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Creating an Enabling Environment for Foreign Direct Investment in Renewable Energy through Law Reforms in Sierra Leone

By

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Declaration

I declare that this Mini-Dissertation which is hereby submitted for the award of Legum Magister (LL.M) in International Trade and Investment Law in Africa at International Development Law Unit, Centre for Human Rights, Faculty of Law, University of Pretoria, is my original work and it has not been previously submitted for the award of a degree at this or any other tertiary institution.

Ebunoluwa Finda Tengbe

Dedication

Imran, we did it!

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The opinions expressed in this paper and conclusions arrived at are mine and are not necessarily to be attributed to my sponsors.

Declaration

Save for the references specifically indicated in the text and such assistance duly acknowledged, this thesis is wholly my own work and has not been submitted for degree purposes at any other University.

List of Acronyms

AfDB- African Development Bank

CIF- Climate Investment Funds

ECOWAS- Economic Community of West African States

ECREE- ECOWAS Centre for Renewable energy and Energy Efficiency

EDSA- Sierra Leone Electricity Distribution and Supply Authority

EGTC- Sierra Leone Electricity Generation and Transmission Company

IPPs- Independent Power Producers

IUCN- International Union for Conservation of Nature

NEA- National Electricity Act 2011

PBF- Public Benefit Fund

PPA- Power Purchase Agreement

PPP- Public–Private Partnership

REASL- Renewable Energy Association of Sierra Leone

REFIT- Renewable Energy Feed-in Tariff

REIPPS- Renewable Energy Independent Power Producers

RET- Renewable Energy Technology

SDGs- Sustainable Development Goals

SE4ALL- Sustainable Energy for All

SLEWRC Act- Sierra Leone Energy and Water Regulation Commission Act 2011

SLEWRC- Sierra Leone Energy and Water Regulation Commission

SREP- Scaling Up Renewable Energy Program

UKDFID- United Kingdom's Department for International Development

UNED- United Nations on Environment and Development

UNFCC- United Nations Framework Convention on Climate Change

WAPP- West African Power Pool

WCED- World Commission on Environment and Development

WSSD- World Summit on Sustainable Development

WWFN- Word Wide Fund for Nature

List of treatises and instruments

Bumbuna Watershed Management Authority and the Bumbuna Conservation Area Act 6 of 2008

Electricity Act 41 of 1987

Electricity Act 42 of 1922

Electricity Regulation Act 4 of 2006

Finance Act 2011

Finance Act 2016

Gas Act 48 of 2001

Johannesburg Declaration on Sustainable Development 2002

Kyoto Protocol to the United Nations Framework Convention on Climate Change 1997

Minerals and Petroleum Resources Development Act 28 of 2002

National Electricity Act 16 of 2011

National Energy Act 34 of 2008

National Energy Regulator of South Africa Act 40 of 2004

National Nuclear Energy Regulator Act 47 of 1999

National Power Authority Act 1982

Nuclear Energy Act 1999

Petroleum Pipelines Act 46 of 2003

Petroleum Products Act 120 of 1977

Rio Declaration on Environment and Development 1992

Sierra Leone Energy and Water Regulation Commission Act 13 of 2011

United Nations Conference on Environment & Development 1992

United Nations Convention on BioDiversity 1992

United Nations Convention to Combat Desertification 1992

United Nations Framework Convention on Climate Change 1992

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CHAPTER 1
GENERAL INTRODUCTION

> '…as the source of two-thirds of global green-house gas emissions, the energy sector will be pivotal in determining whether or not climate change goals are achieved.'
>
> -The World Energy Outlook[1]

1.0 Introduction

As Sierra Leone strives for development, its energy sector is key to ensuring economic growth.[2] However, the current performance of the energy sector falls far short of the country's present electricity demands and fails to match its development aspirations. Households are forced to revert to battery powered lights, generators and kerosene lamps which consume a substantial amount of its income, leaving a limited proportion to satisfy other competing needs.[3] Alternatively, especially in the densely populated rural areas, energy is sourced from firewood and charcoal, which are not only hazardous to heath of its consumers but also significantly contribute to deforestation and environmental degradation. The limited amount of electricity which the state owned utility produces and supplies the national grid across the country, is largely based on fossil fuels, like diesel and petrol, which produce high greenhouse gas emissions that are also harmful to the environment.[4]

Thus, the inefficiency in its energy sector has led to poor access to electricity supply, dependence on non-renewable sources of energy generation at high costs to ordinary consumers, commercial entities and the environment, thereby creating both a negative ecological and economic impression on the country.[5] This sector, which is primarily administered by the National Electricity Act

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[1]F Birol 'Climate Change: Buying Time at no cost' (2013) *World Energy Insight*' 18 18.
[2] TA Koroma & W Rongcheng 'The challenges of energy supply for Sierra Leone's economic development' (2009) 1 *Journal of Economics and International Finance* 158
[3] Sierra Leone Opportunities for Business Action 'Public SOBA Small Solar Market Analysis' (2016) 5 http://www.sobasl.org/application/files/1014/7706/5489/PUBLIC_SOBA_Small_Solar_Market_Analysis.pdf (last accessed March 10, 2017)
[4] n 3 above, 4
[5] n 3 above, 5-6

(NEA)[6] and the Sierra Leone Energy and Water Regulatory Commission (SLEWRC) Act[7], not only operates at odds with the country's development plans, it also contravenes Sierra Leone's commitment to the international community to implement and integrate environmental considerations in its governance structure towards sustainable development. This reach for sustainable development elevates an approach to development without consideration for the ecological footprint to an all-encompassing approach, wherein the effect on the environment forms part of the considerations for development.

1.1 Research problem

Although at the face value, in terms of domestic representations of powers that be and on the international scene, the state appears generally receptive and enthusiastic towards the use of cleaner means of power production. However, there is a gap in law regarding specific regulatory and/or institutional framework to administer a renewable energy sub-sector of the broader energy sector. The present framework makes or gives no provision and/or priority to power producers who are involved in renewable energy production. This indifference in the eyes of the law, leaves renewable energy independent power producers (REIPPs) to compete with state owned and other power producers who largely rely on the conventional sources. They would be subjected to the same regime of absolute discretion by the regulatory commission in the negotiation of power purchase agreements (PPAs)[8] without an express provision or distinction of its source. Moreover, no other relevant laws make any provision to incentivize, sustain or regulate renewable energy production. Without such unambiguity and legal certainty, it is argued that it would be challenging to attract much needed private sector participation in this sector. Clearly, in the absence of private sector entrance in the energy market, particularly in the renewable energy sub-sector, the adverse effects of present inefficiencies, consequent and subsisting means of energy generation will continue to ripple through every sphere of the state. Essentially, the principles surrounding international investment law dictates that attracting investments from the private sector, involves the presence of favorable institutional and regulatory framework. This amounts to an "enabling environment" within which economic activity can occur in the best interests of all concerned. However, the extant laws in the Sierra Leone energy sector, regarding energy production lacks

[6] Act 16 of 2011
[7] Act 13 of 2011
[8] n 6 above, sec 35

these enabling provisions in the area of renewable energy. This gap and consequent ambiguity in the law negatively affects the prospects of private sector involvement in this sector, which is needed to address the present inefficiency. In order to enhance production in the energy sector to a sustainable level, there is a need for pragmatic government action in creating the necessary legal structures. Review and reform of the legal/ regulatory structure of this sector is therefore needed in order to enhance and secure investment and other capital inflows into this sector.

This research problem is well illustrated in the case of Addax Bioenergy Limited.

In 2008, Addax Bioenergy Limited, a subsidiary of the Addax Oryx Group (AOG) entered the Sierra Leone energy market as a REIPP specialized in the production of bio-fuels. It was also the country's first independent power producer (IPP), having the largest non-mining private sector investment in the country and became the first operation in Sierra Leone to be registered as a Clean Development Mechanism (CDM) project of the United Nations Framework Convention on Climate Change (UNFCCC). This project was also the first sugarcane-based power generation facility for ethanol production to be registered as a CDM in Africa.

Addax operated the largest commercial agriculture project in the country which was expected to result in large scale job creation, infrastructure development and ultimately expansion and diversification of the country's economy. The project also aspired to improve the country's agricultural sector and ensure skills transfer to its employees.

The project was designed to incorporate the development of a 10,000 hectare sugarcane plantation, an ethanol distillery factory which would produce 82,000 m^3 of ethanol each year, to be sold under an off-take agreement and exported to the European Union market, and a 32MW cogeneration power plant, of which at least 15MW will be sold into the domestic power grid pursuant to a power purchase agreement with the government of Sierra Leone.

However, in 2015, only four years after commencing operation, Addax announced that the project would be shut down. It stated that this was due to the fact that the company could no longer financially support its operations as a result of huge financial constraints. The company's financial deficits was approximated to about €150,000. The project itself faced other challenges such as low yields, which resulted in low ethanol production and ultimately lower profits and failure to meet

electricity supply to the national grid. The outbreak of the Ebola viral disease in the country in 2014 also affected the presence of expatriates and other employees of the project.

By the time the announcement was made, the project had become a ghost of its initial grandeur, falling far short of its aspirations. The announcement cited a downscale of operations as agricultural sites were abandoned followed by mass lay-off of workers. The management of Addax averred that the project was to undergo review, with promises to explore the best possible option for continued operation in collaboration with the President and his government.

Till date, there has been no feedback from the management of Addax regarding the review process and there appears to be no concrete plan to restart operations.[9]

It is in the light of the foregoing that this study will argue that the extant legal framework does not sufficiently create an enabling environment for development of a renewable energy market and that these laws in their present form militate against the entrance of private sector actors who specialize in renewable energy. It will further argue that reform of the legal environment is thus required in order specifically attract serious private sector players, for development in the renewable energy subsector.

1.2 Research question(s)

The core research question which this study will seek to answer is whether the extant energy sector specific legal framework, in Sierra Leone sufficiently creates an enabling environment for development of a renewable energy market?

However, in answering the broad research question, the following sub-questions will also be answered-

1. Does the extant law create an enabling environment for investment in renewable energy generation?

[9] Abdul R Thomas 'Addax Bioenergy operations in Sierra Leone is in serious financial trouble' 6 July 2015 http://www.thesierraleonetelegraph.com/addax-bioenergy-operations-in-sierra-leone-is-in-serious-financial-trouble/ (last accessed 10 March 2017) see also 'Sierra Leone News: Addax BioEnergy downsize Makeni Operations' *Awoko* 15 October 2015 http://awoko.org/2015/07/15/sierra-leone-news-addax-bioenergy-downsize-makeni-operations/ (last accessed 10 March 2017)

2. Why should Sierra Leone rethink its regulatory framework of the energy sector in favour of renewable energy?
3. What are the current legal impediments to the growth of this subsector?
4. What can the learnt from other jurisdictions?
5. How can the current legal gaps be bridged to encourage investment in renewable energy?

1.3 Thesis statement

This study will argue that the extant energy sector specific legal framework does not sufficiently create an enabling environment for development of a renewable energy market and that these laws in their present form militate against the entrance of private sector actors who specialize in renewable energy. It will further argue that reform of the legal environment is thus a necessity in order to specifically attract private sector players for development of the renewable energy subsector.

1.4 Significance of the study

This research analyzes the existing legal framework of Sierra Leone's energy sector in order to recommend legal reform to create a structurally enabling environment for foreign direct investment in the renewable energy subsector. The overarching objective is to achieve overall efficiency and sustainability in the energy sector, through private sector participation and increased use of cleaner energy sources. This aligns with the state's global commitment towards archiving sustainable development, through the implementation of the Sustainable Development Goals, particularly Goal 7, which entails access to affordable, reliable, sustainable and modern energy for all.[10]

This reform will seek to complement existent initiatives and policies, in order to secure and direct private sector involvement in this sector, in addressing the present deficiency in the renewable energy sector, with consideration for the unique peculiarities involved in generation of renewable energy and the renewable energy market.

[10] Resolution adopted by the United Nations General Assembly 'Transforming our world: the 2030 Agenda for Sustainable Development' (2015) 14

1.5 Literature review

This review of existing literature on the various underpinnings of this research intends to validate the approach and arguments of this thesis. This research is considering the legal framework of the energy sector, the gap in the law and its effect on renewable energy subsector. In that respect, this literature review firstly covers the law and development theory, where the role of law in the process of economic development is examined. It also considers the role of energy in economic development itself, focusing on Sierra Leone as a developing country. Then, it provides an overview of the contemporary approach to development, wherein the theory of intergenerational equity and need for renewables would be underlined. It thereafter highlights the barriers of the renewable energy market created by this gap in the law and examines the effectives of policies in addressing those barriers.

The role of law in the process of development has been widely debated, with various schools of thoughts regarding the place of law, if at all, in affecting economic growth. Cross argues that beyond the scope of the Modernization and Dependency theories in the Law and development orthodoxy, there is the New Institutional Economics theory. As an emerging theory, takes into consideration the different national legal and institutional framework under which development occurs[11]. The central argument of this theory, largely associated with Douglass North, is based on the hypothesis that capitalist development is not a naturally occurring system. North's economic model proposes that development is achievable through deliberate state actions which assumes the form of an incentive structure that will allow individuals to capture the returns to society of investment.[12]. This is a point of convergence with this research, as it examines the legal framework as a key to reforming the energy sector to ensure the development of the renewable energy market space.

The law and development theory, however, has faced some criticism. Ohnesorge questions the emphasis of legal institutions in economic development and rather points to a multitude of contributing factors.[13] Nonetheless, the theoretical debate has subsided, but the work of

[11] FB Cross 'Law and Economic Growth' in H. Schafer & A. V. Raja (eds) *Law and Economic Development* (2006) 80 Texas Law Review 1737 1740
[12] Cross (n 11 above) 1737 1740
[13] JKM Ohnesorge 'Developing Development Theory: Law and Development Orthodoxies and the Northeast Asian Experience' (2007) 28 *University of Pennsylvania Journal of International Law* 219

international organizations in developing countries is still modelled on the core ideas of the theory and remain relevant for the purposes of this research.

Another point of convergence with this research, is the argument of Manyuchi, who discerns that inward foreign direct investment in the energy sector including technological transfer of environmentally sound technology, is attracted through the creation of institutional structures and policy framework specifically directed to achieve this objective.[14] In a broader context, the presence of such structure is identified as precondition for foreign direct investment. According to Sun, directed, clear and proper regulatory framework forms an essential element in creating an enabling environment for foreign direct investment. Strong institutional structures, especially stemming from legislations, have been found to boost investor confidence as well as prevent abuse of the market[15]. Thus particularly for the energy sector, it is reasonable to agree that the regulatory framework does have an impact on the rate of investment. The emphasis on foreign direct investment being beyond financing but also efficient technology transfer, adoption of best practices and ultimately sustainable economic growth.[16]

Notably, the importance of energy to economic growth, especially in the African continent, cannot be over emphasized. This view is supported by the United Nations Economic Commission for Africa's 2004 Report, which highlighted the importance of the energy sector in contributing to economic growth, for instance through industrialization and export diversification[17]. Similarly, Wolde-Rufael argues that modern energy possesses a major role in addressing poverty and contributing to sustainable development, though he pointed out that it is not a panacea to all challenges being faced in Africa.[18]

In a more nuanced correlation, Ebohon in his study of developing countries, deduces a complementary relationship between energy consumption and economic growth. He indicates that sustainable growth can only be achieved in such economies if the challenges in the energy sector are addressed. He concludes that this impacted present and future economic growth. In an

[14] AE Manyuchi 'Inward Foreign direct investment and transfer of environmentally sound technology in Angola' (2016) 112 *South African Journal of Science* 114 119.
[15] X Sun 'How to promote FDI? The Regulatory and Institutional Environment for Attracting FDI' (2002) 4.
[16] Sun (n 15 above) 3
[17] United Nations Economic Commission for Africa 'Economic Report on Africa 2004: Unlocking Africa's Trade Potential in the Global Economy Overview' (2004) http://www.uneca.org/pages/economic-report-africa-2004-unlocking-africas-trade-potential-global-economic-overview (last accessed 27 September 2017)
[18] Y Wolde-Rufael 'Energy demand and economic growth: The African experience' (2005) 27 891 910

effectiveness review of the African Development Bank (AfDB), deficiency in the energy sector was identified as an inhibition to investment and economic growth in the Sub-Saharan region[19]. Hence, there appears to be widespread acceptability of the significance of energy in economic growth in developing African countries, which further buttresses the argument of this thesis.

However, growth has become subjected to global standards and obligations, which require consideration for its surrounding, present and future impact. Stemming from the Millennium Development Goals (MDGs), the Sustainable Development Goals (SDGs) as elucidated in the Agenda 2030 development plan of the United Nations, serves as another premise of this thesis[20]. Sustainable Development was conceptualized as development that meets the need of the present generation without compromising the ability of the future generation to meet their own needs[21]. This sets a standard that would require for development in the energy sector to be environmental friendly. The SDGs include as a seventh goal which aims that by 2030, there would be universal access to affordable, reliable and modern energy services.[22]

Therefore, increase in volume and proportion of commercial energy must be met with sustainability considerations. This has ignited the drive and interest towards the use of renewable energy and development of renewable energy technology. Renewables have been identified as a tool to leapfrog the harmful environmental ramifications of industrialization in the past.[23] Thus, the use of renewables has gained wide favorability and has been acknowledged as the most viable alternative to formerly conventional sources of energy, which no longer conforms to present and aspiring standards of sustainability.[24]

Unlike the developed world, who were capable of industrializing without considering the environmental impact of their actions; emerging and developing economies in the continent do not have that luxury. For Africa, this energy transition to renewable has been viewed as an opportunity to mitigate ecological ramifications and stimulate economic growth.[25] Additionally, Africa has

[19] African Development Bank Group 'Annual Development Effectiveness Review' (2016) 14
[20] n 10 above 3
[21] World Commission on Environment and Development 'Our Common Future' (1987) para 27 of chapter 1
[22] n 10 above 19
[23]G Wilkins *Technology Transfer for Renewable Energy Overcoming Barriers in Developing Countries* (2002) 2
[24] OJ Ebohon, BG Field & C Pugh 'satisfying current and future energy demand in sub-Saharan African cities: the implications for urban environmental sustainability' (2000)
[25] B Arimah & OJ Ebohon 'Energy Transition and its implications for environmentally sustainable development in Africa' (2000) 7 *International Journal of Sustainable Development & World Ecology* 201 215

been shown to present better options for transition to renewable energy due to the fact that most energy sectors are not heavily developed without large capital asset investments, thus making providing a close to clean slate for renewable energy transition.[26]

Despite its obvious benefits, this energy transition to the use of renewables is not without its challenges. Karekezi ranged these between technical manpower, institutional and economic factors[27]. These touch on the problems posed by the regulatory framework of Sierra Leone's energy sector, which this research examines. Nonetheless, there is widespread optimism that these obstacles can be overcome, given the participation of stakeholders including policy and law makers, financiers and investors, manufacturers and utilities.[28]

Indeed, global trends have shown record levels of investment in renewable energy, with higher rates in developing countries than developed countries.[29] In Africa, South Africa has been identified has one of the most prominent countries engaged in renewable energy, ranking amongst the top-10 countries engage in renewable energy investment[30], having the highest private sector investment in renewable energy.[31]

Private sector participation has been emphasized in this energy transition. They are recognized as owners of the technologies that drive this transition to modern and sustainable energy.[32] Further, private sector investment has shown to have higher value flows than official development organizations, particularly through foreign direct investments.[33]

These private corporations have been identified as effective conduits of technological transfer and thus, countries have sought to attract such foreign direct investments.[34] Concurrently, trends towards corporatization have shifted government concentration towards regulation and enabling

[26]S Karekezi 'Poverty and energy in Africa- A brief review' (2002) 30 *Energy Policy* 915 919.
[27] S Karekezi 'Renewables in Africa-Meeting the Energy Needs of the Poor' (2002) 30 *Energy Policy*
[28] Ebohon, Field & Pugh (n 24 above).Also Wilkins (n 23 above) 46
[29] United Nations Environment Programme 'Global Trends in Renewable Energy Investment' (2016) 15
[30] n 29 above 23
[31] n 29 above 28
[32] Wilkins (n 23 above)
[33] F Fortanier 'Foreign direct investment and host country economic growth: Does the investor's country of origin play a role?'(2007) 16 *Transnational Corporations* 41
[34] KE Meyer 'Foreign Direct Investment in Emerging Economies' (2005). Also Fortanier (n 33 above) 41

policies.[35] Albeit the importance of the latter, close attention to the former is necessary, failing which, the latter would have the inverse effect of harming and not developing the economy.

In Sierra Leone, the SLEWRC Act and the NEA regulate the energy sector. State owned institutions, Electricity Generation and Transmission Company (EGTC), has taken over national power production plants and operates in conjunction with Electricity Distribution and Supply Authority (EDSA), for onward supply to consumers. The EGTC operates pursuant to the regulations and authority of the SLEWRC. SLEWRC, inter alia, issues licenses for electricity generation and negotiates power purchase agreements, including undertaking by IPPs.

This sector unbundling has formed part of Government effort to achieve energy efficiency. Similar steps have also been undertaken through it launch of its "Energy Revolution" initiative. Through partnerships with development partners such as the United Kingdom's Department for International Development (UKDFID), Power for All, and Sierra Leone Opportunities for Business Action, campaigns towards efficient and green energy are being promoted. Other bodies such as the Energy Revolution Taskforce, Renewable Energy Association of Sierra Leone (REASL) have been created under the ministry of energy, specifically for this purpose. The expectations of these initiatives are to address the lapses that the present operational system do not adequately provide for, with a strong lean towards optimizing the renewable energy potentials of the country.

However, the present position of the law do not reflect or administer these aspirations. These aspirations are reflective of the intentions of the present government and therefore form "policy". Good as they may, these policies do not possess the binding and authoritative features of legislation. They do not create the institutional structures necessary for economic growth as propelled by the new Institutional Economics theory. They fall short of enforcement mechanisms, which form part of 'strong institutional structures' proffered by Sun, necessary to boost investor confidence.[36]

For sustainable development, beyond aid initiatives, the environment must be able to withstand normal market conditions where private investment can thrive. An unambiguous and

[35] Wilkins (n 23 above)
[36] Sun (n 15 above) 4.

encompassing legislation, which may include incentives as well as operational regulations, will be beneficial for both potential investors and the government (through the SLEWRC).

Other sub-Saharan countries, such as South Africa have made considerable gains in the transition to commercialized cleaner sources of energy. South Africa has accomplished this through coalescing relevant legislation along with enabling initiatives. Its enactment of the National Energy Act, 2008 made provision for the multiplicity of energy sources, whilst emphasizing the need for sustainability, in conjunction with the nation's gravitation towards a "green economy". Further, it has served as a foundation for "new generation" energy regulations and complemented efforts, significantly the renewable energy feed-in tariffs and the Renewable Energy Independent Power Producers Procurement Programme (REIPPPP).

Thus, this research intends fill the gap in the present literature regarding investment in renewable energy, by distinguishing between existence of policies (including policy statements) and legislation which specifically addresses this sector. Although policies and legislation are often used interchangeably, this research argues that without the overarching legal provisions, the present policies are insufficient in creating an environment for investment, in renewable energy, in Sierra Leone.

1.6 Methodology

This research is desk-top based. It contains an outline of the present deficit in the energy sector in Sierra Leone with specific correlation to sustainability. This is followed by a critical analysis of the extant law governing the sector, particularly found in Electricity & Water Regulatory Commission Act, 2011 and the National Electricity Act, 2011. This also includes an examination of the present provisions in respect of renewable energy, predominantly contained in policy statements. It also contains a comparative analysis of laws regarding renewable energy generation in other jurisdictions, such as South Africa, which has made significant strides in producing commercial quantities of renewable energy, in order to highlight the effect of legislation in the development of this sector. It finally contains recommendations, in view of lessons leant from other jurisdictions, towards reforming the legal framework to specifically incentivize foreign direct investment in the renewable energy sector. The study is conducted through consultation of primary sources as aforementioned, and secondary sources inclusive of reports, journal articles, books and internet sources reflecting the literature, trends and developments surrounding this subject matter.

1.7 Limitations to the study

This research concentrates on regulatory provisions surrounding renewable energy production. It does not extensively discuss the sources of renewable energy, renewable energy technologies or attempt to quantify energy supply, though it may refer to these aspects in order to satisfactorily express levels of renewable energy generation. Although small scale production may form part of analysis, this research is focused on commercial production of renewable energy and its use on a large scale on-grid basis. Being a desk review, this research, would depend on statistical and numerical analyses from external sources.

1.8 Outline of chapters

This research is set out as follows:

Chapter 1: Introduction: this chapter provides a background to the study, narrows the narrative of the research problem, highlights the significance the study and presents the research questions which it seeks to answer. It also states the selected methodologies upon which this research is conducted whilst indicating the limitations of the study.

Chapter 2: Theoretical analysis; this chapter discusses the underlining theories of this thesis, being the New Institutional Economic theory of the law and development orthodoxy, the concept of intergenerational rights in sustainable development and the investment principle of legitimate expectations of foreign investors.

Chapter 3: Strides towards development in Sierra Leone: this chapter presents the development path of Sierra Leone. It gives an insight into the concept of sustainable development in order to properly provide context for the emphasis on renewable energy.

Chapter 4: Legal Framework for Sierra Leone's energy sector: This chapter provides insight into the present position of the law relating to energy in Sierra Leone. It contains a comprehensive analysis of pertinent legal provisions, with particular attention to renewable energy generation. It deals with present policies, programs and initiatives pertaining to this sector. It also aims to show the effect and trends in the energy markets in Sierra Leone and whether they sufficiently address the present need for efficient and sustainable electricity and are reflective of global obligations.

Chapter 5: Lessons learnt: South Africa and international best practices; this chapter looks at reforms undertaken by other jurisdictions, primarily South Africa and other best practices in

creating an enabling environment for investment in renewable energy generation. It pays close attention to successes and lessons learnt.

Chapter 6: Summary of chapters, conclusion and recommendations: This chapter contains a summary of the previous chapters and contains a conclusion from its discussions. It makes a case for certain legal reforms to the existing body of laws relating to energy production. The need for more private sector participation is highlighted along with the benefits of free market practices which attracts foreign direct investments and the compulsory legal structures that must accompany it. The need for specificity and clarity in the area of renewable energy is also discussed with the view of ensuring that consequent increased participation be directed in large scale generation of renewable energy. It makes recommendations as to how renewable energy use would be optimized in Sierra Leone, through unrestrictive, though regulated, private sector participation.

CHAPTER 2

THEORETICAL ANALYSIS

> "You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete"
>
> - Buckminster Fuller

2.0 Introduction

This chapter discusses the theories on which the inference of this research is based. Bearing in mind the overarching objective of development, this chapter examines the law and development theory and its applicability to this research. It also discusses the paradigm shift in the outlook of development towards sustainable development and its underlying concept of intergenerational equity. Also considering the relevance of the private sector and foreign direct investment to the development of the renewable energy subsector, this chapter also examines principles of international investment that the ensuing effect on the investment environment.

2.1 Law and development theory

This theory examines the role of law in economic development. It postulates that reform in legal systems, including structures, laws and procedures, is intrinsic to archiving economic growth. It has been the underlying motivation for multilateral international financial institutions such as the World Bank, International Monetary Fund, other regional financial institutions such as AfDB and major bilateral development assistance from aid providers such as the UK DFID.[37]

Amongst the prevalent theories in this school of thought, this study will be focused on the New Intuitional Economics theory. This theory marries law and economic theory through institutional structures and processes. This diverges from the neoclassic orthodoxy of modernization theory of the 1960s, which essentially counted on the nation state to play the necessary, interventionist role of fostering industrialization. It promulgated the overall function of law as the instrument by which reformist third world governments would bring about social change in the direction of socially responsible capitalism and pluralist democracy. [38]

The new institutional economics theory also distinguishes itself from the critique propelled by the Dependency theory which emerged in the 1970s. The Dependency theory promulgates that economy of a certain group of countries is conditioned by the development and expansion of another economy, to which their own is subjected.[39]

The New Institutional Economics theory emerged in another wave of the law and development theory, in the era of neoliberalism. Widely associated with the work of Douglas North, an economist, the new Institutional Economics theory developed as an approach which emphasizes the indispensable role of law as an institution in economic development. This theory is linked to a branch in economics that studies the economic behavior of individuals or firms in a given institutional setting.[40]

This theory views economic change as '…a ubiquitous, ongoing, incremental process that is a consequence of the choices individuals and entrepreneurs of organizations are making every

[37]Ohnesorge (n 13 above) 221
[38] Ohnesorge (n 13 above) 236
[39] Ohnesorge (n 13 above) 239-243
[40]DC North The New Institutional Economics And Development: Washington University, St. Louis

day'[41]. By his definition, such individuals and organization are 'players' whilst institutions form the 'rules of the game'. As such interaction between these two elements result to the pace, efficiency and kind of economic growth. Nonetheless, it is the institutions which determines the interactions within the structure. These institutions are comprises of formal rules, informal constraints and the enforcement characteristics of both. He prescribed the formal rules to be contained in statute law, common law, regulations, whilst the informal rules are conventions, norms of behavior, and self-imposed codes of conduct. The primary focus of this research with be on the formal rules of the game. In essence, this theory dictates that the development and functioning of an economy would be based on its institutional matrix, that is, an administrative system with clear rules to both constrain government actors whilst facilitating freedom of action by private economic actions. This was necessary for economic development.[42]

In his analysis of this theory, Cross acknowledged that the correlation between laws, or more accurately, the environment which law creates, and development is undeniable. He agrees with North in his study of growth of economies during the Industrial revolution was spurred by the existence of (property) rights which assured returns on invention and innovation. These rights had been fashioned and administered by law makers. Notably, Cross ultimately inferred that a blanket approach to institutional reform would be ineffective and thus there is need for particular understanding or particular sectors, its governing laws, implementing agencies which would most efficiently translate to economic growth and possible interfering factors of such growth.[43]

However, although the underpinnings of the law and development theory has been faced with criticisms which questions the simplicity of its approach contrary to the complexity and multiplicity of factors that ultimately contribute to economic development. This has been particularly exemplified by developing countries, with common law systems that are regarded as having better developed legal systems which provide for stronger equity markets and shareholder protection, which when contrasted with civil law systems, which are generally associated with high levels of formalities which are perceived to disincentive private sector participation and

[41] n 40 above
[42] n 40 above
[43] Cross (n 11 above) 1737

encourage bureaucratic rent seeking, these common law jurisdiction have been shown to have not out performed civil law jurisdictions and thus may not have which have not necessarily benefited from such neoliberal economic and legal reforms. This theory has also failed to account for the success of the 'miracle' economies of Japan, South Korea and Taiwan whose legal framework do not conform to its dictates.[44]

Nevertheless, this study justifies the use of this theory with specific application to the existing framework of the energy sector and the contrasting necessary considerations of the renewable energy market. This research reveals that the present institutions and legal provisions reinforces existing barriers to the development of this subsector. In order to attract interest and investment in the renewable energy market, these rules must be reformed to assure 'returns on investment'. It must essentially be de-risked and redesigned to accommodate investor rights and boost investor confidence.

Thus, the specific emphasis on the need to reform institutional structures to stimulate the economic development of the subsector in alignment within the framework of sustainable development, stems from the requirement to accept new conditions on human behavior. Economic development ceases to exist as a standalone objective, but the dictates of sustainability require an interrelated and interdependent approach, inclusive of the human rights and the environmental protection, not only for benefit of the present generation but also for the welfare of future generation.

In order to properly grasp the dictates of sustainability, this research will now delve in to the theory of intergenerational equity, which justifies the advocacy for change in patterns of human behaviour and specifically, economic growth.

2.2 Intergenerational equity

This theory states that as human beings, we hold the natural environment in common with our fellow human beings and other species and with the past, present and future generations.[45] According to Summers and Smith, this theory has found its way in various areas of study;

[44] Ohnesorge (n 13 above)
[45]EB Weiss 'In fairness to future generations and sustainable development' (1992) 8 *American University International Law Review* 19 20

including, transition economics, social policy, government budget-planning, environment, sustainable development, health care, and law.[46] It is described as a value concept that is imbedded into the notion of ecological sustainability. It emphasizes the need for careful consideration of the effect of environmental degradation due to direct or indirect human activity on future generations and other life forms.[47] It merges time old concepts of development and sustainability under the umbrella question framed as 'How can we and our children live good lives without eroding the health and productivity of the physical planet—and therefore the possibility for future generations to lead good lives?'[48]

Weiss another proponent of this theory describes the present generation, as beneficiaries of the earth's resources and trustees of those resources for the future generation. She propels that this creates a synergy of two relationships, our relationship with other generations of our own species and our relationship of the natural ecosystem which we form a part.[49] The centrality of her argument is founded on the perspective that a given generation, regardless of its place in time, would want to inherit the planet in at least a good condition as it has been in for any previous generation and to have as good access to it as previous generations. This creates an obligation for each generation leave the planet 'in no worse condition'.[50]

She proposed three basic principles of this theory; conservation of options, conservation of quality and conservation of access. These principles respectively secure diversity, quality and rights of access to the natural and cultural resource base of the planet for the benefit of future generation. In effect, these principles constrain the actions of the present generation in the manner in which they use, enjoy and develop the planets resources. They thus create a set of rights and obligations for both the present and future generations.[51]

A criticism of this theory was raised by D'Amato on the basis that rights cannot be attributed to individuals (the future generation) who do not yet exist, because right can only be attributed to

[46]J. K. Summers & L. M. Smith 'The Role of Social and Intergenerational Equity in Making Changes in Human Well-Being Sustainable' (2014) 43 *A Journal of the Human Environment* 718 720
[47]Summers & Smith (n 46 above) 719
[48]Summers & Smith (n 46 above) 721
[49] EB Weiss ' Our Rights and Obligations to Future Generations for the Environment' (1990) 84 *The American Journal of International Law* 198 199
[50]Weiss (n 49 above) 200
[51]Weiss (n 49 above) 201, 202

identifiable interests. He further argues that in every way in which we intervene in the protection of the environment, the composition of that future generation is affected as the rights of some are thereby destroyed, different people will be born as a result of the intervention.[52] However, Weiss rebuts that intergenerational rights transcend the traditional conceptual framework of rights as rights of identifiable individuals, and must be conceived as a set of rights held by a generation as a whole in relation to other past, present and future generations. She categorizes intergenerational rights with other approaches to rights such as Islamic law, where the rights of a community take precedence over individual rights. She argues that the enforcement of these rights can be through a guardian or representative of future generations, which does not deprive this rights of legitimacy. On the second ambit, she argues that it does not matter who these individuals who make up the future generation are. The right exists only as generational rights and only attach to individuals when they are born. She takes the broader view that our obligation to the planet is owed to all the earth's future inhabitants which encompasses the theoretical underpinning to sustainable resource development.[53]

2.3 Sustainability

The concept of sustainability encompasses this obligation on the present generation. It is defined 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'[54].The evolution of this concept in international law, will be discussed in detail in chapter 3. Nonetheless, it is this acceptance of intergenerational equity in development that necessitates the use of renewable energy. It answers the question raised by Summers and Smith, as renewables sources and technology provides a cleaner substitute in the generation of energy, which is much needed for economic development.

Nonetheless, this research reiterates that the success of the institutional matrix, created by law for the purposes of sustainable development, is dependent on the organizations that interact within the matrix. The 'organization' that this research focuses on are the private sector. This is due to their ability to circumvent barriers specifically affecting the renewable energy subsector, as discussed in greater detail in chapter 3. However, it is necessary to discuss the surrounding principles which

[52]Weiss (n 49 above) 204
[53] Weiss (n 49 above) 206
[54](n 21 above) para 27 of chapter 1

have shaped the model of the relevant private sector participation, that is, foreign direct investment, in order to properly appreciate the view point of the thesis and the recommendations proffered in chapter 6.

2.4 Engaging the private sector: investment principle of legitimate expectations

The contemporary outlook on investor rights and actions undertaken to boost investor are enshrined in the development of the law on international investment. This area of law has emerged in order to define the relationship between host states, home states and investors. It provides the roles, rights, responsibilities of all concerned parties throughout the life cycle of an investment. Although there is not yet a multilateral agreement on the law of international investment, this field of law has largely been developed through the proliferation of Bilateral Investment Treaties (BITs) and customary international law. Furthermore, despite the debate on the legitimacy of BITs as a source of international law as opposed *lex specialis*, certain principles have emerged from common features of BITs that are now accepted as part of the law on international investment.

These principles are; admission and establishment of investment, national treatment, most favoured nation, minimum standard of treatment, no expropriation without compensation, transfer of funds and transparency. It is noteworthy that a distinction between kinds of investment has also shaped the application of this law. This distinction lies between portfolio investments, which is in simple terms, are generally limited to equity (shares, stock etc.) or debt (bonds, debentures, loans, etc.) and other forms of indirect participation and foreign direct investment, which usually refers to direct and tangible forms of participation. This research argues for the promotion of foreign direct investment, due to the mirage of afore-mentioned barriers facing the concerned sub-sector, which goes beyond financial input.

The underlying principle on international investment of this research is that of a minimum standard of treatment of foreign investors. This creates a right in customary international law that endows foreign investment some assurance of both fair and equitable treatment and full protection and security. The focus of this research would be on fair and equitable treatment of foreign investors. This principle has been examined from two perspectives, firstly, that the fair and equitable treatment merely affirms existing rights ensuing from international minimum standard and secondly, that it expands the scope of international minimum standard by accommodating future decisions on issue arising from unfair treatment by the host state. Although the former view

restricts the application of the principle, the expansive view allows the application of this principle and protects this right in a wide range matters. Instances of a contravention of this principle and ensuing right to fair and equitable treatment may arise from discrimination, denial of justice and for the purposes of this study particular attention is to be paid to a breach of legitimate expectations.[55] The legitimate expectation of an investor is described as an expectation created by administrative conduct which should not be violated unless a hearing is given to the person who had that expectation. This principle exists to insulate the investor and prevent the host government from changes of the domestic political, economic and environmental situation which are contrary to the representation and promises it had made to attract investors.

Thus, when laws, regulations and certain policies are created in respect of a certain sector, investors are reliant on those provisions, and are expectant for those provisions to reasonably remain the same, during the course of their investment. This right is weighed against the state's prerogative to undertake actions in order to further 'legitimate welfare objectives'. Change in laws, regulations and some policies which do not satisfy the legitimate welfare objective standard can be regarded as a violation of legitimate expectation and breach of fair and equitable treatment.

Nevertheless, whilst laws are created and exist to concretize the legitimate expectation of investors, certain policies, programs and initiatives could be administered with greater flexibility, simultaneously without meeting the legitimate welfare objective standard and violating the investor's right to fair and equitable treatment.

The research infers when the laws which form the legitimate expectation of the investor, it creates the 'rights' which provides much needed assurance on the return of investment and innovation, which in turns results in economic development. These laws become the green light regulations which establishes the institutions that instigate the behavior of the different players in the given sector.

2.5 Concluding remarks

This chapter has dealt with the various theories that underline the respective premises that supports argument of this thesis. The new institutional economics theory indicates the importance of the

[55] M Sornarajah *The International Law on Foreign Investment* (2014) 348

regulatory framework whilst the intergenerational equity theory justifies the necessity of sustainability in economic growth, which ties into the need for renewables. It further discusses the interrelation between the legal framework and foreign direct investment, which is one of the proponents of the economic growth. Thus this chapter justifies the need for reform in a manner which captures sustainability and private sector participation.

CHAPTER 3

STRIDES TOWARD DEVELOPMENT IN SIERRA LEONE

3.0 Introduction

In the previous chapter, the underlying theories of this research were discussed. It clearly examines the research rationales and provides the necessary theoretical foundation for the narrative of this chapter. In this chapter, the integration of sustainability into international law is discussed in detail. It also examines the development status of Sierra Leone and its development aspirations with specific relation to the energy sector.

Even as states continue to seek growth, be it through technological advancement, political influence, economic prowess, infrastructural development, pursuit of freedoms and rights or in general terms improved conditions of living for its people, global conditions now require a paradigm shift in the conventional standards of business as usual. It demands a qualitative introspection of growth patterns, with the intent of securing an inclusive approach of both social and environmental considerations in economic activities, in order to preserve the ability of future generations to satisfy their own needs.

This standard becomes highly relevant to emerging markets and developing countries, who must have this in contemplation in national development agendas, unlike developed countries who

industrialized before the widespread realization of the adverse effects of human activity on the planet. With particular focus on economic growth, this research is centered on energy as an integral and indispensable component of that development. This is particularly true for Sub-Saharan countries, like Sierra Leone, wherein the strong correlation between economic growth and energy consumption is undeniable. As a contrast to developed countries, whose impending growth patterns are linked towards efficient use of energy, developing countries face challenges of low levels of energy generation and access coupled with high costs and tariffs. Moreover, it deters economic growth in such countries. Thus, it is safe to infer that efficient supply of energy, which meets the developmental demands of such developing countries will spur economic growth.[56]

However, to satisfy this new standard of growth, the energy sector in developing countries must face a deviation from heavy reliance on fossil fuels and the preset manner of use of biomass, which results in environmental degradation. They must embrace greener and cleaner sources of energy which presents itself in renewable energy sources. Advancement in renewable energy technology has provided scope for large range of sources, storage and conduit of energy generated by renewable means. Moreover, global trends have suggested that there is large interest in the renewable in energy market by the private sector, who possess the technology and capital to engage in large scale production. Accordingly, private sector participation is key to growing the renewable energy market.[57]

3.1 Sustainable development

The concept of sustainable development exists as a blue print of contemporary global standards of development. Emerging sometime in the early twentieth century, its development as an alternative to the conventional means of economic development and industrialization has its roots the emergence of environmental protection movement. Through publications of personalities such as Aldo Leopold[58], Racheal Carson[59] and many others, an increased awareness arose regarding the non-inextinguishable supply of the earth's resources. It drew attention to the adverse effects of

[56] n 19 above
[57] Wilkins (n 23 above)
[58]Aldo Leopold (January 11, 1887 – April 21, 1948) was an Author, philosopher, scientist, ecologist, forester, conservationist and environmentalist. Pioneer in environmental ethics in the United States.
[59]Racheal Carson (May 27, 1907 - Apr 14, 1964) was a Marine biologist, conservationist and author of the 'Silent Spring' and other works which significantly contributed to advancing the environmental movement.

human activity on the earth. Significantly, in 1972 the Club of Rome published a research study 'Limits to Growth', which recounted the negative economic and ecological effects of continued contemporary trends whilst highlighting the possibilities of human ability to innovate and transcend the ensuing environmental and demographic challenges[60].

These efforts were culminated into global actions through the United Nations Conference on the Human Environment in Stockholm also in 1972, the outcome of which set out principles concerning the environment and development. Significantly, other such efforts include the work of the International Union for Conservation of Nature's (IUCN) together with the World Wide Fund (as it then was and subsequently renamed the Word Wide Fund for Nature (WWFN)) in the development of an all exclusive strategy of thinking and future practice of 'sustainable' development and publication of the 'World Conservation Strategy'[61]. This propelled that a new international economic with a new environment ethic to be established to prevent the continued deterioration of the biosphere due to human activity. It defined this pattern of development as follows:

> '…the modification of the biosphere and the application of human, financial, living and non-living resources to satisfy human needs and improve the quality of human life. For development to be sustainable it must first take account of social and ecological factors, as well as economic ones; of the living and non-living resource base; and of the long term as well as the short term advantages and disadvantages of alternative actions'[62]

This exemplified the new train of thought, expressing the commonality amongst the aforementioned publications and initiatives that economic blocks of development and other socio-political and environmental aspects could no longer be pursued in isolation. Another commonality was that the adverse effects were neither as a result of the wrongful practices of individual countries, nor was the burden of mitigating the risks and righting the effects the sole mandate of a select number of countries. The cooperation of all nations would be required to face the challenges.

[60]J Blewitt *Understanding Sustainable Development* (2015) 7
[61]International Union for Conservation of Nature and Natural Resources 'World Conservation Strategy' (1980)
[62] n 61 above, para 3

Not until, 1987 did this realization of need for an all-encompassing manner of development was conceptualized by the publication of a major study by the World Commission on Environment and Development (WCED) in the 'Our Common Future' report. Also referred to as the Brundtland Report. This paper significantly propelled a definition of 'sustainable development'. It defined it as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'[63]. It averred that this can be achieved through what it described as the need for reorientation in international economic relations.

This concept of sustainable development would provide a framework for the integration of environment policies and development strategies in such a manner to revive growth; change the quality of growth; meet essential needs for jobs, food, energy, water, and sanitation; ensure a sustainable level of population; conserve and enhance the resource base; reorient technology and manage risk; and merge environment and economics in decision making.[64]

This set the scene for subsequent universal interest and participation in this concept. Shortly after, in 1992, the United Nations on Environment and Development (UNED) held a conference in Rio de Janeiro as a follow up to Stockholm conference. Also referred to as the Rio Summit or the Earth Summit, this conference affirmed global commitment towards sustainability; addressing issues regarding patterns of production, alternative sources of energy, congestion and pollution and preservation of water sources. This resulted in the global plan action contained in the Rio Declaration[65] and Agenda 21 document,[66] for implementation of these policies by the United Nations, its individual member states, other international and multilateral organizations at local, national and global levels. The Rio Declaration set out twenty-seven fundamental principles by which member states would cooperate with respect to their interest and in protecting the integrity of the global environment and developmental system. These principles must be reflected in their future decisions and policies. Particularly, principle 25 which set out that 'peace, development and environmental protection are interdependent and indivisible'. Agenda 21 set out a work plan of the 21st Century, as a blueprint for partnership amongst member states to reconcile the

[63] n 21 above, para 27 of chapter 1
[64] n 21 above, para 28 of chapter 2
[65] The Rio Declaration on Environment and Development (1992)
[66] United Nations Conference on Environment & Development (1992)

requirements of a 'high quality environment' and a 'healthy economy' for the world's people. As part of its provisions regarding conservation and management of resource, Agenda 21, *inter alia*, urged the development of renewable energy sources. On a whole, these instruments laid the foundation for multilateral and national environmental legislative systems and led to the formation of institutions such as the United Nations Environment Programme (UNEP).

Although the Rio Declaration and Agenda 21 were non-binding, the parties legitimized its undertakings in the United Nations Framework Convention on Climate Change (UNFCC)[67], the United Nations Convention on Bio Diversity[68] and subsequently the United Nations Convention to Combat Desertification[69]. The objective of the UNFCC sets out the aims of parties in archiving the sustainable development as expressed in the Our Common Future report and other subsequent findings as:

> [70] ...stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

Notably, the UNFCC in 1997 was extended in order to further commit states to reduce greenhouse gas emissions by the adoption of the Kyoto Protocol[71].

Ten years after Rio, another conference was convened in Johannesburg. Referred to as the World Summit on Sustainable Development (WSSD), the Earth Summit or Rio +10, this meeting was focused on discussing sustainable development. The main outcome was the Johannesburg Declaration which emphasized that there was a collective responsibility of all states to ensure a sustainable path to development which rests on three interdependent and mutually reinforcing pillars, these being economic development, social development and environmental protection.

[67] United Nations Framework Convention on Climate Change (1992)
[68] United Nations Convention on Bio Diversity (1992)
[69] United Nations Convention to Combat Desertification (1992)
[70] United Nations Framework Convention on Climate Change, article 2
[71] Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997)

This obligation superseded local and national levels and needed to be extended to regional and global levels.[72]

Once again the link between environment and development was strengthened. The Plan of Implementation for the United Nations Summit on Sustainable Development[73] was agreed upon which affirmed this mutual and global commitment, not only for the present but to future generations. A specific focus for African countries was the need to strengthen environmental legislative policies and institutional reform for sustainable development. It also made provision for measures to effectively deal with Africa's energy constrains, which alluded to *inter alia;*

> [74] '...promotion of cleaner and more efficient use of natural gas and increased use of renewable energy, and to improve energy efficiency and access to advanced energy technologies, including cleaner fossil fuel technologies.

Twenty years down the line in 2012 again at Rio, another conference of the United Nations was held on Sustainable Development aimed at further reconciling the economic and environmental goals of the global community. This Rio +20 meeting resulted in the publication of the document 'The Future We Want'[75]. Although it was non-binding, the heads of state of the 192 governments in attendance renewed their political commitment to sustainable development and declared their commitment to the promotion of an economically, socially and environmentally sustainable future, in affirmation of previous action plans like Agenda 21.

The role of the United Nations Environment Programme (UNEP) was also identified as key to the process and thus its authority, resources and mandate was sought to be extended in order for it to adequate perform. Recognition for alternative means of measure of development which took environmental and social factors into account and an alignment of governance and administrative policies and actions to archive such sustainable growth trends. Notably for the purposes of this research, this document included in its provision for sustainable consumption and production, an

[72] Johannesburg Declaration on Sustainable Development (2002)
[73] United Nations Plan of Implementation of the World Summit on Sustainable Development (2002)
[74]n 73 above 37
[75]United Nations Conference on Sustainable Development 'The Future We Want' (2012)

affirmation by members states, to phase out fossil fuel subsidies[76]. This was based on the rationale that such subsidies are not only harmful and inefficient but that they encourage wasteful consumption and undermine sustainable development. This commitment was made against the backdrop of recognizing the critical role of energy in the development process and concatenated with the support for the implementation of policies and strategies which reflected appropriate energy mixes. This inferred increased use of renewable energy sources and other low emission technologies such as cleaner fossil fuel technologies such as biogas, biodiesel and sustainable use of traditional energy sources (such as firewood and charcoal). It further urged governments 'to create enabling environments that facilitate public and private sector investment in relevant and needed cleaner energy technologies'[77].

It also included large support for the development of other initiatives of the United Nations such as the 'Sustainable Energy for All' which focuses on energy access, renewable energy and energy efficiency. It also advocated and inspired the fashioning of a set of measurable targets aimed at promoting sustainable development globally. These would be based on previous plans of action contained in Agenda 21 and the Johannesburg Plan for Implementation, adhering to the principles of the Rio Summit whilst taking into account the varying stages of development of member states and be in congruent with the orthodoxies of international law, existing obligations and facilitate the accomplishment of pending economic, social and environmental aspirations.

This vision was captured in the United Nations development agenda post 2015. This resolution was themed 'Transforming our world: the 2030 Agenda for Sustainable Development', containing universal and transformative goals and targets, to be fully implemented by the year 2030[78]. Those 17 goals were referred to as the Sustainable Development Goals (SDGs) which essentially replaced the Millennium Development Goals, which had been formulated at the beginning of the century. The SDGs solidified global intention towards a shift in patterns of development, in favour of protecting and conserving the natural environment of the planet and promoting social equity and a degree of economic equality within and between nations.

[76] n 75 above 39
[77] n 75 above 22
[78] n 10 above

This research focuses on Goal 7 of the SDGs; Affordable and clean energy. This Goal seeks to promote broader energy access and increased use of renewable energy, including through enhanced international cooperation and expanded infrastructure and technology for clean energy.[79]Significantly, access (including availability and affordability) to energy plays a vital role in achieving all the other SDGs.

3.2 Sustainable development in the energy sector – the role of renewable energy

Realizing that virtually every aspect of economic and social activity demands energy, the provision of energy is essential for development while minimizing environmental hazards has been identified as one of the principal challenges of the twenty-first century. This can be achieved through energy efficiency and the use of renewable energy sources.

As indicated earlier, the focus of this research is limited to increased use of renewable energy and will not touch on aspects surrounding energy efficiency. Renewable energy sources are sustainable and unlimited sources of energy which are by their nature, exempt to depletion. Such sources include hydro (water), solar (sun), geothermal (heat), biofuel and biogas (biodegradable wastes) wind, tidal and wave power (ocean). These sources are notable for having little impact on the environment. Beyond costs of initial installation, operation, management and repair, they require no fuel costs, insulating it from price volatility of the energy market.[80]

Despite its obvious and many benefits, the technology transfer of renewable energy is faced with several challenges which prevent states from optimizing their renewable energy potentials. Wilkins defines technology transfer as 'the diffusion and adoption of new technical equipment, practices, and know-how between actors (e.g. private sector, government sector, financial institutions, NGOs, research bodies, etc.) within a region or from one region to another'[81]. However, the transfer of renewable energy technology is not as straightforward as it appears. There are certain barriers that militate against the adequate diffusion. He categorized these barriers to be

[79] n 10 above 19
[80] United Nations Environment Programme Guide for Energy Efficiency and Renewable Energy Laws (2016) 128
[81] Wilkins (n 23 above) 43

political, institutional and legislative barriers; local capacity in infrastructure and knowledge barrier; economic, financial, social, environmental and technical barriers.

He defined political, institutional and legislative barriers to be those challenges that arise from national policies and programmes, institutional structures and intellectual property and standards. Within national policies and programmes, he averred that challenges present themselves in the form of lack of clear government plans and target for renewable energy development, lack of appropriate fiscal policies and support mechanisms (taxes, duty, pricing etc.), unclear and changing grid electricity plans, lack of access to the grid, lack of integrated planning for energy and development, lack and consistent policy and lack of focus and ownership for renewable energy development[82]. With regards to institutional structures, he indicated that the a lack of communication and coordination between government departments and the electricity utility who bear the responsibilities for policy and regulation that relate to renewable energy do not provide a conducive environment for technology transfer. Regarding intellectual property and standards, he identifies the barriers to be surrounding issues of weak or unclear law on intellectual property rights, lack of supporting legal institutions and lack of technical standards and quality control.

Barriers regarding local capacity in infrastructure and knowledge present themselves in the form of lack of access to information on the use and desire for renewable energy technology, lack of skilled local labour and capabilities to source fitting renewable energy technologies which enhance renewable energy source potential and the absence of expertise to install, operate and maintain projects, and failure of idea and experience exchange with other jurisdictions and their experiences with renewable energy technology.

Economic, financial, social, environmental and technical barriers present themselves through lack of access to capital, lack of investment (which may be real or perceived), "hidden" subsidies of fossil fuels which distort normal market conditions, relatively smaller size of renewable energy independent power producers, social unacceptance of new technology, lack of supporting infrastructure which complements its supply and service structure, vested interest of traditional

[82] Wilkins (n 23 above) 125

participants the fossil fuel supply chain, the ability and willingness of end-users to pay for electricity sourced from renewables which may appear more expensive than subsidized fossil fuels, and lack of data on renewable energy sources.[83]

These barriers amount to risks which disincentives foreign investments. Although this research will touch on all these impeding factors, it will be particularly centred on legislative institutional barriers presented in the regulatory framework of the energy sector. Due to the centrality of laws in this research, it would be instructive to point out the driving notion of regulations, as intended to be appreciated in this investigation.

According to R Baldwin, M Cave & M Lodge[84], regulations have been generally accepted to infer the following definitions; 'promulgation of rules by government accompanied by mechanisms for monitoring and enforcement'; or 'any form of direct state intervention in the economy, in whatever form'; or 'all mechanisms of social control or influence affecting all aspects of behaviour from whatever source, whether they are internal or not'. This distinguishes the conventional notion of regulations as a mechanism of command and control, but as a malleable tool of social engineering. Thus, this research will be based depiction of regulations beyond the scope of command and control, but rather a tool of calculated legislative action, designed to generate a particular reaction and achieve a desired objective.

This view has been further expressed as follows;

> [85]...it should be noted that regulation is often thought of as an activity that restricts behaviour and prevents the occurrence of certain undesirable activities (a 'red light' concept). The broader view is, however, that the influence of regulation may also be enabling or facilitative ('green light') as, for example, where the airwaves are regulated to allow broadcasting operations to be conducted in an ordered fashion, rather than left to the potential chaos of an uncontrolled market

[83] Wilkins (n 23 above) 121
[84]Unpublished: Tumai Murombo 'Law, Regulation, and the promotion of Renewable Energy in South Africa' unpublished PhD thesis, University of the Witwatersrand, 2015 " R Baldwin, M Cave & M Lodge *Understanding Regulation: Theory, Strategy, and Practice* (2011)" 31-33
[85] n 84 above 32

This aligns the overarching inference of this research that legal regulation is necessary in order to entice and increase participation in renewable energy in the energy sector. This view is also in agreement with the approach of UNEP whose stratagem propels that the promotion of clean energy use can be orchestrated at the legislative level, as a tool by which governments can ensure that all stakeholders have the opportunity and incentive to adopt new practices that will help to mitigate behaviours that contribute to climate change, thereby reducing pollution while keeping to the path of economic and social development[86]. Thus this study further argues that law can be used as an instrument towards archiving sustainable development and in this context, creating a lean in favour of renewable energy.

3.3 Development in Sierra Leone

Having attained political stability after its decade long civil war, Sierra Leone as a nation is poised for economic growth. Sierra Leone has proved herself resilient in the face of two economic shocks, due to the outbreak of the Ebola Viral Disease and the global fall in iron ore prices (one of its largest exports) and determined to ply ahead toward development[87]. With a present GDP estimated about USD 4.4 billion, there remains hopes for Sierra Leone to grow and diversify her economy.

State action in recent years in creating avenues for such growth has been pursued through reform and restructuring of pertinent sectors along with strides towards incentivizing entrepreneurship and industrialization. This has been exemplified by steps such as the enactment of an Investment Promotion Act in 2004[88], introduction of investor friendly legal procedures such as alternative dispute resolution in its specially created fast track commercial court[89] and the creation of a special processing zone[90].

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[86] n 80 above
[87] http://www.worldbank.org/en/country/sierraleone/overview (last accessed 19 August 2017)
[88] Act 10 of 2004
[89] The Investment Climate Facility for Africa 'Fast Track Commercial Court in Freetown http://www.icfafrica.org/project/fast-track-commercial-court-in-freetown (last accessed 2 October 2017)
[90]Brand Sierra Leone 'The Special Economic Zone' http://brandsierraleone.tv/the-special-economic-zone (last accessed 2 October 2017)

The energy sector is one such sector which has formed part of this process of reform, which was unbundled in 2011, establishing SLEWRC, EGTC and EDSA. For the first time, provision was also made for the private sector participation in this sector through IPPs.[91]

The importance of energy sector to development cannot be emphasized. There is great need for wider access to efficient electricity from sources which do not negatively impact the environment in order to bring the nation one step closer to archiving its ultimate goal of sustainable development.

3.4 The Sierra Leone energy market

Historically, services such as energy have been the exclusive responsibility of the state. However, the last two decades have seen a worldwide liberalization of the utility industry allowing for private sector participation. Further reform has been through vertical unbundling of the energy sector that is, through the separation of the generation, transmission and distribution functions of the utility.

As highlighted earlier, the Sierra Leone energy utility has undergone similar restructuring. Nonetheless, focus will be given to the generation of electricity, an aspect which allows for multiple participants and competition, unlike transmission and distribution which still largely possess features of monopoly.

Market practices have shown that unbundling incentivizes more players to participate in the energy supply chain and are even encouraged to invest in different ranges of energy generation methods, including renewables. In fact, this mode of restructuring has served to capture and promote investment in niche areas such as renewables.[92]

Presently, energy sector is regulated by SLEWERC and the main participant in the main stream energy generation market in Sierra Leone is the state owned EGTC. The use of renewable energy is limited to the underperforming Bumbuna Hydro-electric Dam which under the new Act was absorbed as an asset of the EGTC. Other actors in renewable energy generation are small off-grid

[91] n 6 above, sec 52

[92] https://www.mwe.com/en/thought-leadership/publications/2007/10/unbundling-intended-to-grow-renewable-energy-sec (last accessed 21 August 2017)

power producers which generate energy silos for private household use or on small scale rural projects.[93]

Therefore, although the energy sector has undergone some reform, the absence of large scale IPPs which deal in renewables (known as renewable energy independent power producers (REIPPs)), deters the desired sustainable development of the sector. The distinction between IPPs and REIPPs goes to the core of this thesis. Although both IPPs and REIPPs are private entities who engage in the generation of energy, REIPPs do so solely based on renewable sources whilst IPPs rely on a wide range of sources, not necessarily limited to renewables. These REIPPs are the targeted organizations' that must be attracted into the renewable energy subsector. They are essential to the growth of this subsector as they inherently possess features which mitigate against some of the highlighted barriers preventing states from optimizing their renewable energy potential. Not only do they have larger capital access to address financial barriers but they are also the 'owners' of the required renewable energy technology and are vital to the process of technology transfer.

In that instance in order for there to be sustainable development of this subsector, there ought to be interface between the SLEWRC (the regulatory institution) and REIPPPs, through the establishment of institutional structures through regulations specifically so designed to influence their participation.

3.5 Concluding remarks

In this chapter, the backdrop of sustainability has been fully presented, providing a clear picture of the global commitments averred to. Specifically, the role of the energy sector and the lean towards increase use of renewables was highlighted. It has also introduced the energy sector in Sierra Leone, in line with its broader efforts towards striving for economic growth, bridging the conversation towards the prospects of achieving sustainable development through renewables.

[93] n 3 above

CHAPTER 4

LEGAL FRAMEWORK FOR SIERRA LEONE'S ENERGY SECTOR

4.0 Introduction

In the previous chapter, the concept of sustainability and its ramifications for development was extensively dealt with and aspects relevant to the energy sector were specifically indicated. Sierra Leone's development position was then considered also with specific attention to its energy sector. On that basis, this chapter focuses on the legal framework of energy sector and analyses its alignment with the dictates of sustainability, renewable energy and REIPPs. It argues that policy without law is insufficient to create an investment environment, specifically for a renewable energy market. It argues that policies alone, fall short of the standard in international investment law, in securing the legitimate expectations of an investor and negatively affects development of the sub-sector.

'High risk and high return' may not always enthrall business people to enter into unchartered territories. On the contrary, investor's confidence plays a large role in enticing private sector

participation. Beyond the economic viability of projects, businesses face other risks beyond the allocating powers or abilities of management. For instance, such a risk may be classified as country risk, which relates to the physical location of the investment itself. A prudent investor wants to know the political and socio-economic environment in which he is bringing his resources into. The security of his investment is much a concern as the success of his business.

The law of international investments, though, *inter alia*, customary international norms, multilateral and bilateral investment treaties, decisions arising from adjudication and settlement of investment disputes, have developed over the years to help abate such anxieties. Historically, large amounts of BITs were executed by capital importing countries, predominantly to address this concern. Principles have emerged, such as 'fair and equitable treatment', to further assure the investor, that due consideration would be given to insulate his business from certain forms of risks in his investment environment.

Such investment environments are constructed through the use of laws and policies. As discussed in the chapter 2, this is a deliberate step by government to intervene in economy in order to produce a desired result. This can occur in many forms, such as liberalization, in which the state wishes to open up and attract capital inflows or control, in order to prevent market abuse. Where the aim is to attract capital inflows, that is, through foreign direct investment, national legal systems tend to develop laws and policies that are 'investor friendly'. For instance, the existence of strong property rights or intellectual property protection have been attributed to positively boosting investment rates. Further steps are through the development of sector specific laws. These laws to clearly state a country's position or aspirations for a particular sector. They create the institutions which then allows participation in a sector. These laws also provide control of the sector and may also contain provision for consumer protection prevent and market abuse.

Often such laws are accompanied by policies and programs, which signifies political will and domestic support in respect of a given sector. However, although law and polices are often used in conjunction, the nature of laws inherently differs from policy. Whilst laws undergo a rigorous process of enactment, amendment and repeal, compel behavior, are enforceable by the courts and carry significant vivacity, policies are statements of intent promulgated by the executive arm of government, through the different ministries, departments or agencies, in fulfillment of the broader national agenda of government. Save from internal formalities in creating and drafting policies,

simple ministerial or presidential assent is sufficient to create policy. Accordingly, change in policy can easily occur, so long as it is no longer fit in the political agenda. In creating an enabling environment, this research distinguishes the two, in order to make apt recommendations for reform.

4.1 The law relating to energy in Sierra Leone

The Law relating to energy in Sierra Leone is primarily provided for in the NEA[94] and the SLEWRC Act[95]. NEA repealed the National Power Authority Act No. 3 of 1982[96]. Under the previous Act the energy sector was horizontally integrated, with all matters relating to the regulation of the energy sector including the generation, transmission and distribution of electricity was under the purview of the National Power Authority, a public utility. However, the new legislation vertically bundled the sector, establishing three distinct bodies to regulate, generate, transmit and distribute respectively.

The NEA in addition to repealing the old Act, also dissolved the National Power Authority and in its place established EDSA and EGTC. As part of the sector unbundling, the SLEWRC Act also established the Sierra Leone Energy and Water Regulation Commission, which is a body mandated to regulate the provision of electricity and water services. For the purposes of this study on energy, reference to this Act will be limited to the provisions relating to energy.

It is also worthy to mention the Bumbuna Watershed Management Authority and the Bumbuna Conservation Area Act No. 6 of 2008 which established the Bumbuna Watershed Management Authority. This body is responsible for the coordination, management and operation of the Bumbuna Hydroelectric Dam. The Bumbuna Hydroelectric Dam is Sierra Leone's first hydroelectric dam situated on the Seli River, in the northern district. The project was principally supported by the African Development Bank. However, since its inception in 1975, the project has been plagued with several challenges, including the civil war and other construction delays.

[94] n 6 above
[95] n 7 above
[96] n 6 above, sec 82(1)

Nonetheless, even after the completion of its first phase, the Dam supplies far below its expected capacity, with low levels in the dry seasons[97].

Presently, hopes for resuscitating the project lies in the development of Bumbuna II, through a public-private-partnership framework between the government of Sierra Leone and Joule Africa, with the support of the Emerging Africa Infrastructure Fund[98]. Another hydro-electric power station is situated on the Bankasoka River, also in the north. However, it only produces electricity on a small scale to supply the local community[99].

Nonetheless, together, these three bodies, SLWERC, EDSA and EGTC primarily form the institutional structure of the energy market. This research argues that these institutions have been unable to meet the energy demand of consumers and the sustainable development obligations of the country. It further argues that the legal provisions for their establishment creates barriers which obstruct the much needed private sector participation in the renewable energy sub-sector.

It is prudent to now analyze the provisions of the law regarding the regulator, SLERWC, and then the players; EDSA, EGTC and IPPs.

4.1.1 The Regulator: Sierra Leone Energy and Water Regulation Commission (SLEWRC)

The SLWERC Act established the Sierra Leone Energy and Water Regulation Commission to regulate the provision of electricity and water service and other related matters.[100] It consists of a Chairman, who is appointed by the President of the Republic of Sierra Leone (hereafter 'the President') upon the recommendation of the Minister responsible for electricity and water (hereafter 'the Minister'); the Director General, one representative each from the Sierra Leone Institution of Engineers, Sierra Leone Labour Congress and the Sierra Leone Consumer Protection Agency, respectively, and four other persons regarded to have formal qualifications, extensive knowledge and experience relevant to the functions of the Commission, two each from the

[97] Kimberly S. Johnson 'Sierra Leone's private sector rushes to fill the void as dam disappoints' (11 September 2013) http://www.theafricareport.com/West-Africa/sierra-leones-private-sector-rushes-to-fill-the-void-as-dam-disappoints.html (last accessed 15 September 2017)
[98] Private Infrastructure Development Group 'Sierra Leone Bumbuna Hydro Power' http://www.pidg.org/impact/case-studies/bumbuna-hydroelectric-project (last accessed 2 October 2017)
[99] United Nations News Centre 'Construction of UN- supported hydro pant begins in Sierra Leone https://www.un.org/apps/news/story.asp?NewsID=41708#.Wa7CwsiGPIU (last accessed 2 October 2017)
[100] n 7 above, sec 3(1)

electricity and water supply sectors respectively, who is also appointed by the president on the recommendation of the minister.[101]

In order for an entity to operate in the electricity sector, that entity must hold a licence, issued by the SLERWRC. Thus, the functions of SLEWRC are summarized as follows:

i. issuance, renewal, amendment, suspension, revocation and cancellation of licences;
ii. compliance monitoring of adherence to licensing terms;
iii. pricing regulation for rates and tariffs charged for electricity services;
iv. service provider and consumer interest protection;
v. performance supervision of service providers, including initiating and conducting investigative procedures;
vi. promoting and ensuring fair competition among 'public utilities'; conducting research and studies which would enhance its performance; and
vii. act as an advisory body on matter relating to electricity services; and carry out such activities necessary to fulfill its overall mandate. [102]

Further to the above functions, SLEWRC has powers to determine and review rates and charges for both 'regulated and unregulated' electricity services[103]. The Act goes on to define 'regulated service' as 'the supply of a commodity derived directly from the business in which a public utility is engaged'. The commodity here is electricity. In determining and/or review rates, SLEWRC is mandated to take into consideration the following;

i. [104] costs of making, producing and supplying the goods or services;
ii. the return on assets in the electricity…sector;
iii. any relevant benchmarks, including international benchmarks for prices, costs and return on assets in comparable industries;
iv. the financial implications of the determination;
v. the desirability of establishing maximum rates and charges, and in carrying out regular review of rates and charges;
vi. and other factors specified in the relevant sector legislation;
vii. the consumer and investor interests;

[101] n 7 above, sec 5 (1), (2) & (3)
[102] n 7 above, sec 10 (1) & (2)
[103] n 7 above, sec 11
[104] n 7 above, sec 11 (1)

viii. the desire to promote competitive rates and attract new entrants to the market; and

ix. any other factors the Commission considers relevant.

The researcher wishes to draw attention to paragraphs (vii) and (viii), which provides that the Commission is required to consider '…investor interests and '…attract new entrants to the market'[105]. SLEWRC is responsible for the approval of power purchase agreements between service (electricity) providers and the EDSA.

Other powers include, the power to obtain information in furtherance of its mandate,[106] make relevant competition policy,[107] and publish any proposed code of conduct, decisions on rates and charges, policy guidance or direction from the minister or any such matters for public attention and/or objection.

4.1.2 The Players: the Electricity Distribution and Supply Authority (EDSA)

As stated earlier, the Electricity Distribution and Supply Authority was formed pursuant to the NEA.[108] It is a body corporate whose governing body consists of a Chairman, the Director-General, the Permanent Secretary of the Ministry responsible for electricity, the Financial Secretary, one representative duly appointed by the President upon the recommendation of the Minster from the Sierra Leone Institution of Engineers, Sierra Leone Chamber of Commerce, Industry and Agriculture, Association of Manufacturers and; Consumer Association.[109]

It performs the following functions; supply, distribution and retail sale of electricity, dispatch and system control, practical establishment of uniform voltages, securing supply of electricity at a reasonable price, promotion and encouragement of electricity efficiency and such other functions incidental to electricity supply and distribution.[110]

Furthermore, it is mandated to purchase electricity from EGTC and IPPs subject to a power purchase agreement by the Commission[111].

[105] n 7 above, sec 11 (1) (h)
[106] n 7 above, sec 12
[107] n 7 above, sec 14
[108] n 6 above, sec 25 (1) & (2)
[109] n 6 above, sec 26 (1) & (2)
[110] n 6 above, sec 34
[111] n 6 above, sec 35

4.1.3 The Players: the Electricity Generation and Transmission Company (EGTC)

Also formed pursuant to the NEA, the Electricity Generation and Transmission Company is a body corporate, responsible for the generation and transmission of electricity and the sale of electricity to the EDSA subject to a power purchase agreement approved by the SLEWRC"[112].

Its corporate structure is comprised of a board of directors which consists of a Chairman, the Director-General, the Permanent Secretary of the Ministry responsible for electricity, the Financial Secretary, one representative duly appointed by the President upon the recommendation of the Minster, from the Ministry responsible for mineral resources, industry, agriculture, Sierra Leone Institution of Engineers and Sierra Leone Chamber of Commerce.[113]

More specifically, EGTC was incorporated to perform the following functions; to takeover and operate assets of pre-existing public utility, acquire new generating facilities on its own or in conjunction with the government through public private partnership, acquire future national transmission grid, advise the ministry on matters relating to generation and transmission of electricity, including construction of generation stations, and carry out all such functions and business incidental to electricity generation and transmission.[114]

4.1.4 The Players: Independent Power Producers (IPPs)

NEA makes provision for Independent Power Producers (hereafter 'IPPs) who can also generate and sell energy to the EDSA subject to a power purchase agreement approved by the EWRC. The Act defines IPPs as public or private entities or public and private partnership entities other than the EGTC, licensed by the SLEWRC to connect to the national electricity grid for the purpose of producing and selling electricity[115].

The focus of this research will be on IPPs which produce energy from renewable energy sources. Such renewable energy independent power producers have carved a niche in the energy market. Due to the nature of the commodity which they produce, these REIPPs tend to require a different regime, in order to secure their entrance and sustainable operation in the energy market.

[112] n 6 above, sec 2(1) & (2)
[113] n 6 above, sec 4(1) & (2)
[114] n 6 above, sec 11
[115] n 6 above, sec 52

Beyond other market conditions, these REIPPs often rely on regulatory regime, stemming from both the law of immediate relevance and policy regarding renewable energy. These provide as discussed in chapter 2, both the green and red lights, in enabling, facilitating and securing the renewable energy market.

An insight in to the renewable energy space in Sierra Leone is presented below.

4.2 Renewable energy in Sierra Leone: The law and policy

In order to create the desired level of private sector participation in this sector, it is important to create the structure which would both stimulate its development and regulate its operation. This structure ought to comprise of regulations, policies and all such initiatives, created to stimulate a specific response regarding the sector.

Although there is an abundance of polices and initiatives from the government, international development partners and non-governmental organizations, this study is centered on the regulatory deficits regarding the renewable energy sub-sector and the effects on investments. However, before delving into the surrounding structure, it is prudent to briefly discuss the renewable energy potential of Sierra Leone.

4.2.1 Renewable energy sources

Presently, the main energy source of renewable energy in Sierra Leone is on-grid electricity is hydro-electricity. Other renewable sources are biomass, geothermal, solar, biofuel and wind[116].

Biomass: this is mostly in the form of fuel wood and charcoal. Its potentials are regarded as high due to vast availability of forestry resources.[117]

Biofuels and Biogas: this potential was explored by Addax Bioenergy, through the production of ethanol. The availability of vast fertile lands was utilized for the cultivation of sugarcane, from which ethanol was produced. Other sources of biofuel have been identified in the form of palm oil from which biodiesel and methane can be produced. Agricultural residues from main crops

[116] United Nation Development Programme 'National Energy Profile of Sierra Leone' (2012) 36
[117] n 116 above 36-37

cultivated in the country such as rice, cassava and cocoa, in the form of husks can be tapped to produce energy.[118]

Hydropower: as discussed earlier, present utilization of the countries hydropower is being harnessed by the Bumbuna Hydroelectric Dam and the Bankasoka Hydroelectric Dam. Other potential hydro-sites have been identified with a total capacity of 1,513MW.[119]

Solar Energy: expected solar radiations are approximated to be about 1460 kwh/m to 2200 kWh/m annually. Solar photovoltaic has been predominantly utilized by off-grid, mini grid and small scale projects, often in rural electrification, by development partners and donor organizations.[120]

Wind energy: although data on wind speeds are rare, existing data on inland wind velocities indicate a country-wide average of between 3 m/s and 5 m/s. There is some indication that wind speeds of 12m/s are possible in some parts of the country, implying that wind energy could be a viable option in selected locations. There is no known development or use of RET for this source in the country.[121]

4.2.2 Legal framework

There is no renewable energy legislation, or provisions in the extant energy laws which specifically provides for the generation of renewable energy. It naturally follows that there is no provision for independent power producers who specifically deal with renewable energy. In the eyes of the law, there is no distinction between generating energy from renewable means or other non-renewable sources.

In fact, the term 'renewable energy' appears nowhere in both the NEA and the SLEWRC legislations. The law imposes no obligation on ETGC to generate or EDSA to procure energy from specifically renewable energy source, in order to employ the use of clean energy or a minimum of a ratio energy mix. Although there is indication of awareness of renewable sources, inclination towards such sources are left to the barest minimum.

[118] n 116 above 37-39
[119] n 116 above 40-42
[120] n 116 above 42-45
[121] n 116 above 45

For instance in the NEA, the definition of electricity is stated as 'means of energy generation to be from water, mineral, oil, coal, gas, solar energy, wind energy, atomic energy or any other means'. This non-exhaustive list of means of power production does include both non-renewable and renewable energy sources. However, no further provisions are made in respect of the use of renewable sources as means of power production.

The use of renewable energy sources does not form part of the considerations of the SLEWRC, nor is it indicated to determine the terms of a power purchase agreement (PPA). Moreover, the existing legal framework provides no guidelines regarding the considerations or criteria for execution of PPAs. It does not provide standardized format for PPAs or any such document relevant to the sub-sector.

As such, the law imposes no obligation on the EGTC to generate its electricity or a proportion of it from renewable energy sources. On the other hand, the Act provides that the EGTC must 'keep itself informed of development relating to the generation of electricity'. Although this may be inferred to include the development of renewable energy technology, it does not preclude sourcing of energy through novel means of non-renewable energy generation, which may negatively impact the environment.

Similarly, there is no obligation on the EDSA to procure an energy mix composing of a variety of renewable energy sources (bearing in mind that the present electricity supply is partly sourced from the Bumbuna Hydro Electric Dam, which counts as a renewable energy source).

The silence in the statute books regarding renewable energy and the extant provisions dealing with the relationship between SLEWRC, EGTC and EDSA all have a profound impact on REIPPs which will be further discussed below.

4.2.3 Policies, programmes and initiatives

On this front, the nation appears to be very eager and receptive towards renewable energy. There is a plethora of national policies, initiatives and programs pioneered and supported the government and international development partners.

However, these initiatives are based on a wide range of approaches regarding the use of renewable energy. Whilst some efforts are focused on identifying the sources, others are centered on

employing its use purely on an off-grid household basis. An overview of these policies, programmes and initiatives is necessary in order to properly reveal the gaps and barriers preventing presence of on-grid REIPPs.

i. **Fiscal policy:** the Finance Act of 2016 amended the Finance Act 2011. In the previous act, photovoltaic system equipment and low energy or energy appliances intended for resale or use by third parties were exempted from import duty for a period of three years. However, the amendment rescinded this timeline but added a requirement that only such products, equipment and appliances that meet the relevant International Electro-technical Commission (IEC) global standards shall be exempted. The Act goes on to provide that a list of products, equipment and appliances that meet this requirement would be published and regularly updated by the Ministry of Energy.[122]

ii. **Energy revolution:** In May 2016, the President launched an initiative which focuses on decentralized renewable energy, in conjunction with international development partners. This program aims to build an enabling environment for investors, donors and off-grid enterprises in order to catalyze expansion in this sub-sector and ultimately much needed development in other sectors. [123] In order to implement the objectives of this programme, an Energy revolution taskforce was established. This body serves as mechanism to ensure adherence to commitments made by the government and other stakeholders. It aims to enhance communication and collaboration amongst the relevant players in the industry. Heavy support for this initiative has come from the US pioneered Power For All, which has also facilitated workshops and training sessions, on various themes such as awareness of the programme and access to finance. The efforts of the taskforce has also led to market activation activities including the establishment of the Renewable Energy Association of Sierra Leone (REASL), a micro-finance association to unlock local finance, quality-linked VAT/tariff exemptions, demand creation and awareness campaigns.[124]

[122] Finance Act 2016 sec 34 (1), (2), (3) & (4)
[123] Susie Wheeldon 'Sierra Leone Launches Energy Revolution' (11 May 2016) http://www.powerforall.org/blog/2016/5/11/sierra-leone-launches-energy-revolution (last accessed 27 August 2017)
[124] Sierra Leone Energy Revolution https://www.slenergyrevolution.com/ (last accessed 27 August 2017)

iii. **Power for All:** This is a global campaign to promote distributed renewable energy as the fastest, most cost-effective and sustainable way to achieve universal energy access. Through its Calls for Action, it advocates and supports projects which align with its view towards access of power "beyond the grid" through specific financial and policy enablers. It engages with the broader sector that is, manufacturers, distributors and consumers, in order to sensitize and encourage the use of renewable energy.[125]

iv. **Energy Africa compact:** This is an agreement between the government of the United Kingdom and the government of Sierra Leone which contains a joint action implementation plan towards accelerating and expanding household solar market, with a target of archiving universal access to energy by the year 2030.[126]It seeks to address market and fiscal barriers, quality assurance, consumer knowledge and protection and surrounding policy framework in the off-grid solar market. Its efforts have yielded fiscal policy reforms such as the Finance Act 2016 and provides support for other initiatives such as REASL, mobilization of donors, other support and review mechanisms. Although its effort may influence the broader plan for renewable energy, the energy Africa compact is centered on household off-grid use of solar. It does not focus on the use of on-grid or diverse renewable energy.

v. **Renewable Energy Association of Sierra Leone (REASL):** this is an association comprised of all partners engaged in renewable energy partner, including government and international development partners. The agenda is to develop an efficient and thriving renewable energy market. It aims to represent, support and enable the rapid growth of renewable energy and environmentally efficiency solutions within the sub-sector through unlocking finance, stakeholder cooperation and communication, creating market awareness and demand and all such means to increase use of renewable energy. It should be pointed out that REASL is presently focused on the use of distributed renewable energy.[127]

[125]Power for All 'Sierra Leone Call to Action' (March 2017) https://static1.squarespace.com/static/532f79fae4b07e365baf1c64/t/58db9bd31b631bb61388b616/1490800826030/Sierra+Leone+-+Call+to+Action (last accessed 27 August 2017)
[126] Sierra Leone Energy Africa Compact https://static1.squarespace.com/static/532f79fae4b07e365baf1c64/t/5826a612e3df28280c8d80ad/1478927890453/Sierral+Leone+Policy+Compact+-+Energy+Africa+-+Final.pdf (last accessed 27 August 2017)
[127] http://reasl.com/

vi. **Sierra Leone National Energy Policy (20009), National Energy Strategic Plan and Renewable Energy Policy (2014):** The National Energy Policy consists of the nation's agenda towards developing the energy sector of the county, it also includes a renewable energy framework. The National Energy Strategic Plan sets outs the implementation of the energy policy. It emphasizes energy efficiency and use of modern energy with emphasis on rural electrification. The Renewable energy policy extends the National Energy Policy, National Energy Strategic Plan with goals, policies and extensive measure for solar and other forms of renewable energy.[128]

vii. **Barefoot women:** these are either illiteracy or semi-illiterate women who have been trained by the Barefoot College in Tilonia, Rajasthan, in Western India to become solar engineers. They are actively engaged in the process of rural electrification, in both the operation and re-education on small scale unit solar powered technologies. They operate in the rural areas and their focus is most confined to off-grid systems. Furthermore, training is confined to solar technology and does not extend to other renewable energy sources [129]

viii. **Sustainable Energy for All (SE4ALL):** this is an action plan by the government designed to be in tandem with the United Nations Sustainable Energy for All, which similarly sets goals and strategies towards increased energy access, generating capacity and efficiency. It also entails harnessing renewable energy sources, also primarily for household and off-grid use.[130]

ix. **Economic Community of West African States (ECOWAS):** Sierra Leone is involved in several initiatives including the ECOWAS Renewable Energy Policy, the ECOWAS Energy Efficiency Policy and Establishment of ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREE). It is also noteworthy to mention the West African Power Pool (WAPP) initiative by West African countries. This initiative aims to integrate the

[128] Ministry of Energy and Water Resources 'Sierra Leone National Energy Policy (2009) http://www.ecowrex.org/sites/default/files/repository_old/2009%20National%20Energy%20Policy%20-%20Min%20Ener_0.pdf (last accessed 2 October 2017)
[129] https://www.barefootcollege.org/the-women-bringing-solar-power-to-sierra-leone/
[130] http://www.ecreee.org/sites/default/files/events/presentation_se4all_action_agenda_sierra_leone.pdf

national power systems into a unified regional electricity market. The ultimate goal is to ensure in the medium and long term, a regular and reliable energy at competitive cost to the citizenry of the ECOWAS region. WAPP will increase the market demand for energy and by implication renewable energy due to subsisting policies such as the ECOWAS Renewable Energy Policy and the ECOWAS Energy Efficiency Policy.[131]

x. **Scaling Up Renewable Energy Programme (SREP):** SREP is a financing programme of the Climate Investment Funds (CIF) designed to address factors negatively affecting investment in the renewable energy market. It serves to remove institutional and financial barriers in the renewable energy sector, entice private sector participation, abate additional costs and risks associated with renewable energy technologies and enhance both public and private financing, support both public and private through financing and capacity building and proven RETs to ultimately increase installed renewable energy capacity in a country's energy supply. It complements national strategies and policies plans. Sierra Leone has received a $300,000 from the CIF to prepare a far-reaching national Investment Plan under the SREP, in order for it to transform its renewable energy sector.

4.3 Why aren't REIPPs eager to get into the game?

Having looked at the energy sector, observing the gaps in extant laws which operates, in contradiction to the present renewable energy aspirations, this research will now closely consider how this impacts on REIPPs.

Statistics show that refined petroleum products are one of Sierra Leone's highest imports, forming about 10%-20% of the country's national import[132]. Although fuel supply is not confined to the use in energy generation, this shows that the use of fossils does not necessarily come cheap. Moreover, since 2011 petroleum products had been heavily subsidized by the government, who only discontinued this practice in 2016, due to shortfall in revenue[133]. This has however moved the financial burden to households and commercial entities, who as discussed earlier, are forced to substitute and complement the short supply of national grid with predominantly the use of standby

[131] http://www.ecowapp.org/
[132] https://tradingeconomics.com/sierra-leone/imports. See also http://atlas.media.mit.edu/en/profile/country/sle/
[133] http://awoko.org/2016/11/14/sierra-leone-news-government-stops-fuel-subsidy-price-increases-by-60-percent/

generators, which are also powered by petroleum products. Thus, the vicious cycle is continued, with greater impact on the already limited household income.

Thus, although it appears that there is a clear gap in the energy market which amounts to an opportunity for private sector participation, there is no mad rush by IPPs who engage in renewable energy to enter the Sierra Leonean market. Excluding economic considerations and focusing on the institutional structure of the energy market, this research argues that the reluctance of REIPPs can be attributed to the following reasons discussed below.

4.3.1 Legal uncertainty

The absence of legal provisions which deal specifically with renewable energy generation and REIPPs created a deafening silence which investors simply cannot ignore. Renewable energy technologies (RETs) are known to be capital intensive, with high initial costs related to installments and preliminary operations. Nonetheless, RETs are proven to be ultimately cheaper, requiring no consequential cost such as fuel and does not leave any eco-footprint. Once installed or constructed, RETs require only additional costs involved in operation and maintenance. [134]

However, the high initial costs require REIPPs to have a level of certainty regarding their investments. These uncertainties are often curbed by subsidies, long term off-take power purchase agreements, mandatory energy mix, and other incentives, which reduce costs of market entry and mitigates demand risk.[135] This ambiguity catalyzes further lack of clarity with regards to terms of power purchase agreements, grid access and other such institutional barriers.

Although the giving of subsidies may pose a challenge to a developing country like Sierra Leone, the use of sector specific regulations would prove helpful in building the framework for its development and distinguishing the renewable energy sector from the fossil energy market. It must be understood that renewable energy and fossil fuels are in direct competition. A new market entrant cannot operate in a swirl of a legal uncertainty and in competition with renowned market actors, neither can their entry be based on policies and policy statements which are easily subject to change.

[134] n 80 above 128
[135] n 80 above 130

This is particularly true when the would-be investors are foreign investors. In the absence of legal provisions, they cannot possess or claim any 'legitimate expectations' in respect of market conditions. The existence of initiatives which intend to provide favourable market conditions are insufficient to offer assurance to foreign investors, because not only are these initiatives mostly pioneered by non-governmental entities, they also cannot be enforced in the manner in which laws or regulations can be. They are mostly humanitarian and aid efforts. Thus offering security for investor is better archived by enacting sector specific regulations, which may also contain 'green light' incentives.

4.3.2 Some players are more equal than others

Presently, for the purposes of generation, EGTC is the single on grid supplier of electricity to the national grid. EGTC absorbed the assets of the former public utility although it operates as a corporate body. It is worthy to carefully consider its corporate structure. Its board is constituted of nine members; two - permanent secretary, financial secretary- are civil servants, employed by the public service commission; one - the chairman- is appointed by the Board as a whole, whilst the remaining six are appointed by the President upon the recommendation of the Minister (the minister is also appointed by the President). Thus, the majority of board, are political appointees.

We must now consider the other players in the market. The EDSA, also a corporate body which is mandated to purchase power, from EGTC and any other IPPs, subject to the approval of EWERC. EDSA presently primarily purchases power from EGTC. Looking at its own corporate structure, EDSA is governed by body also made of nine members, two are the permanent secretary, the financial secretary- are civil servants, employed by the public service commission and are also board directors of the EGTC and the outstanding seven are also similarly appointed the president upon the recommendation of the ministry.

This also results to a majority of political appointees with the minority, who clearly carry a conflict of interest, due to the commonality of representation at the EGTC. It is worthy to note that the NEA requires a 'disclosure of conflict of interest'[136], by its members and staff, but describes such interest as 'personal interest' which may not entirely capture the conflict of the permanent and

[136] n 6 above, sec 8

financial secretaries, who hold seats in the board of EGTC. Notably, all members of the SLEWRC are political appointees, who are appointed by the president upon the recommendation of the minister.

As stated above, power purchase is based upon approval of the SLERWC. However, the commonality of personalities between these bodies certainly raises eyebrows regarding the integrity of the process itself. Bearing in mind that perceived biases have similar effects as actual biases and the perception of an IPP in this environment would lean towards the presence of a 'mafia' in the energy sector. It also presents scope for 'vested interest' which was highlighted as a barrier to renewable energy technology transfer which goes beyond the regular economic considerations which IPPs would be subjected to.

Further to this, the economic position of the EGTC as an electricity generating company and the direct competitor of REIPPs, is by law, skewed. The NEA provides that 'the Ministry of Finance may guarantee the payment of the interest and principal on any loan proposed to be paid by the Company upon such terms and manner as it may think fit'. Thus, the Government is allowed by law, to guarantee the loans to EGTC. On the contrary, the law makes no such provisions for IPPs, who are expected to compete with EGTC. By law, EGTC is in an economically more secure position than IPPs, who may be faced with typical financial barriers in the energy market.

4.4 Concluding remarks

The findings of the chapter infer that the current legal regime is not only unsupportive but also contradictory to its aspirations for development of its renewable energy sub-sector. Present policies, initiatives and programmes do not address or otherwise promote the use of renewable energy on a nationwide off-grid basis, but rather encourages its use on a silo basis. Although it may appear that there is a large amount of capital inflow in this sector, these projects, as described earlier take the form of short lived aid efforts by donor 'development partners'.

On the contrary, renewable energy technology has by far outpaced this viewpoint. Increased widespread use of renewable energy has proved to be key to both energy demand in a financially efficient manner and curb adverse ecological effects of the use of fossil fuels.

Until the use of renewables is systematized, the sector would be stunted and fail to attract private sector who are proven to be essential in its growth. The law in its present form at best initiates unfair competition in favour of the EGTC and hostile market conditions for REIPPs. It is in no way reflective of the country's global obligations or achievement of its sustainable development goal towards access to affordable, reliable, sustainable and modern energy for all.

CHAPTER 5
LESSONS LEARNT: SOUTH AFRICA AND INTERNATIONAL BEST PRACTICES

5.0 Introduction

In the previous chapter, the legal framework of Sierra Leone's energy sector was examined, in light of its effect on the renewable energy subsector. It was found that in its present form, the regulatory structure itself mitigates against this subjects and leaves limited room for new market entrants such as REIPPs. In this chapter, the legal framework of South Africa, a jurisdiction with a thriving renewable energy subsector will be examined, with particular attention to lessons learnt. International best practices compiled by the United Nations Environment Programme would also be discussed with the view of transposing these lessons and best practices in the reformation of Sierra Leone's energy sector.

Agreeably, there is no 'one size fits all' to institutional reforms. Moreover, blanket applicability of borrowed law would have the tendency of creating new obstacles as opposed to proffering solutions for existing ones. Nonetheless, the practice of considering actions undertaken by other entities in a bid to inspire solutions that adequately address one's own challenges is undoubtedly useful.

As highlighted in the preceding chapters, there is a global call for action towards employing sustainable patterns of development. In that regard, various countries across the world, regardless of their level, of economic development, have implemented some forms of green practices in respective sectors. Specifically, in respect of energy, the strategy has been centered on energy efficiency and renewables. Energy sectors have been reformed, through law and policy to incorporate these practices into its operation.

Within the African continent, South Africa, is one such country that has made considerable effort towards the use of renewable energy. As an emerging economy, its advancement in terms of development and use of renewable energy technology is impressive. Although not without her short falls, South Africa has been identified by the United Nations Environment Programme as one of the most prominent countries engaged in renewable energy. Significantly, South Africa's renewable energy development has been fueled not by state actors but the private sector, having one of the highest private sector investment in renewable energy. The energy sector is structured by a plethora of laws and policies which have created this form of large scale investment by the private sector. Thus this chapter will contain an overview of the structure of the South African energy market, including the increased use renewable energy and role of independent power producers.

Realizing the importance in creating the enabling environment through laws, regulations and relevant institutions in order to secure the utilization of renewable energy in various countries, international organizations have conducted in depth research into the various stratagems and tools, both novel and those already been employed by other countries, to achieve this objective. This chapter would consider such best practices and guiding principles, through an analysis of studies and publications of UNEP.

5.1 The South African electricity sector

The South African electricity sector operates in a vertically integrated manner through the state owned utility known as Eskom. This utility was established in 1923 pursuant to the Electricity Act 1922 and was often regarded as a monopoly as it generated 96% of the nation's electricity supply

before the emergence of REIPPs[137]. It also owns, controls and operates the transmission grid as well as deals with the direct distribution of electricity to almost half of end users.[138]

Before the move towards renewable energy, the main source of electricity generation was through coal. South Africa has a vast coal mining industry which was the dominant source of its electricity generation. On a whole, 93.8% of its electricity supply was generated from fossil fuels, whilst 4.2% was produced from Nuclear energy and only 2% from renewable energy (with hydro forming 75.5% of that figure, Biomass and waste; 22.9%, wind; 0.9% and solar; 0.7%.[139]

However, in response to the international call for action towards sustainable development, South Africa began to pay attention to its renewable energy potentials and undertook certain institutional measures to enhance the use of renewables. Notably also, since sometime in 2007, Eskom has been unable to meet increasing energy demand and was forced to introduce 'load shedding'. These are basically planned black outs. It is a clear reflection of Eskom's diminishing ability to meet South Africa's increasing energy demands. As one of Africa's biggest economies there was a strong need for additional energy suppliers, whose technology could not only obviate the challenges faced by Eskom in terms of energy generation, but also in the production of cleaner energy which do not possess the adverse effects of fossil fuels such as coal.

5.2 Renewable energy in South Africa

South Africa is endowed with several renewable energy sources, including high solar and hydro potentials, biomass in the form of firewood, wood waste, dung, charcoal and bagasse, Biogas, landfill gas and wind energy[140]. Nevertheless, it is understood that the presence of or availability of renewable energy potential does not necessarily translate to its utilization on a large scale or at all. Thus it is necessary to provide a brief overview on the prevailing conditions of energy market as a whole, before highlighting the place of renewables.

[137] Public-Private Infrastructure Advisory Facility 'South Africa's Renewable Energy IPP Procurement Program: Success Factors and Lessons' (2014) 5
[138] n 137 above 5
[139] Department of Minerals and Energy of the Republic of South Africa 'White paper on Renewable Energy' (2003) 3
[140]n 139 above 12-24

5.2.1 The legal framework

The legislation dealing with the South African Energy market is set out the Electricity Act, 1987, which was repealed by the Electricity Regulation Act 4 of 2006, save for section 5b, which has remained in place and governs the funding of the Regulator; [141] the National Energy Regulator of South Africa Act, 2004 which governs the institutional aspects and establishes a regulator for electricity, gas, petroleum and nuclear (generation aspects only) energy.[142] The Electricity Act, 1922 was mentioned earlier and it established Eskom[143]. The overarching energy statute is the National Energy Act 2008 which promotes integrated regulation and provides for governing principles of the entire energy sector[144]. Like Sierra Leone, the South African legal framework for the energy sector does not constitute a renewable energy legislation. However, the newer acts, the Electricity Regulation Act and the National Energy Act, contains endearments with respect to sustainability.

5.2.2 Policy space

The relevant policies in the South African energy sector are the White Paper on Energy Policy, 1998[145], the Renewables White Paper, 2003[146] and the Climate Change Response White Paper 2011[147]. Whilst the main objectives of the White Paper on Energy Policy were to increase access to affordable energy, improve energy governance, stimulate economic growth, manage energy related environmental and health effects and secure supply through diversity, it was opined that this policy failed to capture the aspirations of sustainability and missed the opportunity of integrating energy law and environmental law.[148]It was not until the Renewables White Paper that the policy space took a sustainable development paradigm shift. The Renewables White Paper emphasized the need for transition to a path of sustainability and the importance of renewable energy to that transition. Its main objective was to 'create the conditions for the development and commercial implementation of renewable technologies' in South Africa's energy mix with specific targets aimed at energy sustainability'. Although there was no ensuing piece of legislation, this

[141] Act 41 of 1987
[142] Act 40 of 2004
[143] Act 47 of 1999
[144] Act 34 of 2008
[145] n 139 above
[146] n 139 above
[147] Department of Minerals and Energy of the Republic of South Africa 'Climate Change Response White Paper (2011)
[148] n 84 159

reoriented the view of the energy sector and served as a basis for amendments to existing laws, which led to significant gains in the renewable energy market. The Climate change paper further articulated South Africa's commitment to reducing global emissions. It highlighted the energy sector as a principal area where efforts could be made to reducing the country's carbon emissions. It builds on the Integrated Resource Plan and includes a Renewable Energy Flagship Programme which aims to scale-up existing renewable energy programmes.[149]The Integrated Resource Plan of the Department of Energy contains a comprehensive 20 year plan which propounded that renewables excluding hydro power should constitute 42% of all new power generation capacity by 2030, delivering 9% of net electricity.

5.3 How the renewable energy game is played in South Africa

Until 2011, the utilization of large scale on grid renewable energy was a bleak possibility. State actions such as the South African Renewable Energy Feed-in Tariff (REFIT) had proved unsuccessful due to several reasons opined to include financial risks as well as institutional barriers, espoused in the monopoly status of the state owned utility.[150] However, the introduction of Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) in 2011 gave new life to this sub-sector. The REIPPPP has been reviewed to have stimulated great progress towards investment and development of in renewable energy sector and the use of renewables on an on-grid basis. This program would be the key focus of this comparative analysis.

5.3.1 Renewable Energy Independent Power Producer Procurement Programme

In May 2011, the Department of Energy gazetted the New Generation Regulations under the Electricity Regulation Act (ERA) and made the following determinations in respect of desired energy mix: 13 225 MW renewable energy, 2 500 MW designated from coal-fired plants, 1 800 MW of cogeneration under the MTRM plan, 3 126 MW of Gas-fired power plants (2 652 MW base load + 474 MW MTRM), 2 609 MW of imported hydro. It established the REIPPPP, as a platform for securing electricity capacity from the private sector for renewable and non-renewable energy sources, to address the shortages of the present utility, as well as reducing the greenhouse gas effects of the prevalent source of energy supply.

[149] n 147 above 31
[150] n 84 above 21-22

REIPPP began in August 2011 with the release of a request for project proposals for which the proposal deadline was in November 2011. Despite the tight schedule for the request for project proposals, REIPPP 1 was regarded as successful and set the pace for subsequent bids. To date there have been 5 Bid Windows (BW) of the REIPPP contributing 6327 MW in total.[151]

The procurement process operates in the following manner; Eskom (the state owned utility) enters into a PPA with the IPPs selected as preferred bidders, securing an off-take agreement for the renewable energy for the next 20 years. Then on, a Government Framework Support Agreement (GFSA) is signed between Eskom and government setting the terms of support and interfacing. Thereafter, the REIPP enters into a Direct Agreement (DA) with its lenders in order to secure project financing and lastly the REIPP enters into Implementation Agreement (IA) with the Government solidifying commitments made in the bid and confirming the Government's support for Eskom's payment obligations.[152]

According the to the WWF in 2014, REIPPPP "brought clarity to the ever-changing policy landscape with the release of a comprehensive and transparent framework and bidding process, providing a clear path towards the execution of South Africa's long-held vision and ambitions for establishing a robust and sustainable renewable energy industry"[153]

5.3.2 Why did the REIPPPP work?

The success of the REIPPPP has been attributed to the following;

i. Strong institutional setting; unlike previous attempts of engaging IPPs, which according to the direction of government had been left to the discretion of Eskom, the Department of Energy took control of the REIPPP. It was directly administered by a select team of technical staff from the Department of Energy and the National Treasury's Public-Private Partnership Unit, which formed a Department of Energy Public-Private Partnership Unit. This elite team

[151]Lena Mangondo 'The South African Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) –Lessons Learned' (2015) 12
[152] n 151 above 10
[153] World Wide Fund For Nature 'Enabling Renewable Energy in South Africa: Assessing the Renewable Energy Independent Power Producer Procurement Programme' (2014) 3

operated outside of the normal affairs of the government ministry and sought to specifically and sole facilitate its success..[154]

ii. Qualified management team; the Department of Energy Public-Private Partnership Unit was led by and constituted of qualified technical experts who had vast experience in public-private partnership contracts with a skillset of problem solving and facilitating. Their credibility is regarded to have immensely contributed to the success of the programme. [155]

iii. Inclusive management style; the management approach was focused to directly engaged the private sector. This was conducted through frequent and open dialogues, simplified access to information, documentation and fair and transparent operations, especially in the bidding process. The team also boosted the confidence of participants, by maintaining an aura of professionalism, adhering to deadlines and remaining goal oriented with constant presence of qualified local and international advisers who were coopted to perform certain duties such as bid reviews, program design, management and upgrade.[156]

iv. Availability of resources; financing for the operation of the programme, including consulting experts, setting up databases, websites, was key to maintaining its efficiency. This funding was originally provided by memorandum of agreement signed by Department of Energy, National Treasury and the Development Bank of Southern Africa, other development partners such as donor agencies of Denmark, Germany, Spain and the United Kingdom and through related projects sponsored by the World Bank. Subsequent funding came from charges and fees such as bidder registration and project development fees.[157]

v. Tender design, bid process and evaluation; the process itself was characterized by transparency, efficiency and fairness. The use of standardized agreements (PPA, GFSA, DA and IA) was effective in the risk allocation of all participants. The programme program was

[154]Public-Private Infrastructure Advisory Facility 'South Africa's Renewable Energy IPP Procurement Program: Success Factors and Lessons' (2014) 9
[155] n 154 above 9
[156] n 154 above 9
[157] n 154 above 10-11

designed to accommodate the idiosyncrasies surrounding renewables, ensuring flexibility in the structuring of the PPP. Other market conditions, including the advancement of RETs, fed into the timing and design of the programme. The process of evaluation was structured in two steps, first to fulfill environment, land, commercial and legal, economic development, financial, and technical requirements; which provided an all-encompassing dynamic and secondly, on a competitive basis. [158]

5.3.3 Drawbacks

Unfortunately, despite the success of the REIPPPP, there has been several hitches along the way. This has been attributed to poor planning and lack of foresight as the programme has been met with resistance by Eskom, which has been reported to have on several occasions refused to sign PPA. Other problems have emerged in the inability of the transmission and distribution system to match to proficiency of the energy generation of the REIPPs. Thus the optimal use of the programme could be said to have been dampened.[159] However, these observations are being considered and responses are underway.

5.3.4 Watch this space!

Regardless of the present drawbacks surrounding REIPPPP, efforts are underway by the Independent Power Producer Office to both enhance the enabling environment for investment in renewable energy and as boosting investor confidence. These efforts include improving government support through more robust and pragmatic policies, strengthen the procurement process itself, through fairer and more transparent evaluation, increased accessibility to and the standard suite of agreements (i.e. PPA, GFS, IA and DA) and ultimately ensuring a simplified and flexible approach in the bidding process. Other areas of consideration include increasing predictability of the roll-out of the procurement programme, aligning and where necessary, improving generation and transmission planning, implementation and infrastructure and also addressing other barriers such as financial constraints for smaller developers through development of finance institutions with such specific funding mechanisms.[160]

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[158] n 154 above 11-13
[159] https://cleantechnica.com/2017/07/09/south-africas-renewable-energy-future-crossroads/
[160] n 151 above 19

5.4 United Nations Energy Programme (UNEP) Guide for Energy Efficiency and Renewable Energy Laws

This publication by the UNEP contains a compilation of studies on conducted across the globe on various legal framework designed by different countries towards achieving energy efficiency and increasing the use of renewables, which form the main components of sustainability in energy. It also contains overviews of socio economic impacts of such actions and provides insight on topical issues such as rural electrification.[161] Due to the focus of the research on energy generation, the following discussion will be confined to the laws and regulations surrounding renewables. It must be noted that the focus of this Guide is on laws and regulations, although the word policy is used interchangeably, the nature of provisions carries imperative force of law, as opposed to the non-binding and conceptual connotations of policies.

5.4.1 Renewable energy laws

This guide propounds that despite the undeniable benefits of renewable energy as an alternative to the use of carbon-intensive fossil fuel in the process of energy generation, which aligns with universal desire to curb climate change and its devastating effects, coupled with advancement in technology which has resulted to vast reductions of the cost of RETs, the use of renewable energy, save for hydropower has fallen far short of reasonable expectations.[162]

This, it infers, are due to certain barriers which it describes as economic, regulatory and political. Some of these barriers operate through false competitiveness of fossil fuels through their subsidization as opposed to true cost of renewables which is ultimately considerably lower, given its limited costs to human health, climate change and other environmental damages as compared to emissions of fossil fuel. They also exist in the form of the costs of initial construction which are considerably higher than for fossil fuels, thus the nominal first cost price per megawatts for renewables are higher than for fossil fuels, although this may reduce due to zero or low fuel costs of RETs. Also the distinction and externalization of the costs of global warming pollution in electricity prices fail to take wholistic consideration of the advantages of renewable energy. Furthermore, systemic resistance by utilities, especially state owned entities where electricity sales

[161] n 80 above 130
[162]n 80 above 128

are directly linked to revenues. Again, the lack of integration between policies regarding generation and transmission which results to onerous grid access for renewables. Also, the strong influence the producers of fossil fuels and fossil fuel generated electricity in opposing the use of renewable energy, which they directly compete with, in political and regulatory forums.[163]

It must also be pointed out that these barriers militate against private sector interest and participation in the renewable energy sector. However, this guide identifies certain legislative and regulatory tools which could be used to bring down those barriers. It categorized them as four tools, namely; Renewable Portfolio Standards, Economic Tools, Distributed Generation Measures and Disclosure and Green Marketing Measures.[164] These tools will be discussed below.

5.4.2 The tool box

These are tools which can be incorporated in the legal framework of a jurisdiction in order to stimulate private sector interest in the renewable energy sector.

i. Renewable portfolio standards

The Guide defines renewable portfolio standard (RPS) as 'a policy mechanism to increase the amount and/or proportion of renewable energy purchased in a particular jurisdiction ...'[165]

It operates by placing a requirement upon electricity suppliers to source a designated proportion of their energy from eligible sources of renewable energy. The RPS requirement may gradually escalate over time until the desired proportion of renewable energy use is attained.[166]

Although the RPS has been described as a policy mechanism, the distinction between policy and law which is pivotal to this study, it must be pointed out that the use of RPS has typically been employed though legislation. The force of law is what secures compliance of electricity suppliers. Nonetheless, other means have been through administrative actions by utility regulators.[167]

[163] n 80 above 128-130
[164] n 80 above 131
[165] n 80 above 131
[166] n 80 above 131
[167] n 80 above 132

The guide goes further to allude to certain key drafting issues that must be considered in respect of RPS legislation or regulation. They are summarized as follows:

- Ensure a clear definition of the sources of renewable energy which would satisfy the RPS requirement. This must take into consideration the desired energy mix especially regarding 'new renewables' (that is wind, PV, biomass, biogas, and geothermal) and available renewable energy sources within the jurisdiction.[168]
- The RPS must reflect the jurisdiction's present position on renewable energy. This means that the RPS requirement must indicate whether the jurisdiction wishes to develop a particular type of RET, deviate from certain other renewable sources, or focus on RETs which stimulate a certain socio-economic reaction beyond energy supply.[169]
- Consider the use of 'tiers' or 'technology bands'. This creates tiers of preferable and less preferable resources and then allow each tier to meet a certain percentage of the RPS mandate. This enables the simultaneous achievement of various goals highlighted in the previous paragraph. [170]
- Consider rules of origin and the country's position on imported electricity and the ultimate impact on other socio economic effects.[171]
- Defining clear goals and targets which the RPS aims at achieving. This can include timelines as well as the amount of renewable energy to be produced within that period of time. This provides certainty both for the producers and the authority, in order to ensure technical and economic efficiency. Also determine the applicability of RPS requirement, whether it would apply across the board, or to certain energy suppliers. General applicability would ensure fairness and increase the number of renewable energy suppliers.[172]
- Including compliance and enforcement mechanisms, through the use and trading of Renewable Energy Credits (RECs) and provision for the institution which would administer the entire operation of the RPS programme.[173]

[168] n 80 above 134-135
[169] n 80 above 135-136
[170] n 80 above 136-137
[171] n 80 above 137
[172] n 80 above 13-138
[173] n 80 above 138-140

ii. Economic tools

These are described as economic support which operate in the form of incentive mechanisms. The Guide categorizes them in three; government support and investment policies; public benefit programmes, and tax mechanisms. Such incentives are directly designed to encourage investment in renewable energy, make the sector appear more lucrative especially as compared to fossil fuels.[174]

Expatiating on the above, the guide proffers that government support and investment policies that incentives investment in renewable energy can be in the form of 'feed-in' tariffs. This is described as a provision that allows all eligible generators to receive a fixed and known price for their renewable electricity sales. The costs of these tariffs are covered by increased electric rates that sometimes take the form of regional or national or are simply embedded in rates. Similarly to RPS programme, provision for feed in tariffs are made for by law, in order to create a sense of surety for the renewable energy suppliers[175]. Other means of government support is through the use of funding for research and development in renewable energy and RETs.[176]

Furthermore, the Guide provides that public benefit programmes are laws or regulations which obligates electricity customers to pay a small systems benefit charge per kilowatt hour of electricity consumed which is then collected by utilities and goes into a Public Benefit Fund (PBF).[177] This fund is the used to support public or system benefits which can be directed specifically towards support initiatives regarding renewable energy. However, the following key drafting issues were highlighted for making provision for PBF;

- Clear funding and contributory expectations of consumers.[178]
- The duration or lifespan of the provision.[179]
- The text of public benefit fund legislation or regulation must be broad enough to accommodate the discretion of programme administrator in determining which incentives

[174] n 80 above 140
[175] n 80 above 141
[176] n 80 above 140
[177] n 80 above 144
[178] n 80 above 145
[179] n 80 above 146

and support programmes the PBF would be directed towards in order to prompt the direction of investment and interest which are aligned with the country's desired areas of development.[180]

- Clear provisions in respect of the administration of the PBF, which could be by the Utility administration, administration by a government agency.[181]

Again, tax mechanisms in the form of tax credits and deductions as another form of government support. Tax credits are reductions from payable taxes, which confer benefit to low income taxpayers and tax deductions are reductions from the amount of income subject to taxation, thus the greater the income, the larger the deduction.[182]

iii. Distributed generation measures

The Guide describes these as means of generating renewable energy on-site, locate in a specific community or directly on the consumers' premises. Such measures abrogates against the shortcomings of large scale projects and militates against the challenges associated with transmission and distribution systems.[183] Distributed generation measures can be employed through net metering policies which allow consumers who install on-site renewable energy projects, to pay utility bills only for the net electricity they consume; or policies to ensure a swift and straightforward process for interconnecting renewable energy projects to the utility electric grid where one exists, or to a mini-grid where no grid connection is possible; and policies to ensure that the backup rates charged by utilities to customers with on-site renewable distributed generation in grid–served areas are fair and appropriate.[184]

iv. Green marketing measures

The Guide also propounds policies which support and encourage voluntary green marketing programmes. Such polices are environmental disclosure programmes, green choice and green

[180] n 80 above 146
[181] n 80 above 146
[182] n 80 above 147
[183] n 80 above 149
[184] n 80 above 149-150

pricing programmes. These provisions offer consumers to opt for electricity supply from renewable energy sources.[185]

Environmental disclosure programmes direct energy suppliers to provide their customers with information about the source of energy they are supplying. These programmes help inform consumers about the energy and supplier they choose. It may also include fuel mix percentages and emissions statistics. It also serves as a sensitization tool to educate consumers on the correlation and impact of electricity supply and climate change.[186]

Green choice programmes afford consumers market access to renewable energy suppliers, which curbs the traditional monopoly of state utilities, who often generate energy from fossil fuels whilst green pricing programmes offers consumers the liberty to choose their electricity suppliers, more often a renewable energy source, for an additional cost.[187]

5.5 Concluding remarks

The analysis of this chapter has shown that the use of renewables is not limited to small decentralized projects of humanitarian or donor efforts. It has shown that renewables have the capability of forming a viable market which the private sector can successfully participate in. It has highlighted innovative and tested solutions to abate barriers which hinder the widespread use of renewables on an on-grid basis. It has ultimately shown that laws and regulations, are an effective tool of creating the relevant institutions and provisions to accomplish this.

[185] n 80 above 155
[186] n 80 above 155
[187] n 80 above 155-156

CHAPTER 6
FINAL CONCLUSION

'…the "right" risk allocation starts with a coherent energy policy and well-implemented energy regulatory framework to minimize political and regulatory risk'

-The World Energy Council World Energy Trilemma report (2013)[188]

6.1 Summary of chapters

This study has sought to examine whether extant energy sector-specific legal framework sufficiently creates an enabling environment for development of a renewable energy market.

[188] World Energy Council 'World Energy Trilemma: Time to get real – the case for sustainable energy investment' (2013) 12

In chapter 2 the various theories underling the argument of this thesis were discussed. These are the new institutional economics theory, the intergenerational equity and the principle of legitimate expectations of foreign investors. These theories justify centrality of law reform for economic development, the insistence on sustainable development and the need for private sector participation.

In chapter 3 the evolution of sustainable development as a global commitment was discussed with particular attention to the role of renewable energy and RETs. Sierra Leone's development aspirations and energy sector were also presented.

In chapter 4 the legal framework of Sierra Leone's energy sector was analyzed. The extant laws and policies were discussed and they were found to be insufficient and unreflective the country's aspirations and demands regarding renewable energy subsector. The present regulatory regime also presents market entry barriers to REIPPs.

In chapter 5 the renewable energy sector of South Africa was examined and the successes and lessons learnt from its thriving REIPPPP were noted. The UNEP guide on energy efficiency and renewable energy laws containing international best practices in respect of tools and key drafting areas for building a renewable energy subsector was also discussed. These sources are essential for the recommendations made in this study for law reform.

6.2 Conclusions

In conclusion, this study finds that existing regulatory framework militates against the development of the renewable energy sub-sector. The absence of legal provisions which specifically address this subsector deters foreign direct investment in the sector, limiting the bounds of its expansion. The presence of policies, programmes and initiative without an overarching legal framework merely builds castles in the sky as it affords no solid foundation for the sustainable development of the sub-sector. This research finds that in order for the country to meet its global commitments along with its development needs, in providing access to affordable, reliable, sustainable and modern energy, it must reform the regulatory environment of its energy sector. In that regard, this research makes the following recommendations

6.3 Recommendations

Bearing in mind the existing legal framework of the energy sector, these recommendations are being made to propose legal reform. This may be in the form of amendment of the exiting legislations or the enactment of new law in entirety. Nevertheless, the researcher is mindful of the complexities surrounding the introduction of new legal provisions and thus emphasizes the need for careful drafting, to avoid conflicting provisions and ambiguity.

i. Development of sector specific regulations- clarity

The absence of legal provision on renewable energy was identified as a barrier to investment. Therefore, the researcher recommends that laws specifically providing for the generation of renewable energy are enacted. Such laws are to be drafted to address key issues surrounding available and potential renewable energy sources, as well as stir interests in the development of specific sources which best aligns with the related interests of the state. For instances, legal provisions regarding the use of biofuels can also be used as a tool to achieve other socio-economic goals such as creating employment, which would ensue from the development of farms and processing plants. This law can also direct the sustainable use of those sources.

This law can also make specific provision for Renewable Energy Independent Power Producers (REIPPs). This is important in order to distinguish between independent power producers who rely on conventional means of energy generation and those which sole generate energy from renewable energy. Bearing in mind that the aim is to increase access to clean and modern energy, the law must be designed to deliberately create a renewable energy market which would specifically attract REIPPs.

This new provision must also create an institution which would specifically regulate this market. This institution would administer all programmes relating to renewable energy, including all incentives. The independence and authority of this body must be emphasized in order to abate the issues surrounding the conflict of interest between SLEWRC as the approver to power purchase agreements and the ECTG as an electricity supplier. The current Energy Revolution Taskforce could play this role, in order to avoid a multiplicity of authorities. Its mandate and powers may be extended to do so, in order to replicate the activities of the IPP office as in the South African

experience. However, regardless of the need to create a special regime for renewable energy, the ultimate intention is not to separate it from the broader energy sector. Rather, it is beneficial to integrate the two, within an environment where they are not in conflict but rather complement each other in archiving the counties developmental aspirations along with its environmental obligations.

Ultimately, such a legal provision would not only clarify the country's position on renewable energy, it would solidify all present initiatives and policies, whilst also reaffirming the actuality of legitimate expectations of investors.

ii. Leveling the playing field – fairness, transparency and accountability

In the present form, the law is skewed in favour of EGTC. It fortifies its place as a monopoly in the energy market with provisions such as loan guarantees cushioning this position. In order to ensure the entrance REIPPs in the energy sector, the legal framework must be reformed to ensure fair and equitable treatment. Although the rationale of supporting a utility which supplies a necessity to the public is not without credence, such actions amount to protectionist measures which suffocate investment potentials. Rather, liberalization of the sector is necessary to encourage investment. This can occur through a system of incentives, specifically designed to address challenges purportedly faced by the state owned utility and similarly experienced by REIPPs. Such incentives can militate against the existing financial and institutional risks and barriers that presently exists. Incentives will be discussed in detail below.

Furthermore, fair and equal treatment of players in the energy market, including the renewable energy space, can be obtained by ensure clarity in the rules of the game itself. Presently, approval of power purchase agreements is entirely left to the discretion of the SLERWC. Besides the absence of a set criteria which must be adhered to in order to satisfy the desired requirements of a PPA, there is no provision of an objection by a third party of an approval or an appeal or review of a rejection of a particular PPA. This lack of transparency provides no set of standards which new market entrants can anticipate or expect to adhere to. It lives room for ambiguity and abuse especially given the fortified position of EGTC with whom REIPPs are expected to directly compete. Thus, this research recommends clear eligibility provisions.

In the same light, the researcher finds it necessary to proffer that guarantees being offered to EGTC be extended to REIPPs, although they may be structured in other forms, as discussed below. Requirements to benefit from such guarantees and other market practices such as PPAs, must be set and published, in order to ensure transparency of the process and offer fair chance to all electricity supplies. This must also be coupled by accountability mechanisms which allows for review (administrative and/or judicial) of actions of the SLEWRC or any other designated regulator, in order to preserve the integrity of the process. This would also serve to secure the professionalism of all actors within the SLEWRC and the ETGC, despite the means of their appointment, to ensure that their administration of the respective entities are purely based on justifiable economic considerations. It is also key for regulations to account for the standardization of relevant agreements such as the PPA, GFSA, DA and IA used in the South African REIPPPP.

iii. Incentivizing REIPPs

The research recommends that adequate provisions be made in the new legal provisions to incentivize REIPPs to enter into the renewable energy sector.

Presently, the Finance Act exempts duty from imported solar photovoltaic products, equipment and appliances which satisfy the International Electro-Technical Commission (IEC) global standards. However, the law provides that a list of such products, equipment and appliances be published by the Ministry of Energy. However, till date, no such list has been published. Furthermore, the law makes no provision regarding the process of verifying adherence to this standard or review. It is equally silent on designating which authority or entity is to implement this provision either at pre-clearance or at the customs terminal. This questions the effective implementation of the provision. Therefore, the researcher recommends that the law be reformed to reflect proper administration of this policy.

Borrowing from the UNEP guide, certain tools can be incorporated into the new provisions for renewable energy generation. For instance, RPS can be introduced as a regulation, as a way to secure demand for renewable energy, by mandating an energy mix that increases the amount and/or proportion of renewables. The RPS provision must be drafted to promote available renewable sources and inspire research in untapped sources. It can also be modified to accommodate the more researched and tried renewable sources like hydro, solar, biomass and biofuel through the tier RPS. Also, the provision must be drafted to incorporate liberalized rules of origin to accommodate the

increase in energy demand. This can also prove beneficial with respect to contemporary initiatives such as the WAPP, which provides a broader market for renewable energy consumption, making the sector more lucrative to investment.

In addition to the tax waiver provided for in the Finance Act, economic incentives can include the introduction of feed-in tariffs. This would insulate and hedge the financial expectation REIPPs, which would help mitigate against financial barriers in the renewable energy market. This can also be buttressed by the addition of another consideration by the SLEWRC in the determination of rates and charges, that energy is generated from a renewable energy source.

Additionally, although the use of PBF can be employed, the research doubts the effective implementation of this tool. However, as opposed to the blanket application, it can be modified to apply to a limited set of electricity consumers, such as mining companies who account for the largest amount to pollutants. `

Although the researcher is of the opinion that distributed generation measures may not effectively contribute to the widespread use of on-grid renewables, in addition to the lack of local expertise to effectively operate and monitor such offsite RETs, the researcher submits that Green Marketing Measures can be introduced in to offer consumers the opportunity to sway from conventional means of electricity supply. Furthermore, Green Marketing Measures can contribute towards education on the benefits of renewables and the adverse effects of fossil fuels on the environment.

iv. Doing the necessary; planning ahead, upgrading the grid and beyond

Finally, the research recommends that the effective continuity and sustainability of all the above recommended provisions would be impossible if the necessary planning and foresight is not carried out. Primarily, funding to implement this programme is paramount to its success. Thus funds must be provided for, such as those accrued from the PBF, in order to support the institution and structures created by this new law. Also, relevant provision must be made for related aspects of the sector, such as the distribution and transmission, and the drafters must keep in mind that generation cannot be contemplated in silos without which the ultimate goal of increased access would not be accomplished. The researcher also recommends that aligning policies and initiatives, such as UK compact would direct funding and expertise towards enhancing on-grid use of renewables as opposed to isolated projects. Furthermore, periodic review of regulations must form

part of the process in order to maintain flexibility and adaptability to market responses and conditions.

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