awareness of RE

technologies, which can stimulate demand for solutions that local SMEs can meet.

Gender mainstreaming is a cross-cutting area in energy policy. Generally, the policy aims to promote gender equality and equity across the energy sector. Although

this direction does not explicitly mention RE, it is inferred that the RE industry includes the energy sector. The energy policy has identified four key issues concerning gender mainstreaming, with policy directions to meet these gaps. Table 1 summarises these policy issues.

**Table 1:** Gender-related issues in the National Energy Policy

Issue	Policy directions
Low participation of women in managerial positions in the energy sector.	<ul style="list-style-type: none"> <li>Enhance the capacity development of women in the energy sector through STEM education, skills training and internship opportunities.</li> <li>Promote the involvement of women in leadership and decision-making processes in the energy sector.</li> </ul>
Low participation of women in the private sector throughout the energy production network.	<ul style="list-style-type: none"> <li>Promote and support women-owned businesses in the energy sector.</li> <li>Create awareness campaigns to address cultural beliefs and practices that hinder gender equality in the energy production network.</li> </ul>
Low awareness of gender issues in the energy sector among policymakers and the public.	<ul style="list-style-type: none"> <li>Build the gender sensitivity of decision-makers and technical officers in all energy sector institutions, to facilitate gender mainstreaming into energy-related interventions.</li> <li>Institute a gender focal unit in all energy sector institutions.</li> </ul>
Inadequate gender-disaggregated energy data, which creates difficulty for proper planning of gender issues in the energy sector.	<ul style="list-style-type: none"> <li>Enhance gender-disaggregated energy data collection, management and publication.</li> <li>Conduct regular participatory gender audits of the energy sector.</li> <li>Establish a Measurement, Reporting and Verification (MRV) system to monitor gender mainstreaming in the energy policy.</li> </ul>

As seen in Table 1, the energy policy addresses the limited participation of women in the private sector throughout the energy production network. It further provides policy directions to address this challenge, including promoting women's businesses and creating awareness campaigns to address cultural stereotypes around women's involvement in the energy sector production network.

### 3.1.2. Renewable Energy Master Plan

The Renewable Energy Master Plan (REMP) was implemented in 2019, with the primary goal of providing an investment-focused framework for promoting and

developing Ghana's RE resources towards sustainable socio-economic development, while reducing the adverse effects of climate change. The effective period for this Master Plan is from 2019 to 2030.

The activities of the REMP are coordinated by the Ministry of Energy through the REMP Coordinating Unit and are overseen by a national steering committee. The revenue requirement for the master plan is \$5.6 billion over the entire 12-year period, which translates into an annual investment requirement of \$460 million. The private sector is expected to absorb 80% of this projected investment requirement. The plan is currently in its second phase, spanning 2021 to 2025. The third and final phase will span 2026 to 2030 (See Figure 2).

Figure 2: Snapshot of targets under Ghana's RE Master Plan

Renewable Energy Technologies	Reference 2015		Cycle I (2019-2020)		Cycle II (2019-2020)		Cycle III (2019-2020)		Cumulative in 2023	
	No. of units	MWp	No. of units	MWp	No. of units	MWp	No. of units	MWp	No. of units	MWp
<b>Solar Energy</b>										
Solar Utility Scale	-	22.5	-	130	-	195	-	100	-	4475
Distributed Solar PV		2		18		80		100		200
Standalone Solar PV	-	2	-	8	-	5	-	5	-	20
Solar Street/Community Lighting	-	3	-	4	-	4	-	14	-	25
Solar Traffic Signals (% of total traffic signals installed in the country)	14	3	11	-	15	-	20	-	60	-
Solar Lanterns	72,000	-	128000	-	300000	-	500000	-	1000000	-
Solar Irrigation	150	2.8	6000	6	20000	20	20000	20	46150	48.8
Solar Crop Dryers	70	-	80	-	250	-	300	-	700	-
Solar Water Heaters	4,700	-	15300	-	50000	-	65000	-	13500	-

Renewable Energy Technologies	Reference 2015		Cycle I (2019-2020)		Cycle II (2019-2020)		Cycle III (2019-2020)		Cumulative in 2023	
	No. of units	MWp	No. of units	MWp	No. of units	MWp	No. of units	MWp	No. of units	MWp
<b>Wind Energy</b>										
Wind Utility Scale	-	0	-	0	-	275	-	50	-	325
Standalone Wind Systems	-	0.01	-	0.1	-	0.9	-	1	-	2
Wind Irrigation/Water Pumping	10	-	25	-	30	-	35	-	100	-
<b>Biomass/Waste-to-Energy</b>										
Biomass Utility - Scale	-	0	-	0	-	72	-	0	-	72
Waste-to-Energy Utility Scale	-	0.1	-	0	-	30	-	20	-	50.1
Biogas (Agricultural/Industrial Organic Waste)	10	-	20	-	70	-	100	-	200	-
Biogas (Institutional)	100	-	80	-	140	-	180	-	500	-
Biogas (Domestic)	50	-	30	-	50	-	70	-	200	-
Woodlot Cultivation (ha)	190,000	-	60000	-	100000	-	78000	-	428000	-
Charcoal (Local Demand)	1,551,282	-	94017	-	93947	-	100877	-	1840123	-
Charcoal (Export)	190,450	-	59550	-	100000	-	78000	-	428000	-

Renewable Energy Technologies	Reference 2015		Cycle I (2019-2020)		Cycle II (2019-2020)		Cycle III (2019-2020)		Cumulative in 2023	
	No. of units	MWp	No. of units	MWp	No. of units	MWp	No. of units	MWp	No. of units	MWp
Briquetting/Pelleting	19,700	-	20300	-	25000	-	35000	-	100000	-
Biofuel (tonnes)	0	-	100	-	4900	-	15000	-	20000	-
<b>Hydro / Wave Power</b>										
Small/Medium Hydro Plants	-	0	-	0.03	-	80	-	70	-	150.03
Wave Power	-	0	-	5	-	0	-	45	-	50
<b>Hybrid Mini-Grids</b>										
Mini/Micro-grids	13	-	73	-	114	-	100	-	300	12
<b>End User Technologies</b>										
Improved Biomass Cookstove (Domestic)	800,000	-	500000	-	500000	-	1200000	-	3000000	-
Improved Biomass Cookstove (Institutional/Commercial)	1,800	-	1200	-	7000	-	8000	-	18000	-
<b>Total Installed RE Electricity Capacity</b>										<b>1353.63</b>

Source: Ministry of Energy, Ghana

The plan seeks to increase the proportion of RE in the national energy generation mix from 42.5 MW in 2015 to 1 363.63 MW by 2030. The REMP identifies the challenge of connecting island communities to the national grid and seeks to provide RE-based, decentralised electrification options in such off-grid communities.

### ► **Linkage with decent work and localisation in RE production networks**

As an implementation strategy, the REMP seeks to boost and sustain local assembly and manufacture of Renewable Energy Technologies (RETs), by systematically phasing out import duty exemptions on RETs where the country has a competitive advantage. In the policy's bid to make the country a hub for the manufacture of RETs, the Government intends to support the private sector to manufacture local components, through various incentives such as tax allowances, capital subsidies and loan guarantees.

A key objective of the REMP is to promote local content and participation in Ghana's RE industry. The policy adopts the Local Content and Local Participation (Electricity Supply Industry) Regulations, 2017, LI 2354, which focus on localising energy system production networks in Ghana, from ownership to construction and operation. To boost local production, public and private sector-sponsored RE projects would be required to source at least 30% of goods from the local market (where applicable) in the medium-term. The scope and content of local sourcing of goods will be broadened as local production matures. The technologies mentioned under the policy include RE-powered household gadgets, batteries, inverters, wind turbine components, water pumping, biogas reactors, waste-to-energy plants, small hydropower turbines, improved cookstoves and fuel.

In line with the Local Content and Local Participation Policy, the Government would encourage local manufacturers to supply solar systems and components for publicly-funded projects. Research and development would also be enhanced, in partnership with identified research institutions, to spur innovation, adaptation and localisation of RE technologies. The policy also strengthens the Ghana Standards Authority (GSA), to ensure that local production of RE technologies meets national and international standards.

The policy seeks to create livelihoods by focusing on localisation, through building and leveraging the skills of artisans, technicians, entrepreneurs, and

local enterprises, to capitalise on the increase in RE technology penetration globally. The policy also seeks to enhance adaptation mechanisms for agricultural practitioners towards all-year-round farming, using solar-powered irrigation systems. In the same vein, the policy aims to put over 46 000 hectares of extra land under solar-powered irrigation, engaging more than 40 000 farmers, and increasing agricultural productivity and its associated small-scale industries.

The REMP also has a key focus on gender mainstreaming. Like the NEP, it identifies the challenge of limited gender-based data, which is necessary to establish the active role of gender within the energy sector production network. The REMP also highlights the issue of the inadequacy of gender experts in managerial positions in the energy sector. In mainstreaming gender, the REMP seeks to focus on the following key areas:

- Build a robust, gender-based database within the energy sector, to establish the individual involvement of gender in the entire energy production network;
- Strengthen coordination mechanisms and promote initiatives that ensure gender equality;
- Provide equal opportunity for women to work in the RE sector;
- Increase awareness of the benefits of gender mainstreaming in the energy sector;
- Create financing opportunities for women entrepreneurs; and
- Support end-use consumer- and gender-disaggregated data assessment to inform policies on women, children, vulnerable groups and persons with disability.

### **3.1.3. National Energy Transition Framework**

In a quest to accelerate efforts to achieve net zero Greenhouse Gas (GHG) emissions, as advocated under the United Nations' Sustainable Development Goal 13 and the 2015 Paris Agreement on Climate Change, Ghana has laid out a detailed energy transition framework to guide the transition agenda. The National Energy Transition Framework (NETF) was produced through collaborative efforts by various government ministries, led by the Ministry of Energy. The framework provides a roadmap for decarbonising the energy sector and reaching net-zero emissions by 2070, while ensuring socio-economic growth and the sustainable use of Ghana's natural resources.

The framework seeks to identify viable pathways for the country to transition towards carbon neutrality, within a secure and efficient energy sector. It also aims to harness the opportunity for a fair and equitable energy transition, as the country relies on carbon-intensive industries for economic growth, while evaluating the impacts of the energy transition on the economy (infrastructure, government revenue, jobs and social development).

Table 2 outlines Ghana's net-zero targets as part of its energy transition framework. It details specific goals for 2030, 2040, 2050, and 2070, focusing on advancements in household electrification, introducing RE sources of energy, and phasing out fossil fuels.

**Table 2:** Specific targets under Ghana's National Energy Transition Framework

Year	Goal
2030	<ul style="list-style-type: none"> <li>• New sales of household electrical appliances are best in class .</li> <li>• More than 95% of households are electrified.</li> <li>• Internal combustion engines (ICEs) and trains fuelled by Compressed Natural Gas (CNG) are introduced.</li> <li>• More than 60% of cooling appliances and systems are best in class.</li> <li>• 10% of electricity generation capacity is from RE.</li> <li>• A 10% ethanol blend in major petroleum products is introduced.</li> </ul>
2040	<ul style="list-style-type: none"> <li>• Nuclear power in the electricity generation mix upscaled.</li> <li>• Carbon Capture, Utilisation, and Storage (CCUS) for electricity generation, Oil &amp; Gas and Industries.</li> <li>• Sustainable aviation fuel (Biofuel for aviation kerosene) introduced.</li> <li>• Off-road fossil-fuelled ICEs phased out.</li> <li>• Fossil liquid fuel for electricity generation phased out.</li> </ul>
2050	<ul style="list-style-type: none"> <li>• More than 50% of water heating systems are solar-powered.</li> <li>• More than 50% of metro-urban households use electric stoves.</li> <li>• More than 90% of household electrical appliances are best in class.</li> <li>• More than 70% of road vehicles are electricity- or hydrogen-fuelled</li> </ul>
2070	<ul style="list-style-type: none"> <li>• More than 70% of rural households use LPG for cooking.</li> <li>• More than 98% of all appliances and cooling systems are best in class.</li> <li>• All road and rail mobilities are electricity- or hydrogen-fuelled.</li> <li>• Net zero emission in electricity generation in the mid-60s.</li> <li>• 20% of electricity generation capacity is from RE.</li> </ul>

<sup>1</sup> The Policy defines best in class as a superior product within a category of hardware or software.

These targets represent a comprehensive strategy to achieve sustainable energy and reduce carbon emissions across various sectors.

### › **Linkage with decent work and localisation in RE production networks**

Like the NEP and the REMP, the NETF promotes local content and local participation in implementing energy transition programmes and projects. It seeks to achieve localisation by establishing Public Private Partnerships (PPPs) to co-finance the construction, development and deployment of energy transition infrastructure, including solar PV, wind, hydro, mini-grids, nuclear, CNG plants, etc. The involvement of local entities in the execution of these projects will enhance the capacities of such entities to independently execute similar projects.

The framework intends to facilitate the creation of industries for local manufacture of renewable energy components, such as solar panels and batteries, to improve energy access and security in order to meet targets. The government will also facilitate the establishment of these local industries through investments, access to technology, and attractive business incentive schemes.

The framework projects that job creation would occur in electricity and fuel distribution spaces. The electricity sector is projected to create about 1.37 million direct, indirect or induced jobs out of the projected total of 1.40 million jobs. It is also estimated that 52% of the jobs created in the period will be in the construction and installation (C&I) subsectors. C&I and Operations and Maintenance (O&M) activities will comprise over 90% of expected jobs.

Ghana's energy transition framework recognises the potential of job losses resulting from a full-scale energy transition. The framework, therefore, in principle promotes alternative livelihood programmes for persons affected by the energy transition agenda. It also recognises the need to incorporate energy transition into academic curricula, to provide the knowledge and skills required to take advantage of energy transition job opportunities. The framework therefore calls on academic institutions to adapt and develop programmes for this purpose.

## **3.1.4. National Energy Transition Investment Plan**

Unlike the NETF, championed by the Ministry of Energy, the National Energy Transition Investment Plan (NETIP) is led by the Ministry of Environment, Science, Technology and Innovation (MESTI). The investment plan focuses on the financing strategies necessary for executing the national energy transition agenda. A key objective of the investment plan is to help Ghana frame an energy transition agenda that will attract investment, while at the same time ensuring a just transition and fully supporting Ghana's economic growth.

The plan seeks to help Ghana achieve net zero carbon emissions by 2060, by deploying low-carbon technologies in all sectors. There is an investment requirement of \$550 billion, most of which will be in the power and transport sectors. These low-carbon technologies include renewables, low-carbon hydrogen, battery electric vehicles and renewable cookstoves. The plan identifies the private sector, domestic public sector and international institutions as the relevant investment sources.

The GETIP identifies capital markets as a potentially massive funding source. However, the plan acknowledges that some project types might require de-risking efforts before they become attractive to investors in these markets. Capital markets encompass a vast network of institutions and instruments for raising long-term capital. These sources include stock exchanges, bond markets, and private equity firms. Compared to traditional development aid, capital markets offer several advantages, including holding significantly more capital than traditional development funds. Thus, it is believed that tapping into this pool would allow the financing of large-scale projects crucial for Ghana's energy transition. Additionally, it is also believed that successful projects in the capital market can attract long-term investment, fostering a more sustainable funding stream for the energy transition.

### › **Linkage with decent work and localisation in RE production networks**

The NETIP recognises Ghana's opportunity to localise low-carbon technologies and green manufacturing under the Net Zero Emissions (NZE) scenario (International

Energy Agency, 2023).<sup>2</sup> The plan seeks to set the pace of the country's transition in line with global efforts to benefit from the localisation of RE production networks. The plan also envisions the creation of livelihoods through the net addition of 400 000 jobs, of which net zero investments in solar PV and electric vehicle charging/hydrogen fuelling stations will directly stimulate 80%.

The plan seeks to implement policy interventions in the industrial sector to smooth and de-risk investments in renewable and renewable energy technologies. It mentions implementing regulations and standards to ensure efficiency, safety and quality of infrastructure used in producing renewable energy technologies. The plan also seeks to implement incentive schemes and enabling programmes to help create a critical mass of renewable energy products needed to sustain the industry, and develop new production networks of yet-to-be-implemented technologies for private sector enterprises to anticipate and plan for future markets.

The breakdown of job prospects favours the transport sector, directly supporting about 112 000 jobs in constructing and maintaining vehicle-charging and hydrogen-fuelling facilities, and an additional 3 500 indirect and 10 000 induced jobs in the supply chain and broader economy. The power sector will directly support 172 000 jobs in constructing renewable generation assets and 20 000 indirect and 50 000 induced jobs.

## 3.2. SMME AND INDUSTRIAL POLICY

The policy scan reveals that Ghana does not have a comprehensive industrial policy with clear targets for industrial growth, SMME development, or gender inclusion within the industry. Over the years, various policies and government agencies have been introduced to promote and develop SMMEs through targeted interventions and programmes. Despite these efforts, the absence of a unified industrial policy hinders the effectiveness of these initiatives and the overall industrial growth in the country.

The frequent policy changes, and the establishment of new state institutions with each government shift, disrupt continuity and long-term planning. The National

Development Planning Commission (NDPC)<sup>3</sup>, which could have instituted continuity and long-term policy planning, only plays an advisory role to the president, and their plans are therefore not binding. This inconsistency impacts industrial growth and fails to provide a stable environment for SMMEs to thrive. Moreover, the absence of a unified industrial policy results in fragmented efforts that do not adequately address the systemic challenges faced by the industry, such as access to finance, infrastructure deficits, and gender disparities. Ghana must develop a comprehensive policy with clear targets for industrial growth, support for SMMEs, and gender-inclusive strategies. The subsequent sections provide a snapshot of some agencies and policies designed to support industrial and SMME development in Ghana.

### 3.2.1. Ghana Enterprises Agency

The 1980s sparked a transition from a purely state-led economy to a more liberalised market, involving foreign direct investments and the participation of the private sector. The National Board of Small-Scale Industries (NBSSI), currently known as the Ghana Enterprises Agency (GEA), was established by an Act of Parliament in 1981 as an agency under the Ministry of Trade and Industry. Specifically, the NBSSI was established to enhance the development of SMMEs by establishing criteria for small-scale industries. They defined what qualifies as a small business, identified different types, and created supportive policies. They also implement plans, build infrastructure, and advise on business approvals and import processes. The NBSSI coordinated with other government bodies and donors to avoid duplication and maximise resources.

The NBSSI supported entrepreneurs through Business Advisory Centres (BACs). These BACs provided services, such as connecting businesses with customers, providing essential information on business operations, and facilitating access to resources. The NBSSI also helped companies access credit through guidance and training on financial management and record keeping. Additionally, they offered training and counselling on best practices, management fundamentals, market access strategies, and business plan development.

The change from the NBSSI to GEA was underlined by the enactment of the Ghana Enterprises Agency Act 2020 (ACT 1043). It encompasses the needs of both small

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<sup>2</sup> The NZE scenario is part of the IEA's set of scenarios under the energy transition. The Net Zero Emissions by 2050 Scenario outlines a pathway for the global energy sector to achieve net zero CO<sub>2</sub> emissions by 2050, meet key energy-related Sustainable Development Goals, and limit global temperature rise to 1.5°C, with advanced economies reaching net zero ahead of others.

<sup>3</sup> NDPC: National Development Planning Commission is the state agency established by an act of Parliament to coordinate long-term planning of Ghana's development process and advise the president on national development planning policy and strategy.

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and medium-sized enterprises (SMEs). This broadened scope reflects the recognised importance of SMMEs to Ghana's economic growth. The GEA is the lead authority coordinating SMMEs. It facilitates their competitiveness by providing startup programmes, development services and innovative financial services to entrepreneurs and businesses. The Government justified the transition from NBSSI to GEA by highlighting that the former had focused mainly on micro and small enterprises, and there was a need to include a good focus on medium-scale enterprises.

The GEA focuses on four critical angles: (1) the provision of technical support; (2) the provision of access to finance; (3) access to the market; and (4) support from meeting the regulatory needs of SMMEs in Ghana. The common objective among programmes is to create an enabling, competitive and vibrant business environment where all SMMEs thrive to achieve their full potential.

### ► **Decent work, gender inclusion and localisation**

The GEA does not necessarily highlight decent work and gender inclusion as part of its mandate; however, some aspects can be inferred from its work. For example, the agency ensures decent jobs for the vulnerable in society, promoting inclusion in providing livelihoods. The programmes undertaken have special focuses on women and persons with disabilities (PWDs). For instance, the Women Entrepreneurs Rise (WERise) Network, the Women MSME Programme, and the Women SME Innovation Programme - Digitalise for Jobs (D4J) are all tailored for women beneficiaries. Regarding localisation, the agency's programmes and projects are specifically designed for the citizens of Ghana. Skills and other benefits acquired through the agency are expected to help develop the private sector and promote local businesses.

### **3.2.2. National Entrepreneurship and Innovation Programme (NEIP)**

The National Entrepreneurship and Innovation Programme (NEIP) is a flagship policy initiative of the government. It is set within Ghana's long-term strategic vision of consolidating its middle-income status, and building an industry-driven economy capable of providing decent jobs that are suitable and

sustainable for development. The current projects being undertaken under this program include *Kayayei* (head porters<sup>4</sup>) an Empowerment Programme, the Presidential Pitch for Young Entrepreneurs, Entrepreneurship for Restoration programmes, and NEIP Hubs Acceleration Grant Programme (HAGP).

The main objective of NEIP is to provide integrated national support for startups and small businesses. It focuses on providing business development services, startup incubators and funding for young businesses to enable them to grow. Under the NEIP business support programme, 45 000 businesses have received training and incubation services in the following areas:

- Business management
- Financial Management and basic bookkeeping
- Sales, marketing and branding
- Business plan writing
- Organisational management
- Corporate governance

The programme recognises the need to provide decent work for women through its *kayayei* empowerment programme. This particular trade is dominated by females and sometimes children, and interventions to empower them amounts to emancipation from poverty and improvement of livelihoods. The programme support areas have the potential to build local enterprises' and entrepreneurs' capacities and skills, towards participating in diverse ventures, which could include the RE production networks.

### **3.2.3. YouStart Programme**

The YouStart programme was announced in 2022 as a vehicle through which the government intends to provide funding and technical support to the youth (aged 18 to 40) and youth-led businesses. The programme is implemented by both the GEA and NEIP and aims to assist youth in starting, building, and growing their own companies to mitigate unemployment. The programme is measured against similar successful models worldwide, including the Small Business Administration (SBA) in the US and the British Business Bank in the UK. The programme aims to commit about GHS 10 billion (about R13 billion) over three years (2022-2025), towards creating at least a million jobs in the economy. Funding

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<sup>4</sup> Kayayei carry goods for shoppers and traders in markets or transport them across town, usually balancing the loads on their heads. They are commonly found in bustling markets

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sources for the programme include a mix of government and international partnership support.

YouStart is anchored around three key areas: the district entrepreneurship programme (DEP), the commercial programme and the YouStart Grace Programme. The DEP is designed to support startups and existing micro-businesses in rural and urban areas and provide technical and financial assistance to young entrepreneurs. The Commercial Programme aims to support medium-sized businesses by providing them with technical and financial services to facilitate business expansion. It is to be led by banks and other Participating Financial Institutions (PFIs) (Ministry of Finance, 2022).

The YouStart Grace Programme is designed to be led by faith-based organisations (FBOs) nationwide (i.e. organisations with affiliations to a religious body). The aim is to provide technical skills training and business development support services to enhance employability and business growth. The programme targets unemployed youth, especially senior high school and university graduates, as well as vulnerable and needy individuals, rural entrepreneurs, and micro businesses, with a particular emphasis on women-owned enterprises.

The Ghanaian Government, through the YouStart program, intends to build an entrepreneurial nation by providing some of the critical enablers that make entrepreneurship a success. These include the following:

- Training and capacity building
- Access to finance
- Access to market, technology and procurement opportunities
- Business development support services
- Compliance and quality assurance support services

The programme envisions providing a million jobs over its implementation period with a particular focus on women-led businesses, under its Grace model. The model sets a floor of at least 40% and 30% of jobs for women and rural settlers respectively. The provision of these jobs and interventions contributes to enhancing livelihoods and equipping the target groups for ventures in local production networks.

The YouStart programme does not specifically focus on RE production networks. However, the business skills and financial interventions could be applied to enhance local participation of enterprises in the RE production

networks. For example, YouStart could enhance skills training in RE (e.g., solar panel installation, biofuel production), and could equip youth and vulnerable groups to enter relevant job markets. Additionally, technical assistance through the DEP could focus on sectors that utilise RE (e.g., off-grid solar solutions for rural businesses), and it could indirectly support the inclusion of these businesses in the RE production network. The programme's focus on women-owned businesses also offers potential. If these businesses operate in sectors that can benefit from RE (e.g., renewable energy solutions for agriculture), the programme's support could indirectly contribute to their inclusion.

### 3.2.4. One District One Factory initiative (1D1F)

The One District One Factory (1D1F) initiative was conceived with the aim of improving import substitution and promoting non-traditional exports in Ghana. This is a private sector-led initiative proposed by the sitting president and launched on 25 August 2017 to change the dependence of Ghana's economy on import of finished goods and export of raw materials. The initiative seeks to ensure that industries are spread equitably among the country's 261 districts, based on their natural resource endowment. The initiative seeks to create an economy focused on manufacturing, value addition and export of processed goods. The initiative aims to leverage the competitive advantage of districts in the provision of raw materials to feed local processing plants.

The 1D1F initiative seeks to achieve the following (1D1F Secretariat, n.d.):

- Add value to the natural resources and exploit the economic potential of each district, based on its comparative advantage.
- Ensure a balanced and equitable distribution of industries to stimulate economic activity in different parts of the country.
- Create massive employment, particularly for the youth in rural and peri-urban communities, thereby improving income levels and standards of living, as well as reducing rural-urban migration.
- Promote exports and increase foreign exchange earnings.
- Enhance the production of local substitutes for imported goods, thereby conserving scarce foreign exchange.

The government has established a secretariat, which acts as a one-stop shop for business promoters, offering technical support throughout the project lifecycle:

- **Project evaluation and refinement:** They register projects, review business plans against financial institution criteria, and advise promoters on restructuring proposals for better approval chances.
- **Financial support facilitation:** They liaise with financial institutions to secure funding for viable projects and ensure queries are addressed promptly.
- **Stakeholder engagement:** They structure stakeholder engagement to meet both business needs and regulatory requirements.
- **Infrastructure and legal support:** They can help identify infrastructure support and connect promoters with legal assistance.
- **Incentive readiness:** They collaborate with promoters to obtain necessary documentation for government-approved incentives.
- **Project sustainability:** They ensure projects consider the three key evaluation pillars: raw material availability, good governance practices, and market access (including off-take agreements), for long-term success.

According to the secretariat's website, about 232 projects have been launched under the initiative. Further, the secretariat also indicates that the 1D1F initiative has provided support for the establishment of 28 new factories (referred to as 'Green Fields'). The secretariat also indicates that it has supported about 48 existing factories (referred to as 'Brown Fields') under the initiative.

The 1D1F policy has the potential to improve decent work and inclusion in the RE production network. For example, policy could extend job creation to the RE sector, if factories that are established utilise RE. This approach could increase the demand for RE technologies and the provision of operation and maintenance services, which SMMEs could leverage for their growth. Additionally, the 1D1F policy could be coupled with skills development programmes focused on RE technologies. This approach could equip the workforce with the necessary skills to participate in the RE production network.

The policy also prioritises establishing factories in rural districts. If these factories incorporate RE solutions (e.g., off-grid solar power), that could stimulate rural

electrification, and potentially create new economic opportunities related to RE in these areas. The 1D1F policy, again, focuses on supporting women-owned businesses, which could be encouraged to operate within the RE sector (e.g., the provision of renewable energy solutions for agricultural enterprises).

### 3.3. LABOUR AND GENDER POLICY

Ghana, like many countries, faces challenges in achieving equitable representation of women in leadership positions across organisations. This underrepresentation can hinder progress on national development goals. As already demonstrated in this paper, gender inclusion is a critical component of decent work, and an essential strategy for reducing poverty and addressing social injustices. Achieving gender equality is considered a fundamental aspect of human rights and a prerequisite for sustainable development. In Ghana, the pursuit of gender equality is guided by commitments to international instruments, the 1992 Constitution, and national development frameworks. Specifically, Article 17(1) and (2) of the 1992 Constitution guarantees gender equality and freedom from discrimination on various grounds.

Gender mainstreaming in Ghana is stipulated in various sectoral policies at both central and local government levels. At the local government level, Metropolitan, Municipal and District Assemblies (MMDAs) incorporate gender equality and mainstreaming policies into their policies and programmes. The National Development Framework (NDF), which outlines both central and local government development targets, is aligned with international human rights and development frameworks, focusing on the rights of women, men, and children. At the central government level, Ghana's National Gender Policy, since its adoption in 2015, has been the broader framework for implementing national gender mainstreaming efforts in the country. The National Green Jobs Strategy (NGJS) is another state-level policy which seeks to prepare the population, with a special focus on gender inclusion, for participation in the green economy, through skills and enterprise development.

#### 3.3.1. National Gender Policy

The overarching goal of the National Gender Policy is to integrate gender equality concerns into national development processes, thereby improving the social,

legal, civic, political, economic, and socio-cultural conditions of all Ghanaians, particularly focusing on women, girls, children, the vulnerable, PWDs, and the marginalised. The policy outlines the need for stakeholders to address several critical issues, including inequality of access to social protection for the marginalised, gaps in education and skills training, extreme poverty, maternal mortality, unequal economic power and justice, disparities in power and decision-making, and persistent stereotypes and discrimination against women and girls. Despite progress, these inequalities remain deeply entrenched in Ghana's social system, affecting access to justice, health, finance, education, security, and other areas. These challenges are largely attributed to historical patriarchal influences and societal socialisation practices.

To tackle these inequities, successive Ghanaian governments have implemented initiatives, such as promoting girl-child education, providing free school uniforms and exercise books, offering skills training for young women, ensuring free antenatal services for pregnant women, and enhancing access to credit through programmes like the Livelihood Empowerment Against Poverty. Legal reforms, including the Domestic Violence Act of 2007 (Act 732), have also been enacted to address gender inequality and promote the welfare of women and girls.

The National Gender Policy emphasises five main policy commitments:

- Women's empowerment and livelihood
- Women's rights and access to justice
- Women's leadership and accountable governance
- Economic opportunities for women
- Gender roles and relations

The policy outlines the use of various strategies, including information and communication technology (ICT) tools, skills development, advocacy, lobbying, negotiation, mobilisation, transformational leadership, research, and monitoring and evaluation to achieve its intended goals. Clear roles and responsibilities are assigned to state and non-state actors, including civil society organisations (CSOs), the media, the private sector, traditional authorities, and local communities, to ensure efficient and effective implementation. The Ministry of Gender, Children, and Social Protection is designated as the main body responsible for driving policy actions through a Strategic Implementation Plan to achieve the policy objectives.

The policy identified the lack of women's access to decent livelihoods, through engaging with stakeholders in the drafting process. The policy also identified that the achievement of gender equality and women empowerment significantly relies on women's access to wage employment and decent work. However, women often remain in low pay jobs due to their predominance in the informal sector, domestic work, and traditional farming. The primary challenge is to incorporate gender perspectives into Ghana's macroeconomic policies and strategies, promoting accelerated economic growth, alongside improved education and affirmative action measures.

The policy, having identified the need to provide decent work for women, couched its broader premier objective as:

To accelerate efforts and commitments of the government in empowering women (especially women with disability) to have safe and secure livelihood, access to economic opportunities, decent work to improve earnings while addressing disparities in education, socio-economic and cultural issues, health and agriculture, trade and related matters. The core issue here is about 'Women's Empowerment'.

The policy aims to ensure greater inclusion, visibility, and an equal voice for both women and men in employment, by advocating for the engendering of employment policies. This involves implementing measures to close the gaps in access to economic opportunities, earnings, and productivity between women and men at all levels, through structural, legal, and collective action. It also proposes the development of a comprehensive database on employment records for both men and women, in formal and informal sectors. This database will help track, evaluate, and improve employment conditions, particularly for women. Additionally, reviewing and targeting skills development programmes and projects will be necessary to increase decent employment opportunities for everyone, especially women.

The policy proposes that equipping women with entrepreneurial skills and linking them with startup capital is another vital step. Support actions should also be implemented to strengthen the legal and administrative framework for labour administration. Ensuring job security for women and men on maternity leave, through promotion and regulation is necessary to protect their rights. Furthermore, it identifies the

importance of refurbishing and retooling rehabilitation centres, and opening up other avenues nationwide, to provide technical and vocational training for women with disabilities.

### 3.3.2. National Green Jobs Strategy

The National Green Jobs Strategy (NGJS) was developed by the Ministry of Employment and Labour Relations (MELR), in response to the impact of the energy transition on the labour market in Ghana. The NGJS identifies that the commitments of the country in the National Determined Contribution (NDC) will impact directly on livelihoods, since it seeks to change methods of production which are associated with GHGs. Due to these commitments, the workforce will be required to adopt new technologies, skills and innovations to improve their employability, and adapt methods of production to the requirements of the energy transition. The strategy seeks to ensure that this impact is mitigated, by ensuring a just and equitable transition to the desired green economy. The NGJS defines green jobs as “decent jobs that contribute to improving the efficiency of energy and raw materials and limiting GreenHouse Gas (GHG) emissions whilst protecting and restoring ecosystems.” The framework of the NGJS focuses on enterprise development as a means of maximising opportunities of decent work, through the creation of green jobs in the transition economy. The policy assumes that if a suitable business environment is created, green enterprises can develop and grow in a sustainable manner, to create the expected decent work opportunities across various economic sectors.

The NGJS is executed through the Ghana Green Jobs Programme, which is structured around four pillars, which also serve as the objectives:

- To ensure policy alignment, coherence and coordination for the maximisation of green jobs.
- To develop employable skills, particularly for the youth, women and PWDs, to take advantage of existing and emerging green jobs potential.
- To support the creation of green jobs across sectors, through the promotion of sustainable and competitive green enterprises and markets.
- To mobilise and facilitate access to sustainable financing for green enterprises, through inter-sectoral collaboration and cooperation.

By design, the NGJS strongly hinges on inter-sectoral coordination. It presumes that there are already initiatives and interventions in place which could be harmonised and coordinated to achieve the overall goal of creating decent green job opportunities in the transition economy. The effective period of the current strategy is from 2021 to 2025.

#### ► **Linkage with decent work and localisation of RE production networks**


The NGJS generally identifies RE as a sector for the development of green enterprises and decent job creation. RE is considered under the objectives 2, 3 and 4, with various strategies to enhance the RE ecosystem. Under objective 2, which deals with skills development, the policy seeks to update existing manuals on green skills requirements by incorporating RE technology and ensuring support for local employment benefits.

Objective 3 dedicates an entire strategy to the development of enterprises in the RE sector. This strategy seeks to intensify and encourage investments in RE. Table 3 below gives the details of how this strategy will be achieved:

**Table 3: Intensifying and encouraging RE investments according to the NGJS**

Activities	Expected Outputs	Indicators	Means of Verification	Timeframe	Responsibility
Develop collaboration, partnerships and cooperatives in the RE sector.	Collaborations, partnerships and cooperatives in RE developed.	Number of collaborations, partnerships and cooperatives in RE.	Reports, pictures and videos.	Years 1-5	Lead: GIPC, MOF, MOEn Collaborators: Ministry of Trade and Industry, MESTI, Ministry of Food and Agriculture, Ministry of Employment and Labour Relations, Department of Cooperatives, Ministries, Departments and Agencies, MMDAs, Private Sector, DPs.
Sign MOUs and agreements for the development of RE projects.	MOUs and agreements in RE signed.	Number of RE MOUs and agreements signed.	List of MOUs and agreements in RE,		
Facilitate the operationalisation of MOUs and agreements signed.	MOUs and agreements implemented.	Number of MOUs and agreements implemented.	Status Reports		
Implement attractive packages that encourage investments in RE and support local employment benefits.	Attractive packages for RE investments for local employment benefits implemented.	Number of attractive packages implemented.	List of attractive employment-oriented RE packages.		

Objective 4 seeks to achieve PPPs for funding skills development programmes in the RE sector. The NGJS assigns the Ministry of Energy to conduct investment training in RE for government sponsored employment promotion agencies, towards operationalising the strategy.

An aerial photograph of a large hydroelectric dam. The dam structure is concrete with several spillways. In the foreground, there are large orange cylindrical structures, likely part of the dam's infrastructure. The river flows through the dam, creating white water rapids. The background shows a lush green forested hillside under a clear blue sky. A large yellow circle is overlaid on the left side of the image, containing the section title in bold black text.

# **SECTION FOUR: CRITICAL ANALYSIS OF EXISTING POLICIES**

# SECTION FOUR: CRITICAL ANALYSIS OF EXISTING POLICIES

## 3.1. ENERGY POLICY

### 4.1.1. The National Energy Policy

The policy makes significant provisions for localisation and SMME involvement through directly encouraging local manufacturing, capacity building, financial facilitation, and regulatory support. It also makes provisions on gender mainstreaming that look at the broader energy sector.

These approaches could directly or indirectly impact decent work if implementation is well planned. However, despite the policy's strong emphasis on localisation, SMME involvement and gender equality, several gaps could impede its effective implementation.

First, the policy lacks specific mechanisms or frameworks to meet these goals. There are limited details on the approach to identifying and supporting SMMEs for RE projects. The energy policy also mentions the manufacture of RE technologies but pays little attention to the production network of the technologies. It is instructive to note that the RE production network, specifically the solar PV chain, consists of various aspects which could be significant opportunities for SMME participation. For example, SMMEs can engage in research and development (R&D) to provide access to new materials and innovative technologies to improve the efficiency of solar panels. There are opportunities to produce various core PV components, such as solar cells, modules, and inverters. Additionally, opportunities exist to produce mounting systems, cables and back-sheets<sup>5</sup> supporting PV technologies.

SMMEs can also be crucial in supplying and distributing raw materials and creating distribution networks for solar components. Additionally, SMMEs can offer maintenance services to ensure optimal system performance. Beyond

installation and maintenance, SMMEs can contribute to the solar PV production network through training and education and the provision of consultancy services, such as designing and implementing RE projects. In the recycling and waste management sector, SMMEs can establish facilities to recycle solar panels and manage solar PV waste. In short, SMMEs can drive the growth of the RE sector and opportunities for decent jobs through active engagement in the diverse aspects of the RE production network.

Second, the policy does not sufficiently address the technical and financial challenges that would impede SMME integration and gender inclusion along the RE production networks. Although the provision of low-cost financing schemes is mentioned, there is no clear strategy for how SMMEs can access these resources, or how financial institutions will be incentivised to support small businesses. Additionally, while beneficial, the focus on vocational education and certification for technicians and engineers does not extend to broader entrepreneurial and business management skills that SMMEs may require to thrive in the RE sector.

The NEP recognises the need to enhance women's participation in key decision-making processes and to support women-owned businesses within the energy sector. However, it falls short of providing concrete strategies or actionable steps to achieve these goals. For example, while the policy identifies the importance of empowering women and fostering inclusivity, it does not specify targeted programmes, financial incentives, capacity-building initiatives, or other support mechanisms to promote and sustain women-owned enterprises. This lack of detail creates a significant gap, potentially limiting the policy's impact on addressing gender disparities and fostering equitable growth in the energy sector.

Last, the policy lacks a robust framework for monitoring and evaluating the effectiveness of its provisions on localisation and SMME involvement. Tracking progress and making necessary adjustments will be challenging without specific metrics, timelines, or accountability

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<sup>5</sup> Back-sheets are the protective layers on the back of solar panels.

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mechanisms. Establishing a dedicated monitoring body, or incorporating regular assessments and feedback loops, could ensure that the policy's goals are met, and that SMMEs genuinely benefit from the initiatives outlined.

### 4.1.2. Renewable Energy Master Plan

While the REMP provides a robust framework for RE development, it has lagged in its implementation timeline. For example, the plan indicates that, within the first cycle of its implementation (i.e. by 2020), it intends to have about 130MWp of utility-scale solar PV, an estimated investment requirement of \$169 million, while creating 1 196 jobs. Other targets included wave power of about 5MWp and 25 wind irrigation units. While the second cycle of implementation is nearly over, however, it lags behind its targets even in the first cycle. At the end of 2023, Ghana's installed capacity of solar PV technologies was about 81MW, falling short of the 2020 target under the REMP.

There have been several challenges regarding RE deployment in Ghana. Chief among them are the regulatory issues which contradict the plan's intent to create an enabling environment for private investments to thrive. Existing research has identified other factors, including the high cost of financing (Mahama, Derkyi, & Nwabue, 2021). Unfavourable policies, ineffective licensing regimes, and institutional arrangements are additional barriers to the deployment of renewables and achievement of targets under various master plans (Bukari, Kemausuor, Quansah, & Adaramola, 2021). These concerns were even present before the enactment of the REMP. For example, research in 2017 noted that poor implementation structures, the lack of market schemes, and regulatory challenges contribute to the country's poor performance on RE integration (Sakah, Diawuo, Katzenbach, & Gyamfi, 2017). There is a need to address the incoherence in regulation and fiscal policies to create a suitable environment for the operation of RE investments.

There is also a need to address the gaps that hinder gender equity and inclusivity. One significant gap is the lack of explicit gender-specific goals and targets. The plan does not set clear objectives for increasing the participation of women and marginalised groups in the RE sector. Including such targets would ensure a more intentional focus on gender equity.

Another gap lies in the failure to include women and marginalised groups in decision-making processes. The plan does not explicitly ensure their representation in RE planning and implementation. Ensuring diverse representation in decision-making bodies or advisory groups could help address this issue. Additionally, the plan lacks targeted capacity-building programmes specifically designed for women and marginalised groups. While it emphasises general capacity building, developing specific initiatives that enhance the skills and opportunities for these groups, such as technical training, entrepreneurship support, and leadership development, would be beneficial.

The REMP also falls short in its mechanisms for monitoring and evaluating the gender impacts of RE projects. There is no established framework for collecting gender-disaggregated data, or tracking progress on gender equity and inclusivity. Implementing such mechanisms would provide valuable insights and inform necessary policy adjustments. Finally, the plan does not sufficiently promote economic empowerment initiatives for women and marginalised groups within the RE sector. Specific programmes to support women-led enterprises and cooperatives, including access to finance, mentorship, and market opportunities, are essential to ensure that the benefits of the RE sector are equitably shared.

### 4.1.3. National Energy Transition Framework

The NETF makes significant provisions for job creation, and acknowledges the job losses that may follow the full deployment of renewable energy technologies. However, the framework does not provide much detail on the strategy for job creation or mitigating job losses and how these strategies would link to the broader industrial sector.

The framework is expected to be financed from many sources, including the government, multilateral development banks (MDBs), development partners (DPs), private investors, and beneficiaries. Over time, the government estimates that about 55% of the investment required will come from MDBs and DPs. Whereas these sources provide access to a large pool of funds to support the transition, addressing the shortcomings of these funding sources is essential. For example, relying on loans from MDBs can contribute to the national debt burden, potentially leading to debt sustainability issues. Ghana's debt sustainability has

remained questionable, and has led to the country's inability to secure concessionary financing from MDBs. Thus, debt sustainability risks would not enable the government to secure the requisite funding from MDBs if it does not ensure that the country is on the path towards debt sustainability.

Another shortcoming of the funding model is the risk of locking the country into high energy tariffs through unfettered private sector participation (Baloyi & Krinsky, 2022). While the government provides sovereign guarantees de-risk private investments, the declining cost of renewable energy could result in long-term commitments to inflated tariffs. These tariffs would encompass investment costs, interest, and profit margins. Furthermore, private investors could capitalize on market speculation and currency fluctuations, potentially leading to excessive or supernormal profits driven by high exchange rates.

DPs offer various funding mechanisms to support the energy transition, including climate mitigation and adaptation projects. Large-scale funds, like the Global Environment Facility (GEF) and the Green Climate Fund (GCF), hold significant potential, even fostering the integration of SMMEs into RE production networks. However, a major challenge for developing countries like Ghana is securing access to these funds, due to difficulties in meeting the required criteria. Project justification poses a significant hurdle (Africa Policy Research Institute, 2022).

Most climate funds demand proposals backed by scientific data demonstrating the need for funding. Unfortunately, such data is rarely available, requiring member countries to undertake preliminary studies. These studies can be expensive, often exceeding the applicant's existing resources, hindering their access to crucial funding.

Until Ghana builds sufficient capacity to gather the necessary data and meet the application requirements, its reliance on DPs as a major source of funds for the energy transition will remain elusive. Building this capacity requires investment in data collection, analysis, and proposal development expertise. Addressing this gap is crucial for Ghana to unlock the substantial resources offered by DPs and accelerate its path towards a renewable energy future.

#### **4.1.4. National Energy Transition Investment Plan**

The NETIP relies on diverse sources of investment. This diversification strategy effectively mitigates risk by not relying solely on any single source. However, while listing potential funders is helpful, the true challenge lies in creating a business environment that actively attracts these investments. The NETIP lacks concrete measures to secure this vital funding. Ghana must address specific policy gaps to unlock the potential of private foundations, commercial banks, and the broader private sector. These include regulatory hurdles such as delays in securing licensing, and complexity of application processes for documentation that currently create a hostile business environment. The government must develop a transparent and effective governance culture to attract investments in renewable energy technologies. Additionally, broader economic issues that disproportionately impact borrowing costs such as currency depreciation, rising interest rates and inflation require careful attention.

The plan does not address the issue of SMME integration into the RE production network, although it mentions some job creation potential. In this regard, the policy is not in sync with the national energy policy, which is meant to be a universal policy framework in which policies like the NETF and the NETIP serve as subsets.

## **4.2. SMME AND INDUSTRIAL POLICY**

### **4.2.1. Ghana Enterprises Agency**

Despite establishing support institutions, a persistent challenge remains: a lack of significant progress in addressing the core issues hindering SMME development – limited access to financing, stifling regulations, and difficulty entering new markets. For example, Abor and Quartey (2010) observed that SMME development in Ghana is hindered by several factors, including lack of access to advanced technology and international markets, stringent laws and regulations, weak institutional capacity, insufficient management skills and training, and, most critically, limited access to finance (Abor & Quartey, 2010). Recent studies, such as Tagoe, Nyarko, and Anuwa-Amarh (2019), also highlight that obtaining affordable credit with reasonable terms is the primary financial challenge for SMMEs (Tagoe, Nyarko, & Anuwa-Amarh, 2005). Additionally, Attrams and Tshehla (2022) found that high taxes, informal competition, and access to finance are among the top ten challenges facing SMEs in Ghana (Attrams & Tshehla, 2022).

These entrenched challenges necessitate a renewed focus on crafting and implementing effective solutions to unlock the full potential of Ghana's SME sector. These solutions may include an aggressive pursuit of formalisation for SMMEs, instituting fair and targeted financing interventions for SMMEs and prioritising capacity building programs for enterprises.

#### **4.2.2. One District One Factory initiative (1D1F)**

Despite the potentials of the initiative, the policy does not provide explicit targets for the energy sector, particularly in the form of RE integration. A systemic policy alignment is important to ensure that main policies, such as the 1D1F initiative, could incentivise factories that utilise or produce RE technologies.

### **4.3. LABOUR AND GENDER POLICY**

Though the policy seeks to create and promote decent jobs, which could generally benefit women, it does not provide a clear pathway for streamlining gender concerns in the achievement of the objectives, with respect to RE development. For instance, updating the skills requirement in education manuals to include RE does not specify gender considerations, though the objective mentions youth, women and PWDs in the development of employable skills.

A similar nuance is observed in the strategic approach of objective 3, which deals with intensifying and encouraging RE investments. The outlined activities and expected outputs do not include gender considerations in promoting investments. This is evident in the omission of the Ministry of Gender and Social Protection in the list of collaborators identified to undertake this objective. The exclusion of gender-focused state institutions in the drafting of policies such as the NGJS limits efforts of streamlining gender concerns into RE development.



# SECTION FIVE: CONCLUSIONS AND RECOMMENDATIONS

# SECTION FIVE: CONCLUSIONS AND RECOMMENDATIONS

## 5.1. CONCLUSIONS

The Ghanaian context presents a host of policies relating to the thematic areas of decent work, gender inclusion, and localisation, in various sectors of the economy. A key observation is that the energy sector policy space in Ghana is comprehensive, with different policies targeted at achieving specific objectives of the national energy goals.

Localisation is a major focus of most energy policies, providing fertile ground for the enhancement of local enterprises, to provide decent jobs in the transition economy. Generally, the government's inability to expand RE integration, as spelt out in the reviewed energy policies, will undermine the efforts at achieving the outcomes of other sectoral policies and industrialisation goals.

SMME policies, on the other hand, are more short-term and inconsistent with long-term national development goals. This inconsistency is also compounded by the nonexistence of a unified industrial policy, resulting in fragmented efforts that do not adequately address the systemic challenges faced by the industrial sector, such as access to finance, infrastructure deficits, and gender disparities. The country's efforts at nurturing skills and enterprises to participate in the green economy and generate decent work was evident in the NGJS. A general observation across policies considered in this report is that there is a lack of specificity in the pathways of ensuring gender inclusivity and mainstreaming in the development of RE production networks. This is captured as gaps in the policies within the report and could serve as areas of focus in further interventions in the RE sector.

Additionally, a major inadequacy of these policies is their assumption that sustainable financing systems are

readily available for SMMEs. As a result, they fail to make deliberate provisions for establishing and maintaining sustainable financing mechanisms to support these enterprises. Without addressing this critical gap, the potential for SMMEs to drive localisation, create decent jobs, and contribute to the green economy remains constrained, as access to finance remains a significant barrier for many enterprises in Ghana's energy and industrial sectors.

## 5.2. RECOMMENDATIONS

### 01 **Develop a unified industrial policy:**

1.1. Formulate a comprehensive industrial policy to address systemic challenges in the industrial sector, such as access to finance, infrastructure deficits, and fragmented efforts.

1.2. Align SMME policies with long-term national development goals, to provide consistency and enhance the capacity of local enterprises to thrive within RE production networks.

### 02 **Strengthen SMME support frameworks:**

2.1. Introduce targeted financial support mechanisms and incentives to improve access to capital for SMMEs in the RE sector.

2.2. Establish long-term strategies to integrate SMMEs into RE production networks, ensuring their sustainability and contribution to decent work creation.

## 03 Enhance localisation efforts in the RE sector:

3.1. Build on the strong focus on localisation within existing energy policies by creating programmes that prioritise domestic production, assembly, and servicing of RE technologies.

3.2. Foster partnerships between local enterprises and international investors to transfer skills, technology, and best practices for developing the RE production network.

## 04 Promote gender inclusivity and mainstreaming:

4.1. Revise energy policies to include specific and actionable pathways for ensuring gender inclusivity in RE production networks.

4.2. Develop targeted interventions, such as capacity-building programmes, for women entrepreneurs and workers in the RE sector.

4.3. Introduce gender-responsive budgeting to monitor and allocate resources effectively, for gender equity in the energy sector.

## 05 Operationalise the National Green Jobs Strategy:

5.1. Implement the National Green Jobs Strategy more robustly to nurture skills and enterprises for the green economy, with a specific focus on RE technologies.

5.2. Incorporate RE-specific training programmes into national technical and vocational education and training (TVET) curricula, to equip the workforce with relevant skills for decent job creation.

## 06 Facilitate policy coordination and integration:

6.1. Strengthen coordination mechanisms among stakeholders in the energy, industrial,

and labour sectors, to ensure that policies complement each other and address systemic challenges holistically.

6.2. Establish a cross-sectoral platform to monitor and evaluate the implementation of policies relating to localisation, decent work, and gender inclusion in RE.

## 07 Leverage international best practices:

7.1. Benchmark Ghana's policy framework against global best practices in RE localisation and gender inclusion.

7.2. Adopt successful models of integrating SMMEs, promoting decent work, and advancing gender equality from other countries with similar socio-economic contexts.

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# APPENDIX A: SUMMARY OF ENERGY POLICIES

Policy	Goal	Focus Areas and Key Objective	Implementation Timeline
Energy Sector Strategy and Development Plan (2010)	Ensure availability of, and universal access to, energy services and for export by 2020.	<p><b>Power sub-sector:</b> Increase electricity access rate from 66% to 80% while ensuring availability for export.</p> <p><b>Petroleum Sub-sector:</b> Sustain exploration, development and production of the oil and gas endowment.</p> <p><b>RE sub-sector:</b> Increase RE in the total national energy mix and ensure its efficient production and use.</p> <p><b>Waste-to-energy:</b> Convert most of the waste generated in municipal activities, industrial operations and agricultural operations to energy.</p> <p><b>Energy efficiency and conservation:</b> Ensure efficient production and transportation, as well as end-use efficiency and conservation of energy.</p> <p><b>Energy and environment:</b> Ensure that energy is produced, supplied and used in an environmentally sustainable manner.</p> <p><b>Energy and gender:</b> Mainstream gender concerns in the energy sector</p>	2010 - 2020
National Energy Policy 2010	Develop an 'energy economy' to secure a reliable supply of high-quality energy services for all sectors of the Ghanaian economy, and also to become a major exporter of oil and power by 2012 and 2015 respectively.	<p><b>Power Sub-sector:</b> Increase installed power generation capacity quickly from about 2 000 MW to 5 000 (MW) by 2015, and increase electricity access from the current level of 66% to universal access by 2020.</p> <p><b>Petroleum sub-sector:</b> Ensure the sustainable exploration, development and production of the country's oil and gas endowment, and the judicious management of the oil and gas revenue, and enhance local content.</p> <p><b>RE sub-sector:</b> Increase the proportion of RE, particularly solar, wind, mini hydro and waste-to-energy in the national energy supply mix and to contribute to the mitigation of climate change.</p>	2010 - 2020

Policy	Goal	Focus Areas and Key Objective	Implementation Timeline
		<p><b>Waste-to-energy:</b> Convert most of the waste generated in municipal activities, industrial operations and agricultural operations to energy.</p> <p><b>Energy Efficiency and Conservation:</b> Remove the obstacles that have constrained the promotion and implementation of energy efficiency and conservation measures.</p> <p><b>Energy and Environment:</b> Ensure that energy is produced and utilised in an environmentally sound manner.</p> <p><b>Energy and Gender:</b> Mainstream gender concerns in the energy sector and align them with proper health, safety and environmental standards</p> <p><b>Managing the future of the sector:</b> Build a transparent and effective regulatory environment, and strengthen the regulatory institutions to fulfil their mandate effectively.</p>	
Draft of Biofuel Policy for Ghana	Modernise and maximise the benefits of bioenergy on a sustainable basis.	<p><b>Wood fuel:</b> Promote and ensure sustainable supply and efficient production of wood fuel, and increase LPG penetration rate to 50% by 2015.</p> <p><b>Biofuel:</b> Substitute 10% of national petroleum fuels consumption with biofuel by 2020, and 20% by 2030.</p> <p><b>Energy from biomass waste:</b> Enhance efficient collection, management and conversion of waste with low-cost technologies.</p>	2010 – 2011
RE Act	Provide for the development, management and utilisation of REsources for the production of heat and power, in an efficient and environmentally sustainable manner.	<ol style="list-style-type: none"> <li>1. Develop a framework to support the development and utilisation of REsources, and an enabling environment to attract investment in RE sources.</li> <li>2. Promotion for the use of RE technologies.</li> <li>3. Diversify supplies to safeguard energy security.</li> <li>4. Improve access to electricity using RE sources.</li> <li>5. Build indigenous capacity in technology for RE sources.</li> <li>6. Conduct public education on RE production and utilisation.</li> <li>7. Regulate the production and supply of wood fuel and biofuel.</li> </ol>	Enacted in 2011

Policy	Goal	Focus Areas and Key Objective	Implementation Timeline
National Climate Change Policy	Modernise and maximise the benefits of bioenergy on a sustainable basis.	<p><b>Agriculture and food security:</b> Develop climate-resilient agriculture and food security systems.</p> <p><b>Disaster preparedness and response:</b> Build climate-resilient infrastructure, and increase resilience of vulnerable communities to climate-related risks.</p> <p><b>Natural resource management:</b> Increase carbon sinks and improve management and resilience of terrestrial, aquatic and marine ecosystems.</p> <p><b>Equitable social development:</b> Address impacts of climate change on human health, including access to water and sanitation, gender disparities, and migration.</p> <p><b>Energy, industrial and infrastructural development:</b> Minimise GHG emissions and improve national GHG inventory mechanisms.</p>	Implemented in 2013 as Phase 1. No definite timelines provided for subsequent phases.
RE Action Plan	Increase the share of RE in the electricity mix to 10% by 2020.	<p>Increase grid connected installed capacity of RE sources by 2020 to:</p> <ul style="list-style-type: none"> <li>Solar: 217.7MW</li> <li>Tide, wave, ocean: 10MW</li> <li>Wind: 20MW</li> </ul>	2015 - 2020
RE Master Plan	Provide an investment-focused framework for the promotion and development of Ghana's RE resources towards sustainable socio-economic development, while reducing the adverse effects of climate change	<ul style="list-style-type: none"> <li>Increase the proportion of RE in the national energy generation mix from 42.5 MW in 2015 to 1 363.63 MW (with grid connected systems totalling 1 094.63 MW);</li> <li>Reduce the dependence on biomass as main fuel for thermal energy applications;</li> <li>Provide RE-based, decentralised electrification options in 1 000 off-grid communities;</li> <li>Promote local content and local participation in the RE industry;</li> <li>Create 220 000 jobs;</li> <li>Make carbon savings of about 11 million tons of CO<sub>2</sub>.</li> </ul>	2019 - 2030
Amendment of RE Act	Same goal as the RE Act, 2011 (Act 832)	Same objectives as the RE Act, 2011 (Act 832) but with amendments to various sections, including the insertion of a section on a net-metering scheme.	Enacted in 2020

Policy	Goal	Focus Areas and Key Objective	Implementation Timeline
National Energy Policy 2021	Provide a comprehensive framework for the management and development of Ghana's energy resources, to support the larger development goal of the country.	<p><b>Power generation, transmission and distribution:</b> Accelerate the achievement of universal access to electricity in the country, while achieving cost-competitive and enhanced electricity distribution and transmission systems.</p> <p><b>RE:</b> Increase the contribution of RE in the overall energy production mix of the country.</p> <p><b>Nuclear power:</b> Integrate nuclear power into the national electricity generation mix as baseload, to guarantee long-term supply security, and address issues of climate change and air pollution.</p> <p><b>Petroleum (upstream and downstream):</b> Ensure that Ghana's petroleum resources are managed transparently and sustainably and that there is an effective and efficient functioning downstream petroleum industry.</p> <p><b>Energy transition:</b> Develop low-carbon energy resources and infrastructure to deliver renewable energy, in an environmentally responsible manner, for socio- economic growth</p> <p><b>Energy efficiency and conservation:</b> Ensure efficient production, transportation, distribution, and end-use efficiency and conservation of fuel and energy across the economy.</p> <p><b>Cross-cutting areas:</b> Mainstream areas such as gender, local content, health safety and environment, and research and development in the energy sector.</p>	2015 - 2020
Energy Transition Framework	Provide a roadmap for decarbonising the energy sector and reaching net zero emissions by 2070, while ensuring socio-economic growth and the use of Ghana's natural resources.	<p><b>Decarbonisation:</b> Mitigate GHG emissions by offsetting, encouraging fossil fuel companies to invest in RE, and promoting the use of electric vehicles, among others.</p> <p><b>Energy efficiency:</b> Encourage the use of renewable cooking stoves, and promote energy efficiency programmes.</p> <p><b>Energy security and access:</b> Expedite the exploitation of oil and gas to fund renewable energy technologies, promote LPG use, and exploit critical minerals.</p> <p><b>Cross-cutting areas:</b> Establish energy transition fund, mainstream issues such as gender, livelihood programmes, local content and R&amp;D.</p>	2022 – 2070

Policy	Goal	Focus Areas and Key Objective	Implementation Timeline
Energy Transition and Investment Plan	Help Ghana frame an energy transition agenda that will attract investment, while at the same time ensuring a just transition and fully supporting Ghana's economic growth.	<p><b>Investment:</b> Create conditions for investment in Ghana's energy system by pursuing an energy mix that is aligned with international investor appetite.</p> <p><b>New growth sectors:</b> Optimise for macroeconomic benefit, supporting economic activity in the energy sector and wider economy.</p> <p><b>Energy security and trade balance:</b> Ensure system security through self-sufficiency, system stability, and low-risk access to supplies.</p> <p><b>Employment impact:</b> Solve for job retention and future job creation potential from decarbonising Ghana's economy.</p> <p><b>Environmental sustainability:</b> Reduce carbon emissions to reach net zero, and minimise the overall carbon budget, for Ghana to align with international investor expectations.</p> <p><b>Affordability:</b> Minimise energy costs to the Ghanaian population and energy-dependent domestic sectors.</p>	2015 - 2020

## APPENDIX B: SUMMARY OF SMME AND INDUSTRIALISATION AGENCIES

Policy	Goal	Focus Areas and Key Objective	Implementation Timeline
Ghana Enterprises Agency	Create an enabling, competitive and vibrant business environment in which all SMMEs thrive, in order to achieve their full potential.	<ul style="list-style-type: none"> <li>• Business development support</li> <li>• Access to finance</li> <li>• Mentoring/coaching</li> <li>• Technical support</li> </ul>	Established in 1981 and transformed in 2020.
National Entrepreneurship and Innovation Programme	Provide integrated national support for startups and small businesses	<ul style="list-style-type: none"> <li>• Business management</li> <li>• Financial Management and basic bookkeeping</li> <li>• Sales, marketing and branding</li> <li>• Business plan writing</li> <li>• Organisational management</li> <li>• Corporate governance</li> </ul>	Established as Youth Enterprise Support in 2013 and transformed to NEIP in 2017.
YouStart Programme	Commit about GHS 10 billion over a 3-year period (2022-2025) towards the creation of at least a million jobs in the economy.	<ul style="list-style-type: none"> <li>• Training and capacity building</li> <li>• Access to finance</li> <li>• Access to market, technology and procurement opportunities</li> <li>• Business development support services</li> <li>• Compliance and quality assurance support services</li> </ul>	2022 – 2025
One District One Factory Initiative (1D1F)	Achieve value addition to the natural resources of each district, ensure even spatial spread of industries, create massive employment, and enhance import substitution.	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Import substitution</li> <li>• Export</li> </ul>	Launched in 2017

# APPENDIX C: SUMMARY OF GENDER AND LABOUR POLICIES

Policy	Goal	Focus Areas and Key Objective	Implementation Timeline
National Gender Policy	Integrate gender equality concerns into national development processes, thereby improving the social, legal, civic, political, economic, and socio-cultural conditions of all Ghanaians, particularly focusing on women, girls, children, the vulnerable, PWDs, and the marginalised.	<ul style="list-style-type: none"> <li>• Women’s empowerment and livelihood</li> <li>• Women’s rights and access to justice</li> <li>• Women’s leadership and accountable governance</li> <li>• Economic opportunities for women</li> <li>• Gender Roles and Relations</li> </ul>	2015
National Green Jobs Strategy	Create more decent green jobs in Ghana.	<ul style="list-style-type: none"> <li>• Policy alignment, coherence and coordination for the maximisation of green jobs.</li> <li>• Skills development, particularly for the youth, women and PWDs, to take advantage of existing and emerging green jobs potential.</li> <li>• Green enterprise development.</li> <li>• Access to sustainable financing for green enterprises.</li> </ul>	2021 - 2025