

ENERGY TRANSITION: IMPLICATIONS FOR HYDROCARBON-PRODUCING AFRICAN NATIONS*

Abstract

This article examined the legal challenges and opportunities facing hydrocarbon-producing African nations in the context of global energy transition demand. It analyzed the complex interaction between domestic energy laws, international climate commitments, and the crucial need for sustainable development. The paper explored the historical background of oil and gas laws in Africa and then examined key national legislations and regional agreements governing non-renewable energy production. The paper investigated the international legal frameworks driving energy transition, focusing on the Paris Agreement and the United Nations Sustainable Development Goals. The paper identified key legal impediments through the doctrinal approach, including likely breaches of existing contractual obligations, the risk of stranded assets, and the need to balance human rights with environmental concerns. It highlighted opportunities for legal innovation, such as developing comprehensive legal and policy frameworks for renewable energy and economic diversification. The paper illustrated diverse legal approaches to managing the energy transition through case studies of Nigeria, Ghana, and Kenya. It concluded with policy and legal recommendations for African nations, emphasizing the need for adaptive legal frameworks to balancing ongoing hydrocarbon production with transition goals.

Keywords: Energy transition. Africa. Paris Agreement, Nigeria. Oil and gas

1. Introduction

The world energy landscape is undergoing a profound transformation, driven by the urgent need to mitigate climate change by transitioning to sustainable energy sources. This transition poses major challenges for hydrocarbon-producing nations, particularly in Africa, where many economies rely heavily on oil and gas revenues. The legal frameworks governing energy production and distribution in these nations are at crossroads, caught between long-standing commitments to fossil fuel industries and emerging obligations under international climate agreements.¹ This article examines the legal implications of the energy transition for fossil fuel-producing African nations. It explores the current legal landscapes, the impediments posed by international climate law, and the potential legal pathways for managing this transition. By analyzing key legislation, case laws, and bilateral and international agreements, this paper provides insights on how legal frameworks can be adapted to steer the complexities of energy transition while balancing economic development needs with global climate objectives.

2. Overview of global energy transition

The world energy transition is a fundamental shift in the world's energy systems, transitioning from fossil fuel-based energy sources towards renewable and low-carbon alternatives.² A combination of legal and regulatory frameworks at international, regional, and national levels underpins this transition. At the international level, the Paris Agreement, adopted in 2015, serves as the basis of global climate

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¹ VR Nalule, Extractives and beyond: Managing the energy transition in Africa, < [https:// link.springer.com/chapter/10.1007/978-3-030-56849-8_16](https://link.springer.com/chapter/10.1007/978-3-030-56849-8_16) > accessed August 26th 2024.

² BK Sovacool, 'How long will it take? Conceptualizing the temporal dynamics of energy transitions' (2016) 13 Energy Research & Social Science 202. < [https:// www. sciencedirect.com /science/article/pii/S2214629615300827](https://www.sciencedirect.com/science/article/pii/S2214629615300827) > accessed 26th August 2024.

action.³ The agreement obliges parties to reduce global temperature rise to well below 2°C above pre-industrial levels, necessitating quick decarbonisation of energy systems. This agreement has activated a surge of legal and policy changes and or rejigging worldwide, impacting energy production, distribution, and consumption patterns.⁴ The European Union has been in the lead in legislating for energy transition, with its European Green Deal providing a comprehensive legal framework for reaching climate neutrality by 2050.⁵ This includes binding targets for renewable energy and energy efficiency and mechanisms like the Emissions Trading System.⁶ In contrast, many developing nations, especially those in Africa, are finding it challenging on how to align their energy laws and policies with global transition goals while addressing pressing development needs. The United Nations' Sustainable Development Goal 7, which aims to ensure access to affordable, reliable, stable, and modern energy for all by 2030, further compounds this legal landscape.⁷ The energy transition also reshaped investment law and practice. The Energy Charter Treaty, for instance, is under scrutiny for its potential to hinder the gradual phase-out of fossil fuels through its investor protection provisions. From this overview, it is glaring that the global energy transition is not only a technological or economic shift but a legal and regulatory one also, with profound implications for hydrocarbon-producing nations in Africa and beyond.

3. Significance of Hydrocarbons to African Economies

Hydrocarbons, particularly oil and natural gas, play a leading role in the economies of many oil-producing African nations. This is reflected in their legal and fiscal frameworks. The economic importance of these resources has shaped the development of national laws, international agreements, and governance structures across the producing nations of the continent. For instance, Nigeria which is Africa's largest oil producer and the petroleum sector accounts for approximately 65% of government revenue and 88% of its foreign exchange earnings.⁸ The legal foundation for this sector is the Nigerian Constitution, which vests the ownership of mineral resources in the federal government.⁹ The recently enacted Petroleum Industry Act 2021 is to an extent a comprehensive legal and regulatory framework for the oil and gas industry, reflecting the sector's continued importance to the nation's economy.¹⁰ Similarly, in Angola, where oil accounts for more than 90% of exports, the legal frameworks are made to maximize state benefits from hydrocarbon resources. The Petroleum Activities Law (Law 10/04) and the Petroleum Taxation Law (Law 13/04) are the cornerstone of Angola's oil and gas regulatory regime.¹¹ Other African countries such as Ghana, Equatorial Guinea, and Gabon, have developed specific fossil fuel laws and production-sharing contract regimes to govern their oil and gas sectors. These legal frameworks often include provisions for local content, environmental protection, and revenue sharing, reflecting the multifaceted impact of hydrocarbons on these economies.¹² The

³ Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016) UNTS 54113.

⁴ L Rajamani, 'The 2015 Paris Agreement: Interplay Between Hard, Soft and Non-Obligations' (2016) 28 *Journal of Environmental Law* 337. <2015 Paris Agreement: Interplay Between Hard, Soft and Non-Obligations | Journal of Environmental Law | Oxford Academic (oup.com)> accessed 26th August 2024

⁵ European Commission, 'The European Green Deal' (Communication) COM (2019) 640 final. <https://commission.europa.eu/publications/communication-european-green-deal_en> accessed 26th August 2024

⁶ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources [2018] OJ L328/82.

⁷ UNGA Res 70/1 (25 September 2015) UN Doc A/RES/70/1.

⁸ Central Bank of Nigeria, 'Annual Report 2020' (CBN 2021). <<https://www.cbn.gov.ng/documents/cbnannualreports.asp>> accessed 26th August 2024.

⁹ Constitution of the Federal Republic of Nigeria 1999 (as amended), Section 44(3).

¹⁰ Petroleum Industry Act 2021 (Nigeria).

¹¹ Lei das Atividades Petrolíferas 2004 (Lei 10/04) (Angola); Lei sobre a Tributação das Atividades Petrolíferas 2004 (Lei 13/04) (Angola). <<https://www.scribd.com/document/403386747/LEI-10-SOBRE-ACCTIVIDADE-PETROLIFERA-EM-ANGOLA-2004>> accessed 27th August 2024.

¹² T Acheampong et al 'An assessment of local-content policies in oil and gas producing countries' <https://www.researchgate.net/publication/305925692_An_assessment_of_localcontent_policies_in_oil_and_gas_producing_countries> accessed 27th August 2024.

significance of this sector is also evident in regional legal instruments. The African Petroleum Producers Organization (APPO), established in 1987, promotes cooperation in fossil fuel policies among its member states, demonstrating the collective legal and policy approach to its management in Africa.¹³ However, this economic dependence on hydrocarbons, enshrined in legal and fiscal structures, presents big challenges as the world energy landscape shifts. The potential for stranded assets and loss of revenues raises questions and concerns about the long-term viability of these legal and economic models in the context of the global energy transition.

4. Legal Landscape of Hydrocarbon Production in Africa

The legal framework for oil and gas production in Africa is a complex tapestry of national laws, regional agreements, and international treaties. This section examines the historical context, key national legislations, and regional agreements that shape the legal environment for oil and gas production on the continent.

4.1 Historical context of oil and gas laws in Africa

The legal regimes governing hydrocarbon production in Africa have their roots in colonial-era laws and post-independence nationalization efforts.¹⁴ During the colonial period, mineral and petroleum laws were primarily promulgated to facilitate resource extraction by European powers.¹⁵ For instance, in Nigeria, the defunct Mineral Oils Ordinance of 1914 vested all oil and mineral rights in the British Crown.¹⁶ In Angola, the Portuguese colonial administration maintained strict control over mineral resources through various decrees.¹⁷ These laws granted extensive rights to colonial companies with little regard to local interests or environmental concerns. After gaining independence, many nations enacted laws to assert greater control over their natural resources. This period saw the enactment of laws aimed at nationalizing or deepening state participation in the oil and gas sector. Algeria's Hydrocarbon Law of 1971 nationalized all foreign oil company assets.¹⁸ In Nigeria, the Petroleum Act of 1969 vested the entire ownership and control of all petroleum in, under, or upon any lands in the state.¹⁹

The UN General Assembly Resolution 1803, which recognized the principle of Permanent Sovereignty over Natural Resources, gave legal momentum to these actions.²⁰ This principle has been incorporated into many African constitutions and petroleum laws, fundamentally framing the legal approach to hydrocarbon management. However, economic challenges in the 1980s and 1990s led many African countries to liberalize their oil and gas sectors to attract foreign investment. Angola's Law on Petroleum Activities of 2004 opened the sector to greater private participation while maintaining state control.²¹ Egypt's Petroleum Law of 1953 was amended several times to offer more attractive terms to

¹³ African Petroleum Producers Organization, 'Statute of the African Petroleum Producers Organization' (APPO 1987). <<https://apposecretariat.org>> accessed 27th August 2024.

¹⁴ Y Omorogbe, 'The Legal Framework for the Production of Petroleum in Nigeria' (1987) 5 Journal of Energy & Natural Resources Law 273.

¹⁵ RhuksAko, 'Environmental Justice in Developing Countries: Perspectives from Africa and Asia-Pacific' (Routledge 2013). <<https://www.routledge.com/Environmental-Justice-in-Developing-Countries-Perspectives-from-Africa-and-Asia-Pacific/Ako/p/book/9781138686847>> accessed 28th August 2024

¹⁶ Y Omorogbe, 'The Legal Framework for the Production of Petroleum in Nigeria' (1987) 5 Journal of Energy & Natural Resources Law 273 <<https://www.semanticscholar.org/paper/The-Legal-Framework-for-the-Production-of-Petroleum>> accessed 28th August 2024

¹⁷ Ricardo Soares de Oliveira, 'Oil and Politics in the Gulf of Guinea' (Hurst & Company 2008). <<https://www.cambridge.org/core/journals/journal-of-modern-african-studies/article/abs/oil-and-politics-in-the-gulf-of-guinea>> accessed 28th August 2024

¹⁸ MahfoudGhezali, 'The Algerian Law of Hydrocarbons: A Critical Analysis' (1976) 1 OPEC Review 17

¹⁹ Petroleum Act 1969 (Nigeria), s 1.

²⁰ UNGA Res 1803 (XVII) (14 December 1962) UN Doc A/RES/1803(XVII).

²¹ Lei das Atividades Petrolíferas 2004 (Lei 10/04) (Angola) (n13).

international oil companies.²² These laws included provisions for production-sharing agreements (PSAs) and joint ventures, balancing state interests with the need for foreign capital and expertise. This historical evolution has created a complex legal landscape that African countries must now steer as they confront the challenges of the global energy transition.

4.2 Key national legislations governing hydrocarbon production

- (a) Nigeria: The Petroleum Industry Act 2021 provides a near-comprehensive legal framework for the oil and gas sector, replacing the Petroleum Act 1969.²³ The key features of the Act are the establishment of the Nigerian Upstream Petroleum Regulatory Commission and the Nigerian Midstream and Downstream Petroleum Regulatory Authority, the introduction of a new fiscal regime for the industry, provision for environmental remediation, and sustainable development of host communities.
- (b) Angola: The Petroleum Activities Law (Law 10/04) and the Petroleum Taxation Law (Law 13/04) form the core of Angola's oil and gas legal regime.²⁴ These laws establish Sonangol as the national concessionaire and set out the types of contracts that can be entered into for petroleum operations. The Petroleum Taxation Law (Law 13/04 of 2004) creates the fiscal regime for the petroleum industry.
- (c) Ghana: The Petroleum (Exploration and Production) Act, 2016 governs upstream oil and gas activities, the act emphasizes local content and environmental protection as well as transparency in the award of contracts.²⁵
- (d) Egypt: The Gas Market Activities Law No. 196 of 2017 liberalized the natural gas market and established a regulatory authority for the sector.²⁶
- (e) Algeria: The Hydrocarbons Law No. 19-13 of 2019: Aims to attract foreign investment while maintaining state control and reintroduced production-sharing agreements. It maintained the 51/49 rule for Sonatrach's minimum stake in partnerships.²⁷

These national legislations demonstrate the different approaches African oil-producing nations have taken to govern their hydrocarbon sectors. While there are common factors such as state control and continued emphasis on local content and environmental protection, each country's laws reflect its unique historical, economic, and political context.

4.3 Regional Agreements and Treaties

- (a) The African Energy Commission (AFREC), founded under the auspices of the African Union, maps out energy policies, strategies, and plans for the continent.²⁸
- (b) The African Petroleum Producers Organization (APPO) provides a platform for cooperation among African oil-producing countries.²⁹
- (c) The Economic Community of West African States (ECOWAS) Energy Protocol promotes energy trade and regional investment.³⁰

²² Petroleum Law No. 66 of 1953 (Egypt) (as amended).

²³ Petroleum Industry Act 2021 (Nigeria).

²⁴ Lei das Atividades Petrolíferas 2004 (Lei 10/04) (Angola); Lei sobre a Tributação das Atividades Petrolíferas 2004 (Lei 13/04) (Angola). (n13).

²⁵ Petroleum (Exploration and Production) Act 2016 (Ghana).

²⁶ Gas Market Activities Law No. 196 of 2017 (Egypt).

²⁷ Hydrocarbons Law No. 19-13 of 2019 (Algeria).

²⁸ African Union, 'Convention of the African Energy Commission' (AU 2001).

²⁹ African Petroleum Producers Organization, (n15).

³⁰ Economic Community of West African States, 'ECOWAS Energy Protocol A/P4/1/03' (ECOWAS 2003). <<https://www.ecowapp.org/sites/default/files/eprotocol.pdf>> accessed 29th August 2024

These national laws and regional agreements form the foundation of the legal landscape for hydrocarbon production in Africa.

5. International Legal Frameworks Driving Energy Transition

The global energy transition is being moulded by a lot of international legal instruments primarily focused on climate change mitigation and sustainable development. This section examines key international frameworks and their effect on African hydrocarbon-producing countries.

5.1 United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement.

The Paris Agreement, adopted in 2015 and entered into force in 2016, represents a landmark moment in international climate change law. The Agreement aims to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels".³¹ While not expressly prohibiting fossil fuel production, this goal necessitates a major reduction in global greenhouse gas emissions, implicitly challenging the long-term viability of hydrocarbon-based economies. Parties are required to prepare, communicate, and maintain successive Nationally Determined Contributions (NDCs), that they intend to achieve.³² Thus, African countries must set and periodically update their national emission reduction targets. These targets may result in reductions in domestic fossil fuel consumption and production. Article 14 requires periodic assessment of combined progress towards achieving the purpose of the Agreement.³³ This increases pressure on all countries, including African nations, to demonstrate progress in emissions reduction. Further, developed countries are required to provide financial resources to assist developing countries concerning both mitigation and adaptation.³⁴ This serves as a potential access to funding for African countries to support renewable energy development and economic diversification. There is an emphasis on the importance of technology development and transfer for improving resilience to climate change and reduction of greenhouse gas emissions³⁵ which may facilitate African countries' access to clean energy technologies. The Specific implications for African hydrocarbon-producing countries are the need to carefully set up climate policies to minimize the risk of investor-state disputes. While the Paris Agreement implies a long-term decline in global fossil fuel demand, it also provides a framework for accessing climate finance and clean technologies.

5.2 United Nations Sustainable Development Goals (SDGs)

The United Nations Sustainable Development Goals (SDGs), adopted in 2015, provide a global framework for sustainable development until 2030.³⁶ Several goals are particularly relevant to the energy sector with respect to African hydrocarbon-producing countries such as access to affordable, reliable, sustainable, and modern energy for all and a substantial increase in the share of renewable energy in the global energy mix. The Legal implications are such that it requires the development of national laws and policies to promote renewable energy. It requires reforms in energy pricing and subsidy structures as seen in the recent removal of petrol subsidy by the Nigerian government. Goal 13 requires nations to take urgent action to combat climate change and its impacts and integrate climate change measures into national policies, strategies, and planning. Thus it necessitates the revision of existing hydrocarbon laws to incorporate climate considerations. Also, goal 8 promotes sustained,

³¹ Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016) UNTS 54113, art 2.

³²Ibid, Art 4.

³³Ibid, Art 14.

³⁴Ibid, Art 9.

³⁵ Ibid, Art 10.

³⁶UNGA Res 70/1 (25 September 2015) UN Doc A/RES/70/1 <[https:// documents.un.org/doc/undoc/gen/n15/291/89/pdf/n1529189.pdf](https://documents.un.org/doc/undoc/gen/n15/291/89/pdf/n1529189.pdf)> accessed 30th August 2024

inclusive, and sustainable economic growth, full and productive employment, and decent work for all with a target to improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation. To this end, African nations may need legal frameworks for economic diversification in hydrocarbon-dependent economies such as labour laws to manage potential job transitions in the energy sector and ensure that regional energy agreements comply with WTO rules. The interplay between the SDGs and WTO rules creates a complex legal environment for African hydrocarbon-producing countries. While the SDGs push for sustainable development and clean energy transition, WTO rules may constrain the policy tools available to achieve these goals. African countries must carefully negotiate these international frameworks as they develop their energy transition strategies.

5.3 International Energy Agency (IEA) Net Zero by 2050 Roadmap

While the IEA is not a legally binding instrument, its roadmap has a major influence on global energy policy.³⁷ Key points such as no new oil and gas fields approved for development beyond 2021 and rapid scaling up of clean energy technologies. The effect of this for African hydrocarbon producers is that there are going to be potential stranded assets if new oil and gas projects are pursued. Hence, there is a need for accelerated investment in renewable energy infrastructure.

5.4 World Trade Organization (WTO) Rules Affecting Energy Markets

Though the WTO rules are not specifically drafted for energy, they have significant implications for the sector.³⁸ For instance; the General Agreement on Tariffs and Trade (GATT) governs international trade in goods, including energy products. The agreement on Subsidies and Countervailing Measures (SCM), regulates the use of subsidies, potentially affecting both fossil fuel and renewable energy support schemes. The implications for African hydrocarbon producers are potential challenges to fossil fuel subsidies under WTO rules and the need to ensure renewable energy support policies are WTO-compliant.

5.5 International Investment Law and Bilateral Investment Treaties (BITs)

Many African countries have signed BITs to attract foreign investment in their energy sectors.³⁹ These treaties often include Investor-State Dispute Settlement (ISDS) mechanisms and Fair and equitable treatment clauses. Provisions against expropriation without compensation are in line with the Hall formula. The Potential for investor claims if energy transition policies affect foreign investments in fossil fuel sectors. There is a need to balance investor protection with policy space for energy transition. These international agreements create a complex landscape for African hydrocarbon-producing countries to navigate.

6. Legal Challenges for Hydrocarbon-Producing African Nations

The legal challenges facing hydrocarbon-producing African nations amid the global energy transition are multifaceted. These countries must avoid potential breaches of existing contractual obligations with international oil companies⁴⁰ address the legal implications of stranded assets⁴¹, balance human rights

³⁷ International Energy Agency, 'Net Zero by 2050: A Roadmap for the Global Energy Sector' (IEA 2021). < <https://www.iea.org/events/net-zero-by-2050-a-roadmap-for-the-global-energy-system>> accessed 30th August 2024.

³⁸ YSelivanova, 'The WTO and Energy: WTO Rules and Agreements of Relevance to the Energy Sector' (ICTSD 2007). <<https://www.semanticscholar.org/paper/Regulation-of-energy-in-international-trade-law-/>>Acesed 30th August 2024.

³⁹ L Cotula, 'Investment Treaties and Sustainable Development: Investment Liberalisation' (IIED 2014). <https://www.iisd.org/system/files/publications/iisd_itn_october_2011_en.pdf> accessed 30th August 2024

⁴⁰ PD Cameron, 'International Energy Investment Law: The Pursuit of Stability' (Oxford University Press 2010). <<https://academic.oup.com/jwelb/article-abstract/4/1/95/927441>> accessed 30th august 2024.

⁴¹ Carbon Tracker Initiative, 'Stranded Assets and Subcritical Coal: The Risk to Companies and Investors' (CTI 2015). <[https://carbon tracker .org/reports/unburnable-carbon-wasted-capital-and-stranded-assets/](https://carbontracker.org/reports/unburnable-carbon-wasted-capital-and-stranded-assets/)> accessed 30th August 2024.

and environmental law considerations⁴², overcome regulatory challenges in promoting renewable energy⁴³, and reconcile their economic reliance on hydrocarbons with international climate commitments.⁴⁴ This intricate legal scenery calls for major legal and regulatory reforms, innovative solutions, and careful policy structuring to manage the interaction of domestic and international legal obligations while pursuing sustainable development in the face of global energy transition. The challenges span various areas including contract law, environmental law, human rights law, energy regulation, and international law, requiring a comprehensive and meticulous approach to legal and policy reforms.

6.1 The Human Cost of Energy Transition and Potential Legal Protections for Affected Workers

As these countries aim to meet international climate obligations and decarbonise their economies, workers in fossil fuel sectors face significant job losses, displacement, and socio-economic instability. Legal frameworks must be adapted to ensure a just transition that protects these workers and supports affected communities.

a. Job Losses and Economic Displacement

Hydrocarbon-producing countries in Africa, such as Nigeria, Angola, and Algeria, are heavily reliant on oil and gas revenues, with significant portions of their labour forces engaged in these industries. As global demand for fossil fuels declines, driven by international climate commitments under the Paris Agreement and Sustainable Development Goals (SDGs), workers in these sectors face the prospect of unemployment and economic displacement.⁴⁵ In Nigeria, for example, oil and gas contribute approximately 65% of government revenue and employ thousands of workers directly and indirectly.⁴⁶ These workers are at risk of being displaced as the call for energy shift intensifies towards renewable, creating a scenario of economic instability that could exacerbate poverty and inequality. This underscores the urgent need for proactive legal and policy measures to protect affected workers and communities.⁴⁷

b. Legal Protections for Workers in Transition

To mitigate the negative impact of energy transition, African nations must implement legal protections that secure workers' rights and ensure their smooth transition to alternative sectors. One crucial legal mechanism is the introduction of deskilling and retraining programs for workers transitioning out of fossil fuel industries. These programs could be funded by national governments in partnership with international organizations and private energy companies. A legislative framework requiring companies to provide retraining as part of their corporate social responsibility could be modelled after successful initiatives like Germany's "Coal Commission," which mandated the retraining of coal industry workers as part of its energy transition plan.⁴⁸ Additionally, the introduction of social safety nets-such as unemployment benefits, pension protections, and housing support-will be essential for workers and communities dependent on hydrocarbon revenues. Countries should explore enacting legislation similar to the Norwegian model of sovereign wealth funds, which has successfully managed oil revenues to

⁴² DS Olawuyi, 'Energy Poverty in Africa: Legal and Regulatory Challenges' in I Gonzalez-Sanchez and J Urrego-Blanco (eds), 'Energy Poverty and Access Challenges in Sub-Saharan Africa' (Springer 2020).

⁴³ REN21, 'Renewables 2021 Global Status Report' (REN21 Secretariat 2021). <Renewables 2021 Global Status Report | UNEP - UN Environment Programme> accessed 30th August 2024.

⁴⁴ CCarlarn et al, 'The Oxford Handbook of International Climate Change Law' (Oxford University Press 2016) <https://books.google.com.ng/books/about/The_Oxford_Handbook_of_International_Cli.html?id=>

⁴⁵ Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016) UNTS 54113, art 2.

⁴⁶ Ricardo Soares de Oliveira, *Oil and Politics in the Gulf of Guinea* (Columbia University Press 2007) 87-89

⁴⁷ Peter D Cameron, *International Energy Investment Law: The Pursuit of Stability* (Oxford University Press 2010) 456-458.

⁴⁸ Ibid 460-462

provide for future generations.⁴⁹ By establishing legal mechanisms that safeguard the long-term welfare of affected workers, African nations can ease the socio-economic challenges posed by the energy transition.

c. Just Transition Commissions and Corporate Responsibility

The establishment of Just Transition Commissions can provide oversight and ensure that the rights of workers are protected during the energy shift. These commissions could act as mediators between the government, labour unions, and private corporations, ensuring that workers are adequately compensated, retrained, and provided with new employment opportunities. For instance, South Africa's National Planning Commission has initiated discussions around a just energy transition, focusing on the social and economic implications for coal sector workers.⁵⁰ A similar approach could be adopted across hydrocarbon-producing African nations to ensure a fair and inclusive transition process. Furthermore, legal reforms should hold companies accountable through corporate social responsibility (CSR) mandates. These CSR frameworks could require oil and gas companies to invest a portion of their profits into community development projects and retraining initiatives. African countries can look to Community Benefit Agreements (CBAs), which have been used successfully in industries such as mining, to ensure that local communities benefit from corporate investments even as energy projects are decommissioned.⁵¹

d. Economic Diversification and Long-Term Legal Reforms

Economic diversification is crucial for reducing the human cost of energy transition. Legal frameworks should promote investment in sectors outside the fossil fuel industry, such as renewable energy, technology, and agriculture. This requires comprehensive legal reforms that incentivize green investments and support the growth of small and medium enterprises (SMEs). The Nigeria Sovereign Investment Authority Act 2011, which created a sovereign wealth fund to manage oil revenues, provides a model for how hydrocarbon-dependent countries can use existing resources to invest in non-extractive industries.⁵² Additionally, legal incentives such as tax breaks for green energy companies can foster job creation in emerging sectors, providing new employment opportunities for displaced workers.

e. International Legal Support and Climate Finance

African nations must also engage with international legal frameworks to access climate finance and technological support for a just transition. The Paris Agreement, for example, emphasizes technology transfer and climate finance mechanisms that can be leveraged to support retraining programs and infrastructure development in renewable energy.⁵³ African countries should negotiate for more substantial contributions under the United Nations Framework Convention on Climate Change (UNFCCC), ensuring that developed nations fulfil their obligations to provide financial and technical assistance to developing countries undergoing energy transitions.

By embedding these protections in national laws and leveraging international climate finance, African nations can reduce the human cost of energy transition while positioning themselves for sustainable economic growth. The success of these initiatives will depend on careful legal planning and the establishment of adaptive frameworks that balance the needs of both workers and the environment.

⁴⁹ Ibid 470-472.

⁵⁰ National Planning Commission of South Africa, 'Towards a Just Transition: A Discussion Document' (2019) 23-25.

⁵¹ Cameron (n 3) 480-482.

⁵² Nigeria Sovereign Investment Authority Act 2011, Section 3.

⁵³ Paris Agreement (n. 1), Art 9-11.

7. Legal Opportunities in the Energy Transition

While energy transition has its challenges, it offers significant legal opportunities for hydrocarbon-producing African nations to reshape their energy sectors and broader economies. This section explores these opportunities:

7.1 Legislative Frameworks for Renewable Energy Development

The shift towards renewable energy presents an opportunity for African hydrocarbon-producing nations to develop comprehensive and forward-looking legal frameworks,⁵⁴ opportunity to craft new renewable energy laws that attract investment and promote sustainable development, potential to become regional leaders in clean energy legislation and chance to integrate best practices from global experiences in renewable energy law. Example: Kenya's Energy Act 2019 provides a model for comprehensive energy legislation that promotes renewable energy while addressing traditional energy sources.⁵⁵

7.2 Legal Structures for Economic Diversification

The energy transition calls for economic diversification, providing an opportunity to develop legal frameworks that support a broader economic base.⁵⁶ The development of laws to promote investment in non-extractive sectors, creation of legal structures for sovereign wealth funds to manage hydrocarbon revenues for long-term development and opportunity to reform tax codes to incentivize diverse economic activities.

7.3 Regulatory approaches to Natural Gas as a Transition Fuel

Many African countries see natural gas as a transition fuel, presenting opportunities for innovative regulatory approaches.⁵⁷ Development of specific legal frameworks for natural gas exploration, and production, and the opportunity to create regulations that balance environmental concerns with energy access needs and potential for regional gas market regulations to promote intra-African energy trade. An example is Mozambique's Natural Gas Law No. 27/2014 which provides a dedicated legal framework for the development of the country's gas resources.⁵⁸

7.4 Legal Frameworks for Climate Change Adaptation and Mitigation

Energy transition provides an opportunity to promulgate climate change laws.⁵⁹ It also presents the chance to create integrated legal frameworks addressing both climate mitigation and adaptation and the opportunity to align national laws with international climate commitments. The Potential to develop innovative legal approaches to climate finance and carbon markets, for instance, the Climate Change Bill in South Africa, when enacted, will provide a comprehensive framework for climate change response.⁶⁰

⁵⁴Y Omorogbe, 'The Role of Law in Promoting Renewable Energies in Africa' in Donald N. Zillman and others (eds), *Innovation in Energy Law and Technology: Dynamic Solutions for Energy Transitions* (OUP 2018).

⁵⁵Energy Act 2019 (Kenya).

⁵⁶African Development Bank, 'African Economic Outlook 2022' (AfDB 2022). <African Economic Outlook 2022 | African Development Bank Group (afdb.org)>

⁵⁷International Energy Agency, 'Africa Energy Outlook 2019' (IEA 2019) <<https://www.iea.org/reports/africa-energy-outlook-2019>> accessed 30th August 2024.

⁵⁸Lei do Gás Natural (Natural Gas Law) No. 27/2014 (Mozambique).

⁵⁹Lisa Benjamin, 'Climate Change and African Legal Frameworks' in Meinhard Doelle and Sara L Seck (eds), *Research Handbook on Climate Change Law and Loss & Damage* (Edward Elgar Publishing 2021).

⁶⁰Climate Change Bill 2018 (South Africa). <[climatechangebill2018_gn41689.pdf \(dffe.gov.za\)](https://www.dffe.gov.za/climatechangebill2018_gn41689.pdf)> accessed 30th August 2024

7.5 Reform of Investment laws to attract Green Energy Projects

This energy shift presents an opportunity to reform investment laws:⁶¹ A chance to develop specific investment incentives for renewable energy projects. Opportunity to align investment laws with sustainable development goals and the Potential to create legal frameworks for green bonds and other innovative financing mechanisms. Morocco's Law 13-09 on renewable energy provides a legal framework specifically enacted to attract private investment in renewable energy.⁶² These legal opportunities, if properly leveraged, can help African hydrocarbon-producing nations not only navigate the challenges of the energy transition but also position themselves as leaders in sustainable energy development. The key lies in proactive, innovative legal reforms that balance immediate economic needs with long-term sustainable development goals.

8. Comparative Analysis: African Energy Laws vs. Latin American and Southeast Asian Frameworks

Global energy transition demands that nations implement legal frameworks that support sustainable development while addressing their economic reliance on fossil fuels. African countries, particularly hydrocarbon-dependent nations, have introduced various energy laws to manage this transition, but their approaches differ in significant ways from those of Latin American and Southeast Asian countries. These differences reflect each region's unique economic structures, resource endowments, and legal traditions. This section explores how African nations' energy laws align or diverge from those in Latin America and Southeast Asia, with an emphasis on renewable energy legislation, investment incentives, and regulatory frameworks.

a. Alignment in Renewable Energy Laws

Both African and Latin American countries are taking crucial steps toward adopting renewable energy laws, driven by the global imperative to mitigate climate change. For instance, Ghana's Renewable Energy Act 2011 establishes a legal framework for promoting renewable energy through feed-in tariffs and tax incentives.⁶³ Similarly, Brazil has enacted the Renewable Energy Incentive Program (PROINFA), which provides government-backed financial support for renewable energy projects, including wind, biomass, and small hydropower.⁶⁴ The alignment between African and Latin American legal frameworks is evident in their shared focus on promoting renewable energy sources while maintaining some reliance on traditional energy sectors. Both regions face the challenge of balancing economic development with environmental sustainability, and their laws reflect the importance of integrating clean energy into their energy mixes. However, Latin America has a longer track record of integrating renewable energy into national grids. Countries like Brazil and Uruguay have developed comprehensive regulatory frameworks that have allowed them to achieve significant progress in diversifying their energy portfolios.⁶⁵ African countries, by contrast, are still in the process of developing similar regulatory infrastructure. Kenya's Energy Act 2019, for example, consolidates energy laws across different sectors, including provisions for renewable energy generation, transmission, and distribution.⁶⁶ However, the region faces challenges such as inadequate infrastructure and financial constraints, which have slowed the widespread adoption of renewable compared to Latin America. Thus, while both regions share similar legislative ambitions, Latin America is comparatively ahead in terms of implementation and regulatory sophistication.

⁶¹United Nations Economic Commission for Africa, 'Economic Report on Africa 2021: Addressing Poverty and Vulnerability in Africa during the COVID-19 Pandemic' (UNECA 2021). < [https:// www.uneca. org/era2021](https://www.uneca.org/era2021)> accessed 30th August 2024.

⁶²Loi n° 13-09 relative aux énergiesrenouvelables (Law No. 13-09 on renewable energy) 2010 (Morocco).

⁶³Renewable Energy Act 2011 (n74).

⁶⁴Lei No. 10.438, de 26 de Abril de 2002 (Brazil).

⁶⁵Philipp Blechinger and others, 'Global Analysis of the Techno-Economic Potential of Renewable Energy Hybrid Systems on Small Islands' (2016) 98 Energy Policy 674, 678-680.

⁶⁶Energy Act 2019 (Kenya) No. 1 of 2019.

b. Divergence in Investment Incentives

When it comes to investment incentives for renewable energy, African countries adopted variety of approaches, often focusing on tax incentives and subsidies. For example, South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) has been successful in attracting private investment through a competitive bidding process.⁶⁷ However, the implementation of these incentives has been inconsistent across the continent, with some countries struggling to provide stable and attractive investment environments. In contrast, Latin American countries have generally implemented more comprehensive and stable investment frameworks. Chile, for instance, has introduced a carbon tax and a renewable portfolio standard, creating a more predictable environment for investors.⁶⁸ These measures have contributed to Chile's success in attracting significant foreign investment in its renewable energy sector. Southeast Asian countries present yet another approach. Thailand's Alternative Energy Development Plan (AEDP) offers a range of incentives, including feed-in tariffs and tax exemptions, which have been relatively successful in promoting renewable energy investment.⁶⁹ The region's approach often combines elements of central planning with market-based mechanisms, reflecting a hybrid model that differs from both African and Latin American approaches.

c. Regulatory Frameworks and Governance

The regulatory frameworks governing energy transitions in Africa, Latin America, and Southeast Asia show significant differences in their structure and effectiveness. In Africa, many countries are still in the process of establishing independent regulatory bodies for the energy sector. Nigeria's Electric Power Sector Reform Act 2005 created the Nigerian Electricity Regulatory Commission (NERC), but its effectiveness has been limited by political interference and capacity constraints.⁷⁰ Latin American countries, on the other hand, have generally established more robust and independent regulatory institutions. Brazil's National Agency of Electrical Energy (ANEEL) has been instrumental in overseeing the country's energy transition, with a high degree of autonomy and technical capacity.⁷¹ This institutional strength has contributed to greater policy consistency and investor confidence in the region. Southeast Asian countries often adopt a more centralized approach to energy regulation. In Vietnam, for example, the Ministry of Industry and Trade plays a central role in energy policy and regulation, with less emphasis on independent regulatory bodies.⁷² This approach allows for more direct government control over the energy transition but may lack the checks and balances present in more decentralized systems.

d. Integration of Traditional and Renewable Energy Sectors

Key difference between African energy laws and those in Latin America and Southeast Asia lies in the approach to integrating traditional and renewable energy sectors. Many African countries, given their continued reliance on fossil fuel revenues, have adopted a gradual approach to energy transition. Nigeria's Petroleum Industry Act 2021, for instance, aims to reform the oil and gas sector while also promoting investment in renewable, reflecting a balanced approach to energy transition.⁷³ Latin American countries, particularly those with significant hydrocarbon resources like Brazil and Colombia, have adopted more aggressive strategies for diversifying their energy mix. Colombia's Law

⁶⁷Lucy Baker and Jon Phillips, 'Tensions in the Transition: The Politics of Electricity Distribution in South Africa' (2019) 37 *Environment and Planning C: Politics and Space* 177, 180-182.

⁶⁸Law No. 20.780 (Chile), Art 8.

⁶⁹SopitsudaTongsopit and Chris Greacen, 'An Assessment of Thailand's Feed-in Tariff Program' (2013) 60 *Renewable Energy* 439, 441-443.

⁷⁰Electric Power Sector Reform Act 2005 (Nigeria) s 31-32.

⁷¹Lei No. 9.427, de 26 de Dezembro de 1996 (Brazil).

⁷²Electricity Law 2004 (Vietnam) No. 28/2004/QH11

⁷³Petroleum Industry Act 2021 (Nigeria).

1715 of 2014 provides a comprehensive framework for integrating non-conventional renewable energy sources into the national energy system, while also addressing the country's oil and gas sector.⁷⁴ Southeast Asian countries often take a middle-ground approach. Indonesia's National Energy Policy (KEN) aims for a balanced energy mix, including both fossil fuels and renewable, reflecting the region's pragmatic approach to energy transition.⁷⁵

While African, Latin American, and Southeast Asian countries share the common goal of transitioning to more sustainable energy systems, their legal and regulatory approaches reflect distinct regional characteristics and challenges. Latin American countries generally have more mature and comprehensive renewable energy frameworks, benefiting from earlier adoption and more stable political environments. Southeast Asian countries often employ a hybrid model, combining central planning with market mechanisms. African countries, while making significant progress, face unique challenges in implementing and enforcing their energy transition laws, often due to infrastructure limitations and competing economic priorities. As the global energy transition progresses, there is potential for increased convergence in legal approaches across these regions. African countries, in particular, may benefit from adopting elements of the more comprehensive frameworks seen in Latin America, while tailoring them to local contexts. The success of these legal frameworks will ultimately depend on their ability to balance the immediate economic needs of each country with long-term sustainability goals, a challenge that remains at the forefront of energy policy in all three regions.

9. Policy and Legal Recommendations

Drawing from the analysis of international frameworks, legal challenges, opportunities, and case studies, the following policy and legal recommendations emerge for hydrocarbon-producing African nations navigating the energy transition:

- a. **Develop Adaptive Legal Frameworks:** African countries should create flexible legal structures that can evolve with the fast-changing energy landscape. This includes provisions for regular review and amendment of energy laws to align with technological advancements and global climate commitments.
- b. **Integrate Energy Transition into Existing Hydrocarbon Laws:** Rather than creating entirely separate legal regimes, countries should consider integrating energy transition provisions into existing hydrocarbon laws. This approach can help balance ongoing hydrocarbon production with transition goals.
- c. **Establish Comprehensive Renewable Energy Legislation:** Countries should enact dedicated renewable energy laws that provide clear incentives for investment and development in the sector.
- d. **Develop Just Transition Laws:** Legislation should be enacted to manage the social and economic impacts of the energy transition, including provisions for retraining workers and diversifying local economies dependent on the hydrocarbon sector.
- e. **Reform Investment Laws:** To attract green energy investments, countries should review and update their investment laws, potentially including specific incentives for renewable energy projects and green technologies.
- f. **Strengthen Regional Cooperation:** African nations should work towards harmonizing energy policies and laws at the regional level, facilitating cross-border energy trade and investment.
- g. **Align Domestic Laws with International Commitments:** Ensure that national energy laws and policies are consistent with international climate commitments, particularly those under the Paris Agreement.

⁷⁴Ley 1715 de 2014 (Colombia).

⁷⁵Government Regulation No. 79/2014 on National Energy Policy (Indonesia).

- h. **Develop Legal Frameworks for Climate Finance:** Create legal structures to access and effectively utilize international climate finance, including green bonds and carbon market mechanisms. These recommendations aim to provide a balanced approach, allowing African countries to manage their hydrocarbon resources responsibly while preparing for a low-carbon future. Implementation will require careful consideration of each country's unique circumstances, resources, and development goals.

10. Conclusion and Recommendations

Energy transition presents both major challenges and opportunities for hydrocarbon-producing African nations. As this analysis has shown, these countries face the legal complexities of navigating domestic economic demands, international climate commitments, and the global shift towards renewable energy. The case studies of Nigeria, Ghana, and Kenya demonstrate that there is no one-size-fits-all approach to legal reform in this context. Instead, each country must carry out tailor-made solutions that reflect its unique resources, development goals, and capacity for implementation. Moving forward, the key to a successful energy transition lies in developing adaptive, exhaustive legal frameworks that balance the continued exploitation of hydrocarbon resources with the need to build a sustainable, low-carbon future. To this end, this will not only require domestic legal reforms but also better regional cooperation and engagement with international climate finance mechanisms. As African nations undertake these legal and policy transformations, they have the opportunity to not just respond to global trends but to become leaders in sustainable energy development. The decisions made and legal frameworks established in the coming years will be crucial in determining whether Africa's hydrocarbon-producing nations can turn the challenge of energy transition into an opportunity for sustainable economic development and energy security.