



Energy Infrastructure Investments in East Africa and the Relevance of the Energy Charter Treaty

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Abstract

The rapid development of regional energy infrastructure is necessary to achieve economic development and growth in East Africa. This paper examines the role of the International Energy Charter and the Energy Charter Treaty (ECT) process in facilitating investments in energy infrastructure in East Africa. The paper highlights major renewable and conventional energy projects in Kenya, Uganda and Tanzania that have regional implications. In particular, it looks at the key challenges, which are common in the region and how the inter-state cooperation could maximise the developmental impact of the energy sector.

This paper explores ways to accelerate the energy infrastructure development in East Africa through increasing private sector involvement, improving legal and regulatory systems, good governance, and strengthening local capacity to absorb technical assistance from international institutions such as the International Energy Charter.

Keywords: Energy Policy, Energy Infrastructure, East Africa, Oil and Gas, Renewables, Energy Investments, Energy Charter Treaty, International Development, International Energy Charter.

Chapter 1: Introduction

Although it is assumed that sub-Saharan Africa's investment climate is somewhat murky and risky, in the last decade, the region has experienced an annual average gross domestic product (GDP) growth of five percent (5%). The steady economic strides have been attributed to improved policy making and overall level of governance. However, this progress is dampened by the energy deficit that constrains the regions' development.¹

Over the last decade, Africa's action priorities in the energy sector remain to be increasing renewable energy, energy efficiency and regional integration.² African governments also face the

¹ T. Njoroge Daniel, 'International Energy Charter 2015 and its Relevance and Possible Influence in Respect of Energy Law and Policy in the East African Region'. *Oil, Gas & Energy Intelligence*, 15 no. 3(2017).

² World Energy Council, 'World Energy Issues Monitor 2019; Global and Regional Perspectives' *World Energy Council*, 2019, <<https://www.worldenergy.org/publications/2019/world-energy-issues-monitor-2019-managing-the-grand-energy-transition/>> (accessed 15 May 2019)

global energy trilemma of achieving equity, security and environmental sustainability.³ The increased discoveries of oil and gas deposits across the continent, particularly in the East African region calls for a more balanced approach in energy investments towards resilient climate infrastructure.

Electricity demand projections in Africa highlight the magnitude of the task at hand. Per a 2015 report by the International Renewable Energy Agency (IRENA), a demand projection for 2030 indicates that 318 gigawatts (GW) would be required in North Africa, 63 GW in West Africa, 25 GW in Central Africa, 55 GW in Eastern Africa and 150 GW in Southern Africa.⁴ The high electricity demand in this projection is based on a scenario with high economic growth.⁵ In order to satisfy this demand for electricity, an annual average of USD 45 billion in investment until 2030 would be required.⁶ An additional annual investment of USD 25 billion will be required for transmission and distribution lines.⁷

Consequently, the energy sector in the East African region needs to address persistent challenges in order to achieve higher levels of economic development. Funds allocated to the energy sector are not sufficient to develop the available and prospective conventional and renewable energy resources, which are capital and technology intensive. The World Bank estimates that only 1 percent of private sector capital flows for energy reaches Africa whereas 34 percent goes to Asia and 26 percent to Latin America.⁸ Unsurprisingly, energy access remains an overarching challenge in sub-Saharan Africa, where electricity access is on average 35 percent in urban areas and only 19 percent in rural areas.⁹ Further, the region faces challenges in terms of poorly planned cities and scattered settlements that hinder the permeation of energy infrastructure, thus making it difficult for the region to become a destination for efficient energy markets.¹⁰

³ World Energy Council and Oliver Wyman, 'World Energy Trilemma; Global and Regional Perspectives' *World Energy Council*, 2016, < <https://www.worldenergy.org/publications/2016/world-energy-trilemma-2016-defining-measures-to-accelerate-the-energy-transition/> > (accessed 15 May 2019)

⁴ IRENA, 'Africa 2030: Roadmap for Renewable Energy Future', 2015 <http://www.aler-renovaveis.org/contents/lerpublication/irena_2015_oct_africa_2030_remap.pdf > (accessed 5 September 2019)

⁵ IRENA, 'Africa 2030: Roadmap for Renewable Energy Future', 2015 <http://www.aler-renovaveis.org/contents/lerpublication/irena_2015_oct_africa_2030_remap.pdf > (accessed 5 September 2019)

⁶ IRENA, 'Africa 2030: Roadmap for Renewable Energy Future', 2015 <http://www.aler-renovaveis.org/contents/lerpublication/irena_2015_oct_africa_2030_remap.pdf > (accessed 5 September 2019)

⁷ IRENA, 'Africa 2030: Roadmap for Renewable Energy Future', 2015, < http://www.aler-renovaveis.org/contents/lerpublication/irena_2015_oct_africa_2030_remap.pdf > (accessed 17 May 2019).

⁸ T. Njoroge Daniel, 'International Energy Charter 2015 and its Relevance and Possible Influence in Respect of Energy Law and Policy in the East African Region'. *Oil, Gas & Energy Intelligence*, 15 no. 3(2017)

⁹ World Energy Council, 'World Energy Issues Monitor 2019; Global and Regional Perspectives' World Energy Council, 2019, < <https://www.worldenergy.org/publications/2019/world-energy-issues-monitor-2019-managing-the-grand-energy-transition/> > (accessed 15 May 2019).

¹⁰ T. Njoroge Daniel, "International Energy Charter 2015 and its Relevance and Possible Influence in Respect of Energy Law and Policy in the East African Region". *Oil, Gas & Energy Intelligence*, 15 no. 3(2017).

This paper will highlight the main energy infrastructure projects in East Africa with selected case studies. It will focus on the various challenges that impede the region from attaining its energy development aspirations. Apart from boosting the region's investment climate, it will also highlight additional benefits accrued from acceding to the ECT.

Through desk research, this paper will review and analyse literature from various sources. Initial findings of this review suggest that significant investments will be required to develop the energy infrastructure necessary to enable this region to participate in global energy markets. In this research, regulatory and infrastructure gaps were identified as the major hindrance to fully tapping into East Africa's energy potential, particularly in the oil and gas sector.

The paper acknowledges the critical role that the International Energy Charter plays in facilitating regional energy cooperation and mobilising the much-needed investment. It also explores whether East African countries' accession would help mitigate some of the critical challenges in the expansion of energy infrastructure projects, particularly cross-border developments in the region. In particular, this paper will analyse three key projects in Kenya, Uganda and Tanzania (namely the East African Crude Oil Pipeline (EACOP), East African Power Pool (EAPP) and Lamu-Port-South-Sudan-Ethiopia-Transport (LAPSSET) Corridor) to provide a clear picture of the current landscape and the possible implications of unlocking further investments with tools such as the ECT.

Chapter 2: Renewable Energy in East Africa

2.1 Introduction

Electricity demand projections in Africa showcase the challenges of facilitating a transition to a low-carbon power supply system highlight the magnitude of the task at hand. Per a 2015 IRENA report, demand projections suggest that in 2030, 318 gigawatts (GW) is required in North Africa, 63 GW in West Africa, 24 GW in Central Africa, 55 GW in Eastern Africa and 150 GW in Southern Africa, to match a scenario of high economic growth and high electricity demand.¹¹ Satisfying this demand across Africa will require an annual average of USD 45 billion in investment for generation capacity until 2030.¹² An additional annual investment of USD 25 billion will be required for transmission and distribution lines.¹³

Renewable energy is pivotal in mitigating greenhouse gas (GHG) emissions since a reduced reliance on fossil fuels decreases a country's carbon footprint. Being located in the tropics, East Africa has abundant potential for renewable energy production. Kenya's primary source of

¹¹ IRENA, 'Africa 2030: Roadmap for Renewable Energy Future', 2015, < <https://www.res4africa.org/wp-content/uploads/2016/05/Africa-2030-a-roadmap-for-a-renewable-energy-future.pdf> >(accessed 17 May 2019)

¹² IRENA, 'Africa 2030: Roadmap for Renewable Energy Future', 2015, < <https://www.res4africa.org/wp-content/uploads/2016/05/Africa-2030-a-roadmap-for-a-renewable-energy-future.pdf> > (accessed 17 May 2019)

¹³ IRENA, 'Africa 2030: Roadmap for Renewable Energy Future', 2015, < <https://www.res4africa.org/wp-content/uploads/2016/05/Africa-2030-a-roadmap-for-a-renewable-energy-future.pdf> > (accessed 17 May 2019)

energy is mainly renewable. This is mostly from hydro and geothermal sources that respectively contribute 40 and 49 percent of its energy mix.¹⁴ Kenya's highly diversified power mix continues to displace imported diesel (i.e. 10 percent of the mix) and hydroelectric generation.¹⁵ Kenya is also en route to adding two of the largest renewable energy facilities in Africa (i.e. a wind farm at Lake Turkana (310 MW)) and the region (i.e. a solar facility in Garissa (55 MW)).¹⁶

Over the last decade, the energy sector in Kenya has seen multiple rounds of sector reforms in the form of legislation and the implementation of its various national strategies. There, state power off-taker and distributor, Kenya Power and Lighting Company, launched a Last Mile Connectivity campaign, which is financed by the Kenyan Government and the African Development Bank (AfDB).¹⁷ In its first phase, this campaign seeks to provide electricity access to over 300,000 non-commercial households (i.e. 1.5 million Kenyans), including those located within 600 metres of a transformer.¹⁸ Together with the second and third phases, the campaign would reach an additional 500,000 customers (i.e. 2.5 million Kenyans), thus supporting the governmental objective of achieving universal access to electricity by 2020.¹⁹ This Last Mile Connectivity campaign and the off-grid solar market have propelled energy access from about 20% in 2012 to above 50% in 2018.²⁰

It is estimated that the energy sector in Kenya receives 40 to 45 percent of Kenya's local public climate financing.²¹ Kenya is a participant in the Scaling up Renewable Energy in Low-Income Countries Program (SREP), established in 2011 and financed through the Climate Investment

¹⁴ Ministry of Energy, Energy Matrix [n.d.] Government of Kenya < <http://energy.go.ke/?p=505> > (accessed 19 August 2019)

¹⁵ Rose Mutiso and Jay Taneja, 'The Seven Major Threats to Kenya's Power Sector' *Energy for Growth*, 2018 <<https://www.energyforgrowth.org/memo/the-seven-major-threats-to-kenyas-power-sector/>> (accessed 13 May 2019)

¹⁶ Rose Mutiso and Jay Taneja, 'The Seven Major Threats to Kenya's Power Sector' *Energy for Growth*, 2018 <<https://www.energyforgrowth.org/memo/the-seven-major-threats-to-kenyas-power-sector/>> (accessed 13 May 2019)

¹⁷ Kenya Power and Lighting Company 'Last Mile Connectivity' [n.d.] <<https://www.kplc.co.ke/content/item/1120/last-mile-connectivity>> (accessed 15 August 2019) and African Development Bank, 'projects and Operations', [n.d.] <<https://www.afdb.org/en/projects-and-operations/project-portfolio/p-ke-fa0-010/>>(accessed 15 August 2019)

¹⁸ Kenya Power and Lighting Company 'Last Mile Connectivity' [n.d.] <<https://www.kplc.co.ke/content/item/1120/last-mile-connectivity>> (accessed 15 August 2019) and African Development Bank, 'projects and Operations', [n.d.] <<https://www.afdb.org/en/projects-and-operations/project-portfolio/p-ke-fa0-010/>>(accessed 15 August 2019)

¹⁹ Kenya Power and Lighting Company 'Last Mile Connectivity' [n.d.] <<https://www.kplc.co.ke/content/item/1120/last-mile-connectivity>> (accessed 15 August 2019) and African Development Bank, 'projects and Operations', [n.d.] <<https://www.afdb.org/en/projects-and-operations/project-portfolio/p-ke-fa0-010/>>(accessed 15 August 2019)

²⁰ Rose Mutiso and Jay Taneja, 'The Seven Major Threats to Kenya's Power Sector' *Energy for Growth*, 2018 <<https://www.energyforgrowth.org/memo/the-seven-major-threats-to-kenyas-power-sector/>> (accessed 13 May 2019)

²¹ Vincent Mutie Nzau, 'Climate Change Financing in Kenya', *The International Institute for Environment and Development*, 2014 <<https://pubs.iied.org/pdfs/17226IIED.pdf> > (accessed 17 May 2019)

Funds (held in trust by the World Bank and AfDB).²² According to a 2017 report from the World Bank, climate finance of \$800 million has been contributed and pledged to SREP.²³

Similarly, Tanzania's major sources of power are coming from natural gas, petroleum and hydropower. Out of the installed power capacity of 1,264 MW in 2018, 568 MW was produced from hydroelectric power, 685.4 MW was produced from thermal and less than 82.4 MW was contributed to by other renewable sources.²⁴ More than 85 percent of the Tanzanian population uses traditional fuels for domestic use. In addition, only 32.8 percent of the communities in Tanzania have access to electricity. People in urban areas have a 65.3 percent access to electricity rate compared to 16.9 percent in rural areas.²⁵ Nonetheless, the presence of natural gas reserves as well as abundant wind and solar resources present opportunities.

Similar to its neighbours, Uganda is endowed with renewable energy sources particularly, hydro, biomass and solar. Biomass accounts for 94 percent of the country's energy consumption and is followed by hydroelectric.²⁶ The country is considered to have significant hydro power potential estimated at 2,000 MW, largely along the River Nile.²⁷ Nonetheless, the discovery of large oil deposits in 2006 (which will be discussed under the East African Crude Oil Pipeline (EACOP) project in subsequent sections) is expected to progressively cause shifts in Uganda's energy mix.²⁸

2.2 The East African Power Pool (EAPP)/Nile Basin Initiative (NBI)

Cross-border electricity trade has become increasingly important for energy security and resilience since it is a result of access to a diversified basket of power sources and supply.²⁹

²² Sameer Akbar and Gary Kleinman, 'The Climate Change-Energy Access Nexus' *World Bank*, 2017 <<http://documents.worldbank.org/curated/en/465151494924794652/pdf/115064-BRI-P148200-PUBLIC-FINALSEARSFClimateChangeweb.pdf>> (accessed 16 May 2019)

²³ Rose Mutiso and Jay Taneja, 'The Seven Major Threats to Kenya's Power Sector' *Energy for Growth*, 2018 <<https://www.energyforgrowth.org/memo/the-seven-major-threats-to-kenyas-power-sector/>> (accessed 13 May 2019)

²⁴ Obadia K. Bishoge, Lingling Zhang and Witness Gerald Mushi, 'The Potential Renewable Energy for Sustainable Development in Tanzania: A Review', *Clean Technologies*, (2018), 1 pp. 70-88 <<https://doi.org/10.3390/cleantechnol1010006>> (accessed 17 May 2019)

²⁵ Obadia K. Bishoge, Lingling Zhang and Witness Gerald Mushi, 'The Potential Renewable Energy for Sustainable Development in Tanzania: A Review', *Clean Technologies*, (2018), 1 pp. 70-88 <10.3390/cleantechnol1010006> (accessed 17 May 2019)

²⁶ Uganda National Renewable Energy and Energy Efficiency Alliance, 'Overview of the Ugandan Energy Sector' [n.d.] <<https://unreeea.org/resource-center/overview-of-the-ugandan-energy-sector/>> (accessed 19 August 2019)

²⁷ Reuters, 'UPDATE 2- Uganda ups oil reserves estimate by 85 pct, finds natural gas' 29 August 2014 <<https://www.reuters.com/article/uganda-oil/update-2-uganda-ops-oil-reserves-estimate-by-85-pct-finds-natural-gas-idUSL5N0QZ1EW20140829>> (accessed 2 September 2019)

²⁸ Reuters, 'UPDATE 2- Uganda ups oil reserves estimate by 85 pct, finds natural gas' 29 August 2014 <<https://www.reuters.com/article/uganda-oil/update-2-uganda-ops-oil-reserves-estimate-by-85-pct-finds-natural-gas-idUSL5N0QZ1EW20140829>> (accessed 2 September 2019)

²⁹ Fernandes Barasa, 'Opening up E.A. Power Markets Will Cut Prices' *Business Daily Africa*, 30 April 2019, <<https://www.businessdailyafrica.com/analysis/columnists/power-markets-will-cut-prices/4259356-5094692-11c6prs/index.html>> (accessed 9 May 2019)

Climate change poses threats towards power generation, especially for countries that are dependent on hydropower as a result of changing rainfall patterns.

The East African Power Pool (EAPP) was established in 2005 to coordinate and harmonise electrical power generation and transmission among member countries, which include Kenya, Burundi, Democratic Republic of Congo (DRC), Ethiopia, Rwanda, Sudan, Tanzania, Libya and Uganda.³⁰ South Sudan and Djibouti also aim to join and are included in the Regional Master Plan Study.³¹ Egypt withdrew from the EAPP over its opposition to Ethiopia's construction of the Grand Ethiopian Renaissance Dam (GERD) along the Nile.³²

Through economies of scale, these countries involved in the project would be able to reduce the costs associated with power generation and transmission, improve power supply and attract investment in the region. Besides, a large regional interconnected power grid would allow for competitive consumer rates. In the long run, it is hoped that the project will foster social and economic development while minimising adverse environmental effects.

A 2011 report by the EAPP and East African Community concerning the Regional Power System Master Plan and the Grid Code Study observed that sub-regional countries have not coordinated their efforts in respect of their power systems and have instead been lead by national demand.³³ Although there exist bilateral power exchange agreements in the sub-region, the quantities exchanged are not substantial.³⁴ Further, exporting countries are challenged by their own systemic deficiencies in meeting their delivery commitments.³⁵

In 2006, the EAPP was adopted as a specialised institution by the Common Market for Eastern and Southern Africa (COMESA) with the aim of providing it with political clout especially when negotiating financial contracts with donor agencies.³⁶ However, the EAPP remains largely

³⁰ Eastern Africa Power Pool, 'Home' <<http://eappool.org/>> (accessed 2 September 2019)

³¹ Eastern Africa Power Pool, 'Power System Master Plan: Executive Summary' <<http://eappool.org/the-master-plan-update-2014/>> (accessed 14 August 2019)

³² Alfonso Medinilla, Bruce Byiers and Karim Karaki, 'African Power Pools: Regional Energy, National Power' European Centre for Development Policy Management (ECDPM) Discussion Paper 244 February 2019, <<https://ecdpm.org/wp-content/uploads/DP-244-African-Power-Pools-1.pdf>> (accessed 14 August 2019)

³³ Mthuli Ncube and Charles Leyeka Lufumpa, *Infrastructure in Africa: Lessons for future development* (Bristol University Press, 2016)

³⁴ Mthuli Ncube and Charles Leyeka Lufumpa, *Infrastructure in Africa: Lessons for future development* (Bristol University Press, 2016)

³⁵ Mthuli Ncube and Charles Leyeka Lufumpa, *Infrastructure in Africa: Lessons for future development* (Bristol University Press, 2016)

³⁶ Elke Verhaeghe and Sean Woolfrey, *Understanding COMESA and the East African Power Pool Incentive-based institutional reform?*, ECDPM, background paper March 2017 <<https://ecdpm.org/wp-content/uploads/COMESA-Background-Paper-PEDRO-Political-Economy-Dynamics-Regional-Organisations-Africa-ECDPM-2017.pdf>> (accessed 1 September 2019)

autonomous. While Ethiopia, Kenya and South Sudan played a key role in its establishment, it is not clear, if there is a lead country underpinning its development.³⁷

The EAPP members are also partners in the Nile Basin Initiative, which is at different completion stages in each country with several challenges along the way.³⁸ The change of scope necessitates new feasibility studies due to unplanned costs, time lags and schedule spillage. Project management issues arise due to the flawed communication flow which involves the difficult task of coordinating the interests of the multiple stakeholders. Furthermore, market liberalisation in the region has been slow as the reforms often focus not only on economic benefits but are also linked to political gains (as energy security is the responsibility of the state).³⁹ Moreover, there was a need to harmonise contracts in line with national and international standards and laws.⁴⁰ In particular, the commercial rules of practice such as commercial framework, pricing, transaction settlements and arbitration between power utilities.⁴¹ These challenges have resulted in delays in the implementation of the project. The EAPP is expected to improve the quantum as well as the reliability of affordable electricity in the Eastern Africa region with cleaner surplus from bordering countries. There are plans to link the EAPP with the Southern African Power Pool (SAPP) and further to Northern Africa to create the African Clean Energy Corridor (ACEC). The ACEC is a regional initiative supported by IRENA and endorsed by Ministers from EAPP and SAPP at the fourth IRENA Assembly in 2014.⁴² This will create an African electricity superhighway that will promote cross-border trade of renewable power.⁴³

The EAPP checks off the objectives outlined in the New Partnership for Africa's Development (NEPAD) in terms of regional integration and promotion of infrastructure development through regional co-operation in crucial productive sectors such as energy. Nonetheless, for these regional players to realise their energy security dreams, significant amount of investments will be required to fund the pooled power projects towards 2030. Table 1 below shows the cumulative investment needs of the regional energy pools across Africa.

³⁷ Alfonso Medinilla, Bruce Byiers and Karim Karaki, 'African Power Pools: Regional Energy, National Power' ECDPM Discussion Paper 244 February 2019, <<https://ecdpm.org/wp-content/uploads/DP-244-African-Power-Pools-1.pdf>> (accessed 14 August 2019)

³⁸ Nile Basin Initiative, 'Powering the Nile Basin' Briefing Note 2, Nile Basin Initiative [n.d.] <<http://www.nilebasin.org/documents-publications/53-powering-the-nile-basin-digital/file>> (accessed 14 May 2019)

³⁹ Alfonso Medinilla, Bruce Byiers and Karim Karaki, 'African Power Pools: Regional Energy, National Power' ECDPM Discussion Paper 244 February 2019, <<https://ecdpm.org/wp-content/uploads/DP-244-African-Power-Pools-1.pdf>> (accessed 14 August 2019)

⁴⁰ Nile Basin Initiative, 'Powering the Nile Basin' Briefing Note 2, Nile Basin Initiative [n.d.] <<http://www.nilebasin.org/documents-publications/53-powering-the-nile-basin-digital/file>> (accessed 14 May 2019)

⁴¹ Nile Basin Discourse, 'The NELSAP Power Interconnection Projects Fact Sheet' [n.d.] <<https://www.nilebasindiscourse.org/images/downloads/The-NELSAP-Power-Interconnection-Projects-Fact-Sheet.pdf>> (accessed 14 May 2019)

⁴² International Renewable Energy Agency 'African Clean Energy Corridor' <<https://irena.org/cleanenergycorridors/Africa-Clean-Energy-Corridor>> (accessed 3 September 2019)

⁴³ Nawfal Saadi, Asami Miketa and Mark Howells, 'African Clean Energy Corridor: Regional Integration to Promote Renewable Energy Fueled Growth' *Energy Research and Social Science*, 5, (2015) pp. 130-132

Table 1: Cumulative Investment Needs 2015-2030

Investment in USD Billions (2015—2030)				
Region	All Generation	Large Hydro	Other Renewables	Transmission & Distribution
North Africa	342	2	218	186
West Africa	89	36	31	52
Central Africa	32	13	17	14
East Africa	72	36	21	49
Southern Africa	145	18	94	74
Total	681	106	381	325

Source: IRENA (2015)⁴⁴

2.3 Renewable Energy and the Energy Charter

When the ECT came into force in the early 1990s, it was designed for a predominantly fossil fuel world. Solar and wind technologies existed but had not penetrated the energy markets at full scale. The ECT was conceived as technologically neutral with provisions to promote sustainable development, environmental protection and energy efficiency, as embodied in its principles. This is evident in Article 19 which states the contracting members will minimise environmental degradation while taking safety into account. ECT Contracting Parties are required to take into consideration environmental considerations in the formulation and implementation of their energy policies. The 1998 Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects also endorses the same principles.⁴⁵

The presence of a global framework like the ECT allows increased levels of integration and better incorporation of variable renewables into power systems, while ensuring economies of scale for larger projects. The ECT promotes rule of law, access to capital, investor protection as well as stability and transparency across the energy value chain.

For East African countries, acceding to the ECT would enable them to diversify their foreign direct investment (FDI) sources by putting them firmly on the map for global energy

⁴⁴IRENA, ‘Africa 2030: Roadmap for Renewable Energy Future’, 2015, <<https://www.res4africa.org/wp-content/uploads/2016/05/Africa-2030-a-roadmap-for-a-renewable-energy-future.pdf>> (accessed 17 May 2019))

⁴⁵ Protocol on Energy Efficiency and Related Environmental Aspects to the Energy Charter Treaty (entry into force on 16 April 1998) < https://energycharter.org/fileadmin/DocumentsMedia/Legal/1994_PEEREA.pdf> (accessed on 3 September 2019)

investments. In this case, the accession of COMESA would be a welcome step for the region and would signal global energy investors that the EAPP project is making steady strides in promoting regional energy development. In addition, the accession of Kenya, Uganda and Tanzania to the ECT framework would enable them to boost their commitments to facilitate the development of energy transport facilities and protect established cross-border flows of energy as per Article 7 of ECT on transit.⁴⁶

2.4 Chapter Summary

This chapter has looked at the current state of play in the renewable energy sector in three countries in East Africa and drilled down to the regional power mix and potential for cross-border power integration by examining the components of the EAPP and the Nile Basin Initiative. This chapter concludes that for successful achievement of while attracting investments through public-private collaborations and implementation of common energy sector ambitions, the ECT framework could play an important role as a facilitator of regional cooperation and investment protection.

Chapter 3: Oil & Gas Infrastructure Development in East Africa

3.1 Introduction

The oil and gas industry in East Africa is quickly gaining traction. Until the 2000s, the region had no significant known reserves of hydrocarbons, but the discovery of sizable reserves of oil and gas in countries such as Tanzania (in 2010), Uganda (in 2006) and Kenya (in 2012) have elevated the region's status in the industry.⁴⁷

Uganda's oil reserves are estimated to be 6 billion barrels (1.4 billion recoverable).⁴⁸ Kenya has oil reserves of approximately 600 million barrels.⁴⁹ From 2010, Tanzania's discovered natural gas reserves were estimated to be 57 trillion cubic feet (TCF) in 2016.⁵⁰ Each of these three East African countries have national oil companies (NOCs) namely: the National Oil Corporation of Kenya (NOCK), the Uganda National Oil Company (UNOC) and the Tanzania Petroleum Development Corporation (TPDC). International Oil Companies (hereafter IOCs) such as Tullow

⁴⁶ The International Energy Charter and Consolidated Energy Charter Treaty with Related Documents, 2016, Article 7 pp 66-67. Energy Charter Secretariat. Brussels.

⁴⁷ Allan Alingo, 'Equitable Resource Sharing- Tanzania Sets the Stage for Review of Mining Agreements after Acacia Deal' *The East African*. 21 October 2017, < <https://www.theeastafrican.co.ke/business/Tanzania-mining-agreements-Acacia-deal--/2560-4149632-14x96tbz/index.html>> (accessed 17 May 2019)

⁴⁸ The Economist, 'Uganda tries to Dodge the "presource curse"' 4 April 2019, Middle East and Africa, <<https://www.economist.com/middle-east-and-africa/2019/04/04/uganda-tries-to-dodge-the-presource-curse>> (accessed 17 May 2019).

⁴⁹ Luke Patey, 'Oil in Uganda: Hard bargaining and Complex Politics in East Africa' *Oxford Institute for Energy Studies*, OIES Working Paper 60, 2015, < <https://www.oxfordenergy.org/publications/oil-in-uganda-hard-bargaining-and-complex-politics-in-east-africa/>> (accessed 17 May 201)

⁵⁰ Tanzania Investment Authority, 'Gas' < <https://www.tanzaniainvest.com/gas/>> (accessed 15 May 2019)

Oil, Total and China National Offshore Oil Corporation (CNOOC) have also accelerated their activities in the region to tap these substantial unexploited resources.

In 2008, the East African Community (EAC) approved a strategy for a regional refinery to enhance existing distribution networks and storage capacities for efficient delivery of oil products throughout the region.⁵¹ The regional strategy identified vital stakeholders and recognised that the implementation of the project would boost the EAC's capacity to refine fossil fuels by securing its supply at low costs while contributing to the region's growing energy needs. In turn, the generated revenue would create investment opportunities by facilitating industrialisation.

The high global oil prices between 2004 and 2014 contributed to the rush to explore new oilfields. The injection of USD 13 billion by investors to the East African oil and gas industry in 2012 accounted to nearly 32% of Africa's investment and renewed optimism over the region's oil fields despite South Sudan's dissipating ones.⁵² Increased investment raised hopes that the region's oil industry would provide significant benefits to the national economies of East African states through revenues from oil exports.⁵³

As a result there have been some improvements in the development of regional infrastructure, however East African countries still face many challenges. First, there is still a lack of apparent cooperation between the IOCs and governments. Second, there is considerable bureaucratic inertia within individual states, and the bilateral relations are not cordial enough to allow straightforward deal-making. Third, landlocked countries such as Uganda and South Sudan that are reliant on neighboring countries to access international markets are challenged by internal and interstate political instability. For example, some months after South Sudan's secession from Sudan in 2011, the South Sudanese government shut down its oil production due to its political tensions with Sudan. This was then followed by a civil war in South Sudan in 2013.⁵⁴

The following section will provide three examples of infrastructure development in East Africa. First, it will describe the planned Lamu-Port-South-Sudan-Ethiopia-Transport (LAPSSET) Corridor, which will comprise of road, rail and pipeline interconnections between Kenya, South Sudan, Ethiopia and Uganda. Second, it will describe the East African Crude Oil Pipeline

⁵¹ Halima Abdallah, 'Russians in Comeback to Uganda Oil Refinery Deal as Total Oil Wants 10pc Stake' *The East African* 18 December 2016 < <https://www.theeastafrican.co.ke/business/Russians-in-comeback-to-Uganda-oil-refinery-deal/2560-3490108-93i019z/index.html>> (accessed 14 August 2019)

⁵² Luke Patey, 'Kenya: African Oil Upstart in Transition' *Oxford Institute for Energy Studies*, OIES Working Paper 53, 2014< <https://www.oxfordenergy.org/publications/kenya-an-african-oil-upstart-in-transition/>>(accessed 17 May 2019)

⁵³ Luke Patey, 'Kenya: African Oil Upstart in Transition' *Oxford Institute for Energy Studies*, OIES Working Paper 53, 2014< <https://www.oxfordenergy.org/publications/kenya-an-african-oil-upstart-in-transition/>> (accessed 17 May 2019)

⁵⁴ Phillippe Le Billon and Emily Savage, 'Binding Pipelines? Oil, Armed Conflicts and Economic Rationales for Peace in the Two Sudans', *African Geographical Review* (2016)35, no.2 , pp.134-150; Patey, "Kenya: African Oil Upstart in Transition."

(EACOP) which will consist of an oil pipeline between Uganda and Tanzania. Third, it will describe the natural gas projects in Tanzania.

3.2 The LAPSSET Mega Project

The LAPSSET corridor project was originally planned to run from Kenya and Uganda and then connect landlocked South Sudan and Ethiopia covering approximately 1,518 km.⁵⁵ The Government of Uganda opted out of the project and decided to build its own refinery and re-route its oil through Tanzania as will be further discussed in the next section.

The \$25 billion⁵⁶ project comprises of several components including a port, airport and oil refinery in Lamu (Kenya), road networks, railway line, oil pipeline, a hydropower dam and three resort cities etc.⁵⁷ In developing the project, contracts have been awarded to companies such as China Communication Construction Company (CNOOC) and Tullow Oil.⁵⁸ And in 2016, the Kenyan government signed a joint development agreement with Tullow Oil, Africa Oil and Maersk, which would progress the project by facilitating funds for engineering designs of greater detail and environmental studies.⁵⁹ In mid-2018, Kenya was able to transport its first batch of crude oil to its holding facility at the Mombasa Port under the programme dubbed “Early Oil Pilot Scheme” (EOPS).⁶⁰ From the first batch of 700 barrels of oil per day (bpd), the production levels were expected to hit 2,000 bpd in April 2019.⁶¹ Tullow Oil and the Kenyan government are targeting final investment decision (FID) in 2020 and the first oil to flow in 2021/22.⁶²

There are substantial obstacles to the development of the regional pipeline. Nonetheless, the government of Kenya has been seeking partners to undertake this venture to ensure that its crude oil pipeline connects the hinterland of Turkana to the port of Lamu. The appraisal of the

⁵⁵ Vision 2030 Secretariat, ‘Second Medium Term Plan 2013-2017: Transforming Kenya: Pathway to Devolution, Socio-economic Development, Equity and National Unity’ (Government of Kenya, Nairobi, 2013).

⁵⁶ Wanjohi Kabukuru, ‘A Megaproject rises in East Africa’ Africa Renewal Online, 2016, <<https://www.un.org/africarenewal/magazine/august-2016/megaproject-rises-east-africa>> (accessed 3 September 2019)

⁵⁷ Atkins Acuity, ‘Lamu Port City Agreed Investment Framework’ April 2017 <<https://drive.google.com/file/d/0B7w3900K6lYnSVBTMW93OFN3RkU/view>> (accessed 3 September 2019)

⁵⁸ LAPSSET Corridor Development Authority, ‘Brief on the LAPSSET Corridor Project’, 2016, <<http://vision2030.go.ke/inc/uploads/2018/05/LAPSSET-Project-Report-July-2016.pdf>> (accessed 17 May 2019)

⁵⁹ George Wachira, ‘Pipeline Pact Marks major Milestone in Success of LAPSSET’, *Business Daily Africa*, 2017, <https://www.businessdailyafrica.com/analysis/Pipeline-pact-marks-major-milestone-in-success-of-LAPSSET/539548-4177146-tie2u2z/index.html> (accessed 17 May 2019); Reuters, ‘Kenya Finalises Agreement for Development of Crude Oil Pipeline’ 24 August 2016, <<https://af.reuters.com/article/kenyaNews/idAFL8N1B52NA>> (accessed 14 August 2019)

⁶⁰ The Daily Nation, ‘Kenyatta flags off Kenya's first crude oil export’ *The East African*, 3 June 2018 <<https://www.theeastafrican.co.ke/business/Kenya-starts-oil-export/2560-4593584-5j3vbez/index.html>> (accessed 17 May 2019)

⁶¹ Tullow Oil, ‘About Tullow in Kenya’, 22 February 2019 <<https://www.tulloil.com/operations/east-africa/kenya>> (accessed 13 May 2019)

⁶² Tullow Oil ‘About Tullow in Kenya’, 22 February 2019, <<https://www.tulloil.com/operations/east-africa/kenya>> (accessed 13 May 2019)

discovered oil resources in Kenya is dependent on approvals of the pipeline plan by the regional governments involved as well as securing the financings, acquiring the land for the pipeline route and its eventual construction.⁶³

3.3 The East African Crude Oil Pipeline (EACOP)

Once completed, the 1,445 km EACOP will be the longest electrically heated pipeline of its kind in the world.⁶⁴ Uganda chose to route the pipeline through Tanzania which they deemed as a cheaper alternative to Kenya.⁶⁵ The EACOP is set to enhance co-operation between Uganda and Tanzania and attract a significant amount of FDI. USD 3.5 billion in capital has been channelled to the construction and operation of the pipeline, which has increased foreign direct investment in both countries by 60 percent.⁶⁶

The project has already made legal and institutional headway with Uganda and Tanzania entering an intergovernmental agreement and is projected to be completed by 2020 with a daily output of 216,000 barrels per day.⁶⁷ A pipeline company with shareholding from the Uganda National Oil Company (UNOC), the Tanzania Petroleum Development Corporation (TPDC), CNOOC, Total and Tullow constructs and operates the project.⁶⁸

3.4 Natural Gas Projects in Tanzania

Aside from oil sector developments, there have been significant gas infrastructure developments in East Africa over the last decade. Tanzania was East Africa's first petroleum producer and has maintained a modest market since 2004 due to the considerable upstream investment it allocated for both onshore and offshore projects.⁶⁹

Tanzania is projected to become one of the major gas exporters in the world over the next two decades.⁷⁰ As of 2016, the natural gas reserves were estimated at 57 trillion cubic feet (TCF).⁷¹

⁶³ Luke Patey, 'Kenya: African Oil Upstart in Transition' *Oxford Institute for Energy Studies OIES Working Paper* 53, 2014, < <https://www.oxfordenergy.org/publications/kenya-an-african-oil-upstart-in-transition/> >(accessed 17 May 2019)

⁶⁴ EACOP 'Presidents Museveni, Magufuli lay foundation stone for crude oil pipeline construction' 4 September 2019 <<https://eacop.com/author/contentadmin/>> (accessed 3 September 2019)

⁶⁵ John Agliony 'Uganda's Oil Reserves Bring Promise of Work and Infrastructure' *The Financial Times* 27 April 2017 < <https://www.ft.com/content/e057c978-1555-11e7-b0c1-37e417ee6c76>> (accessed 18 August 2019).

⁶⁶ EACOP 'Unlocking East Africa's Potential' East Africa Crude Oil Pipeline < <http://eacop.com/unlocking-east-africas-potential/>> (accessed 19 August 2019)

⁶⁷ EACOP 'Uganda and Tanzania sign Intergovernmental Agreement for Crude Oil Pipeline' East Africa Crude Oil Pipeline < <http://eacop.com/uganda-and-tanzania-sign-inter-governmental-agreement-for-crude-oil-pipeline/>> (accessed 19 August 2019)

⁶⁸ EACOP 'Unlocking East Africa's Potential' East Africa Crude Oil Pipeline < <http://eacop.com/unlocking-east-africas-potential/>> (accessed 19 August 2019)

⁶⁹ TanzaniaInvest, 'Gas' 28 August 2019 <<https://www.tanzaniainvest.com/gas>> (accessed 3 September 2019)

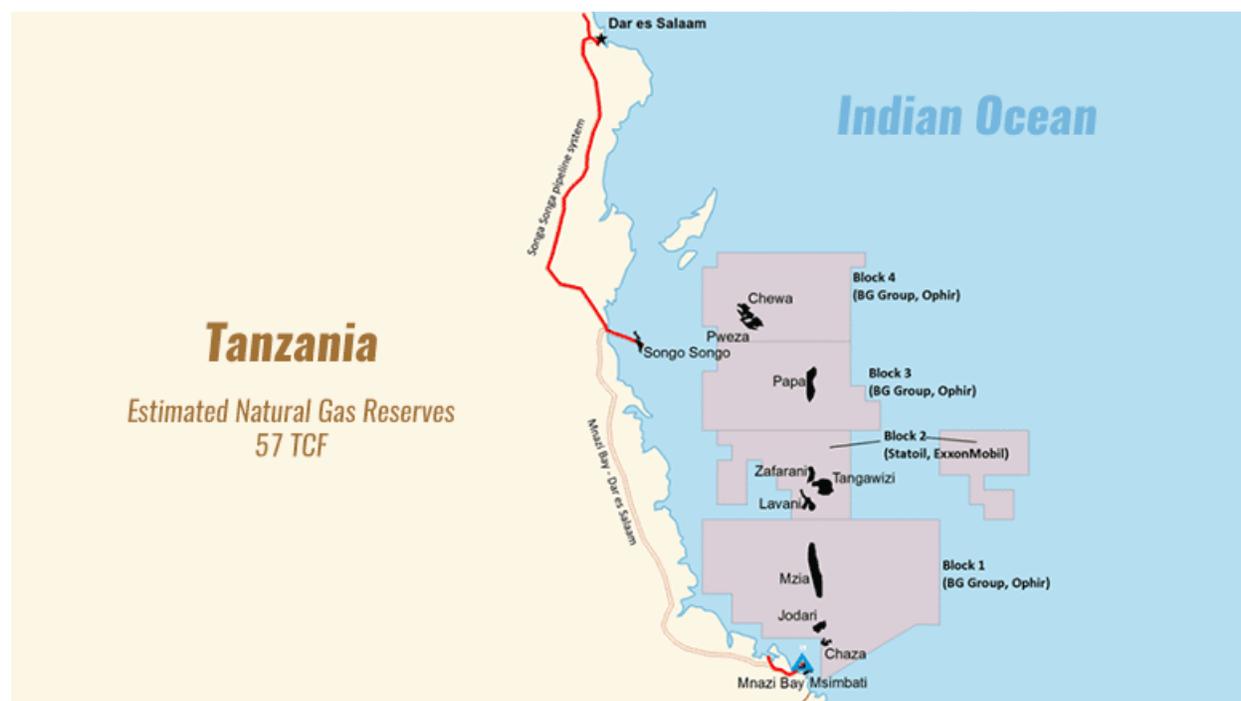
⁷⁰ Siri Lange and Abel Kinyondo "Resource nationalism and local content in Tanzania: Experiences from Mining and Consequences for the Petroleum Sector" *The Extractive Industries and Society* (3) 2016 1095-1104

⁷¹ TanzaniaInvest, 'Gas' 28 August 2019 <<https://www.tanzaniainvest.com/gas>> (accessed 3 September 2019)

Hence, there had been notable interest by various IOCs and NOCs in investment opportunities in Tanzania.⁷²

Figure 1 below shows the major gas projects in Tanzania.

Figure 1 : Major Natural Gas Projects in Tanzania



Source: TanInvest Website⁷³

The Mtwara-Dar gas pipeline’s major off-taker, TANESCO, faces substantial debts, mainly from legacy loans to pay emergency power producers which the World Bank estimated at USD 490 million in 2016.⁷⁴ TANESCO’s high off-taker’s non-payment risk could discourage further investment in large-scale investments as it would be reflected in lending rates that significantly increases the cost of capital.⁷⁵ Moreover, President Magufuli declared in 2016 that TANESCO

⁷² David Ledesma, “East Africa Gas-Potential for Export,” OIES NG 74 (Oxford: The Oxford Institute for Energy Studies, 2013)

⁷³ Tanzania Investment Authority, undated “Gas” <<https://www.tanzaniainvest.com/gas>> (accessed 15 May 2019)

⁷⁴ Peter Bofin and Rasmus Hundsbaek Pedersen ‘Challenging Prospects for Upstream Contracting in Tanzania’ Oxford Energy Forum January 2019 Issue 117 pp 19-22 The Oxford Institute for Energy Studies.<
<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/01/OEF-117.pdf?v=518f4a738816>> (accessed 14 August 2019)

⁷⁵ Ahmed Aly, Magda Moner-Girona, Anders Branth, Pedersen and Steen SolvangJensen ‘Barriers to Large-scale Solar Power in Tanzania’ Energy for Sustainable Development, Volume 48 February 2019 Pp 43-58<
<https://www.sciencedirect.com/science/article/pii/S0973082618310846>> (accessed 14 August 2019)

would be the only power generator which has discouraged further development of the known gas reserves.⁷⁶

The discovery of offshore gas reserves in 2010 and their potential boost to Tanzania's economy prompted the ambitious National Natural Gas Utilisation Master Plan (2016-2045) concerning internal utilisation (i.e. industrial and power generation use) and external utilisation (i.e. regional pipeline exports).⁷⁷ However, for these plans to be realized, there must first be the approval of an LNG project in Tanzania (led by Norway's Equinor) and the satisfaction of local content obligations by offshore operators.⁷⁸ So far, there has been little progress over negotiations between investors and the host government.⁷⁹ Nonetheless, in 2019, Tanzania's energy minister, Medard Kalemani, stated to the parliament that the construction of the LNG project was expected to start in 2022 and conclude in 2028.⁸⁰

The state owns the NNGIP with debt financing from China's Exim Bank as well as grants from the World Bank (USD 300 million) and the AfDB (USD 200 million).⁸¹ However, with NNGIP operating below capacity, the National Audit Office fears loan defaulting, which would threaten the viability of the state oil company.

Natural gas plays a vital role in the region as a cleaner fossil fuel used in the electricity generation alongside renewable and other low carbon energy resources. Since energy access rates are significantly inferior in East Africa, a review of gas exploration, production and export projects is necessary to map out the infrastructure needs of the region, which will be carried out next.

3.5 Chapter Summary

This chapter provided an overview of the East African oil and gas sector with the LAPSSET Corridor, EACOP and the natural gas projects in Tanzania as case studies. It is clear that for these projects to attain their desired socio-economic development goals; the governments

⁷⁶ Peter Bofin and Rasmus Hundsbaek Pedersen 'Challenging Prospects for Upstream Contracting in Tanzania' *Oxford Energy Forum* (2019), 117, pp 19-22 < <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/01/OEF-117.pdf> > (accessed 11 August 2019)

⁷⁷ Peter Bofin and Rasmus Hundsbaek Pedersen 'Challenging Prospects for Upstream Contracting in Tanzania' *Oxford Energy Forum* (2019), 117, pp 19-22 < <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/01/OEF-117.pdf> > (accessed 15 May 2019)

⁷⁸ Peter Bofin and Rasmus Hundsbaek Pedersen 'Challenging Prospects for Upstream Contracting in Tanzania' *Oxford Energy Forum* (2019), 117, pp 19-22 < <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/01/OEF-117.pdf> > (accessed 15 May 2019)

⁷⁹ Peter Bofin and Rasmus Hundsbaek Pedersen 'Challenging Prospects for Upstream Contracting in Tanzania' *Oxford Energy Forum* (2019), 117, pp 19-22 < <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/01/OEF-117.pdf> > (accessed 15 May 2019)

⁸⁰ News Article, Reuters, 'Tanzania says construction of LNG plant to start in 2022' May 2019 < <https://www.reuters.com/article/us-tanzania-lng/tanzania-says-construction-of-lng-plant-to-start-in-2022-idUSKCN1SY1TU> > (accessed 1 September 2019).

⁸¹ Tanzania Investment Authority, [n.d.] "Gas" <<https://www.tanzaniainvest.com/gas>>(accessed 15th May 2019)

involved will have to create a climate conducive to investment that balances their national aspirations and attracts the right investors.

Although there was an initial optimism about gas exploration and production in East Africa, some fundamental issues remain unresolved in terms of the commerciality of LNG projects. These include: the timeline of gas production, LNG export routes, expected revenue flows as well as East Africa's position and competitiveness in the global LNG gas market especially with other new entrants such as Israel.⁸²

The Energy Charter Conference set up the Industry Advisory Panel in 2004 to strengthen dialogue between governments and the private sector on the main directions of the Energy Charter Process with a focus on risk mitigation and improving the business climate. Companies from signatory and observer countries are selected via voluntary applications from the business community, nominations from member countries and invitations from the Secretariat.⁸³ The East African countries would benefit from their involvement in the dialogues at the Industry Advisory Panel. If these countries accede to the ECT they would have the opportunity to engage with the private sector on how their business climate can be improved and how investment risks can be efficiently mitigated.⁸⁴

Chapter 4: Challenges and Opportunities in Energy Infrastructure in East Africa

4.1 Introduction

For there to be a vibrant regional market for energy in East Africa, there must be adequate physical infrastructure. The need for infrastructure is driven by the region's wealth of natural resources as well as high demand from the global markets. Despite the strides made in achieving higher economic activity and global competitiveness, the East African region still grapples with inadequate energy infrastructure that hinders it from attaining the required growth levels as well as significant opportunities for local and international investors to finance physical assets. For the public entities to secure domestic and external investment, they will have to gain market confidence through prioritising projects with clear implementation timelines within politically stable environments to ensure their completion. This is imperative for infrastructure undertakings with long payback periods, as private investors are keen on revenue certainty and the institutional capacity of the relevant governments.⁸⁵

⁸² David Ledesma, 'East Africa Gas-Potential for Export,' The Oxford Institute for Energy Studies, OIES NG 74 (2013) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2013/03/NG-74.pdf>> (accessed 17 May 2019)

⁸³ International Energy Charter 'Industry Advisory Panel' 2015, <<https://energycharter.org/who-we-are/industry-advisory-panel/>> (accessed 9 May 2019)

⁸⁴ Energy Charter Secretariat, 'Energy Charter Industry Advisory Panel', 25 March 2015 <<https://energycharter.org/who-we-are/industry-advisory-panel/>> (accessed 18 August 2019)

⁸⁵ Deloitte US, "Addressing Africa's Infrastructure Challenges"

4.2 Investments in Energy Infrastructure

In sub-Saharan Africa, 600 million people are estimated to lack clean energy, with the majority living in rural areas.⁸⁶ Energy poverty limits African countries' economic opportunities and creates health risks through the use of low-cost, alternative energy sources such as biomass for cooking. Further, energy security impedes the operations of households, schools, hospitals and businesses, thus reducing the quality of life and restricting human capital. Hence, energy poverty is at the core of the sustainable development agenda⁸⁷ underpinned by Sustainable Development Goal 7 on ensuring access to affordable, reliable, sustainable and modern energy for all.⁸⁸

Financing needs in energy infrastructure to address energy poverty in Africa was estimated at USD 63 billion in 2013.⁸⁹ According to a 2017 study, only USD 8 billion was allocated to energy infrastructure, leaving a financing gap of USD 55 billion.⁹⁰ From the USD 8 billion investment, domestic public finance made up nearly half of these investments while external investments accounted for the rest. There is massive potential for climate/green funds in developing countries that target the reduction of GHG emissions and support climate change resilience through renewable energy projects. This however calls for the establishment of functioning energy markets. Outside of South Africa, markets are generally underdeveloped, though this is slowly changing. Also, markets in sub-Saharan Africa are challenged as they have limited access to international capital markets and private equity financing despite their need for long-term debt financing. Local banks in East Africa are unable to supply loan tenors for long-term infrastructure investment, which then requires diversification of funds.

In addition, there are issues with debt sustainability for infrastructure projects. For instance, in Kenya, the Government has been receiving funding from international development partners (particularly China) to finance public sector projects. However, it will not have headroom to borrow beyond a specific limit governed by its fiscal responsibility. Thus, the Kenyan Government should consider an appropriate mix of public and private sector projects to avoid adverse impact on the country's debt sustainability. In that respect, governments and public

⁸⁶ International Energy Agency, 'Energy Access Outlook 2017 From Poverty to Prosperity' <https://www.iea.org/publications/freepublications/publication/WEO2017SpecialReport_EnergyAccessOutlook.pdf> (accessed 3 September 2019)

⁸⁷ International Energy Agency, 'Energy Access Outlook 2017 From Poverty to Prosperity' <https://www.iea.org/publications/freepublications/publication/WEO2017SpecialReport_EnergyAccessOutlook.pdf> (accessed 3 September 2019)

⁸⁸ More information on Sustainable Development Goal 7 can be found at: <https://sustainabledevelopment.un.org/sdg7> (accessed 3 September 2019)

⁸⁹ Amadou Sy and Amy Copley, 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', *Africa Growth Initiative at Brookings Institute Policy Brief* (2017) <https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/> (accessed 17 May 2019)

⁹⁰ Amadou Sy and Amy Copley, 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', *Africa Growth Initiative at Brookings Institute Policy Brief* (2017) <https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/> (accessed 17 May 2019)

authorities in countries like Nigeria, Kenya and Ghana are increasingly supporting public-private partnership (PPP) contracts, such as in the enactment of new laws. In these contracts, the public entities retain ownership of the assets while the private sector is involved in various degrees concerning financing, construction, operations and maintenance.⁹¹ Politically, PPPs generally enable quicker decision-making process and increase project transparency and oversight.⁹² PPPs are critical as concession contracts in sub-Saharan Africa face higher dispute risks than other regions due to poor public investment management and lower capacity in project risk assessment.⁹³

In search for a solution, developing countries are also exploring overseas listings as it is difficult to raise equity for new generation projects. For instance, utilities with proven track records, cash flows and profitability can be listed to raise funds for new projects. They would require adherence to international accounting and reporting standards. A listing would entrench corporate governance practices and transparency because of various disclosure requirements.

External financing for African infrastructure includes Official Development Financing (ODF) and Private Participation in Infrastructure (PPI) with Chinese official funding accounting for 97% of all external investments.⁹⁴ Emerging markets like Brazil, India and the Arab states play a minor role in African infrastructure financing but this could change in the future with the development of organisations like the BRICS' New Development Bank. A 2017 study noted that the levels of external funding in sub-Saharan Africa tripled between 2004 and 2012 primarily from the World Bank and AfDB.⁹⁵ Private investment increased to over 50% and as mentioned above, China has become a leading bilateral source of funding.⁹⁶ Growth in PPI in the energy sector is accelerating faster than others, driven by investments in electricity. Notably, these

⁹¹ Patrick Sabol and Robert Puentes, 'Private Capital, Public Good: Drivers of Successful Infrastructure Public-Private Partnerships', *Brookings Institute*, 2014, <https://www.brookings.edu/wp-content/uploads/2016/07/BMPP_PrivateCapitalPublicGood.pdf> (Accessed 17 May 2019)

⁹² Deloitte, "Addressing Africa's Infrastructure Challenges" [n.d.] <<https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Energy-and-Resources/dttl-er-africasinfrastructure-08082013.pdf>> (accessed 17 May 2019)

⁹³ Manabu Nose, 'Enforcing Public-Private Partnership Contract: How do Fiscal Institutions Matter' *International Monetary Fund*, IMF Working Paper WP/17/243, 2017, <<https://www.imf.org/en/Publications/WP/Issues/2017/11/15/Enforcing-Public-Private-Partnership-Contract-How-do-Fiscal-Institutions-Matter-45353>>(accessed 17 May 2019)

⁹⁴ Amadou Sy and Amy Copley, 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', Africa Growth Initiative at Brookings Institute Policy Brief, April 2017 <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>> (accessed 15 August 2019)

⁹⁵ Amadou Sy and Amy Copley, 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', Africa Growth Initiative at Brookings Institute Policy Brief, April 2017 <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>> (accessed 15 August 2019)

⁹⁶ Amadou Sy and Amy Copley, 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', Africa Growth Initiative at Brookings Institute Policy Brief, April 2017 <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>> (accessed 15 August 2019)

investments target generation rather than transmission and distribution, leaving distribution financing to alternative funding sources.⁹⁷

Chinese support in the form of public lending through the China Export-import Bank (China Exim Bank) has helped integrated solutions to be found in power generation capacity and transmission and distribution, including cross-border transmission lines between Ethiopia and Kenya.⁹⁸

China has been criticised for being lax in consistently applying the World Bank social and environmental safeguards and failing to consider key institutional and operational issues while engaging in African infrastructure projects like the Lamu coal project.⁹⁹ Nonetheless, despite such criticism, China has shown that it is open to cooperating with international and African partners.¹⁰⁰ It has played a role in founding the BRICS' New Development bank and has also partnered with the African Development Bank on the Africa Growing Together Fund.¹⁰¹

A further issue in energy infrastructure investments is how to prioritise energy projects – grid or off-grid, renewable or carbon-intensive. The discussion is still ongoing, and the trade-offs are daunting.¹⁰² Securing finance for large-scale renewable energy projects in East Africa is a major obstacle. The initial capital investment involves high sunk costs for the equipment and installations. Thereafter, lower capital flows are required for maintenance and operations.¹⁰³ It takes at least five years for energy projects to reach a financial close as evidenced in the Lake Turkana Wind project which took nine years, while the Corbetti geothermal project's final

⁹⁷ Amadou Sy and Amy Copley , 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', Africa Growth Initiative at Brookings Institute Policy Brief, April 2017 <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>> (accessed 15 August 2019)

⁹⁸ Amadou Sy and Amy Copley , 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', Africa Growth Initiative at Brookings Institute Policy Brief, April 2017 <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>> (accessed 15 August 2019)

⁹⁹ Jill van de Walle 'China's Empty Promises for Green Energy in Africa', The Diplomat, 26 September 2018 , <<https://thediplomat.com/2018/09/chinas-empty-promises-of-green-energy-for-africa/>> (accessed 17 May 2019)

¹⁰⁰ Amadou Sy and Amy Copley , 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', *Africa Growth Initiative at Brookings Institute Policy Brief* , 2017, <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>>(accessed 17 May 2019)

¹⁰¹ Amadou Sy and Amy Copley , 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', *Africa Growth Initiative at Brookings Institute Policy Brief* , 2017, <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>>(accessed 17 May 2019)

¹⁰² Amadou Sy and Amy Copley , 'Closing the Financing Gap for African Energy Infrastructure: Trends, Challenges and Opportunities', Africa Growth Initiative at Brookings Institute Policy Brief , 2017, <<https://www.brookings.edu/research/closing-the-financing-gap-for-african-energy-infrastructure-trends-challenges-and-opportunities/>>(accessed 17 May 2019)

¹⁰³ Bruce Usher, 'Renewable Energy: A Primer for the twenty-First Century' 2019, Columbia University Press

investment decision exceeded seven years.¹⁰⁴ Nonetheless, the falling prices of solar and wind equipment, increased consumer demand for off-grid solutions as well as the integration of mobile phone technology have seen the rise of innovative solutions such as Mkopa Solar pay-as-you-go platform.¹⁰⁵ Off-grid projects can offer a significant solution for energy access in remote communities, while reliable grid-based electricity is pivotal in the urban areas as a development catalyst in the region.¹⁰⁶

Despite progress, there is much ground to cover on energy access in Africa. A further hindrance to the uptake of energy investments is low market confidence for promoting large-scale renewable energy solutions. Many countries, including the EAC members, need to provide predictable tariff regimes, simplified licensing procedures, standardised 'technology-based' power purchase agreements as well as practical energy planning tools to further attract the needed investments and create functioning energy markets for the benefit of consumers.

4.3 Regulatory Environment and Institutional Quality

The East African region has a relatively stable legislative and regulatory framework for investors. However, its political climate remains primarily unstable due to the country's long history with tribalism and corruption. This has had knock-on effects when dealing with government bureaucracy, which reduces effectiveness within state institutions.¹⁰⁷

4.3.1 Corruption

African democracies tend to rely on personal appeal at the ballot rather than a coherent party-platform backed by credible promises. The reliance on patronage and clientelism for political survival influences the lack of accountability mechanisms between campaign trail promises and the consequences of being voted out of political office.

According to the Transparency International's 2018 Corruption Perception Index, Kenya ranked 144th out of 180 countries globally, behind Tanzania at 99th and Rwanda at 48th.¹⁰⁸ Uganda was a couple of places lower at 149, while Burundi ranked 170 out of 180 countries. Corruption is often associated with collusion, bribes, inducements, political interferences, lack of

¹⁰⁴ Emma Gordon, 'The Politics of Renewable Energy in East Africa' *Oxford Institute for Energy Studies*, OIES Working Paper EL 29, 2018, < <https://www.oxfordenergy.org/publications/politics-renewable-energy-east-africa/>> (accessed 15 August 2019)

¹⁰⁵ M-Kopa, 'About' [n.d.] <<http://solar.m-kopa.com/about/>> (accessed 15 August 2019); Lapo Pistelli, 'The New African Energy Landscape: Catching the Changing Tide' *Oxford Energy Forum* January 2019 Issue 117 pp 27-30 The Oxford Institute for Energy Studies

¹⁰⁶ Lapo Pistelli, 'The New African Energy Landscape: Catching the Changing Tide' *Oxford Energy Forum* January 2019 Issue 117 pp 27-30 The Oxford Institute for Energy Studies

¹⁰⁷ Emma Gordon, 'The Politics of Renewable Energy in East Africa' *Oxford Institute for Energy Studies*, OIES Working Paper EL 29, 2018, < <https://www.oxfordenergy.org/publications/politics-renewable-energy-east-africa/>> (accessed 15 August 2019)

supervision and issuance of false certificates of completion.¹⁰⁹ This may create mistrust among communities about the reliability of new energy sources, for instance renewable plants, and they may resist to switch from unhealthy fuels such as charcoal.

An important example is Kenya. As a country that plans to generate hydrocarbon revenues, it is vital for Kenya to address its institutional weaknesses early on to prevent it from assuming the characteristics of a failed petro-state.¹¹⁰ There is a growing consensus among scholars that oil production in countries with weak institutions tend to have higher incidences of violent conflicts.¹¹¹

Ethno-politics remains at the core of Kenya's democracy. Social fragmentation has remained rife and is the leading cause of inequitable resource distribution in the country. Also, oil exploration regions like Turkana country tend to have multiple governing institutions: cultural institutions, various ethnic groups and local governments, which may make accountability and transparency difficult to establish and maintain.

Land is an emotive issue in Kenya, and with the increased discovery of natural resources, there has been increased land titling, fraudulent land sales, and the fear of land grabs by the government and IOCs without compensation. Speculative land buying related to oil discovery by newcomers is a common practice that frustrates local communities.

4.3.2 Legal and Regulatory Structure (Rule of Law): Kenya

Kenya's plans for the energy sector are laid out in key policy documents such as the Vision 2030 Development Strategy, the National Energy and Petroleum Plan 2015 and the Rural Electrification Master plan.¹¹² More recently, President Kenyatta's administration is implementing the Big 4 Agenda that focuses on manufacturing, food security, affordable housing and healthcare; all of which are underpinned by the need for energy security.¹¹³ In terms of renewable energy, the Kenya National Climate Change Action Plan 2013-2017 and 2018-2022,

¹¹⁰ Patricia I. Vasquez, 'Kenya at Crossroads: Hopes and Fears Concerning the Development of Oil and Gas Reserves', *International Development Policy*, 2013, < <https://journals.openedition.org/poldev/1646>> (accessed 17 May 2019)

¹¹¹ Michael L. Ross, 'Blood Barrels: Why Oil Wealth Fuels Conflict'. *Foreign Affairs*, 2008, 87,3 pp 2-8 <<https://www.sscnet.ucla.edu/polisci/faculty/ross/papers/other/BloodBarrelsFA.pdf>> (Accessed 27 August 2018)

¹¹² Republic of Kenya Ministry of Energy and Petroleum 'DRAFT NATIONAL ENERGY AND PETROLEUM POLICY' 20 January 2015 https://www.ketraco.co.ke/opencms/export/sites/ketraco/learn/maps/Legal_Documents/National_Energy_and_Petroleum_Policy.pdf (accessed 3 September 2019)

¹¹³ Financial Times, 'Kenya's president eyes legacy with Big Four plan for economy' 28 June 2018 <https://www.ft.com/content/1ccf8fd4-658d-11e8-bdd1-cc0534df682c> (accessed 3 September 2019)

and the Kenya Green Economy Strategy and Implementation Plan (GESIP) 2016-2030 are also worth noting.¹¹⁴

In a bid to modernise the energy sector, President Kenyatta assented to the Petroleum Act 2019¹¹⁵ and Energy Act 2019¹¹⁶ in March 2019. The Petroleum Act 2019 repeals the Petroleum (Exploration and Production) Act, Chapter 308 that came into force in 1984.¹¹⁷ It consolidates all the laws in the oil and gas value chain. Previously, the upstream activities were regulated by the former Petroleum Act while midstream and downstream activities were regulated by the former Energy Act 2006.¹¹⁸

Under section 10 of the Petroleum Act 2019, the Cabinet Secretary of the Petroleum Ministry of Kenya has several functions, including the negotiating, entering into and overseeing of petroleum agreements on behalf of the national government.¹¹⁹ However, as also stated in that same section, these functions are subject to the recommendations of the National Upstream Petroleum Advisory Committee, which consists of the Attorney General and representatives from the Petroleum Ministry, National Oil Corporation and National Treasury etc. The section further states that the Cabinet Secretary is also given recommendations from the Energy Regulatory Commission, although it appears that the Cabinet Secretary may reject those recommendations in writing. Section 50 of that Act stipulates local content requirements that have been long debated in the country. The section provides that the cost of local content should be calculated according to the prevailing market rate. This encourages the procurement of local content and promotes fiscal viability of the projects.

Additionally, the Petroleum Act 2019 requires the model production sharing contract (PSC) included in the law to be used the Cabinet Secretary when entering into a petroleum agreement.¹²⁰ The model PSC includes extensive obligations including the application of investor friendly dispute mechanisms such as the United Nations Commission on International

¹¹⁴ Government of Kenya Ministry Of Environment And Forestry ‘National Climate Change Action Plan (Kenya): 2018-2022’ 2018 < <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/10/8737.pdf> > (accessed 3 September 2019)

¹¹⁵ Government of Kenya, The Petroleum Act No. 2 of 2019, 14 March 2019 < http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2019/PetroleumAct_No._2of2019.pdf > (accessed 3 September 2019)

¹¹⁶ Government of Kenya, The Energy Act No. 1 of 2019, 14 March 2019 < https://kplc.co.ke/img/full/o8wccHsFPaZ3_ENERGY%20ACT%202019.pdf > (accessed 3 September 2019)

¹¹⁷ Government of Kenya, Petroleum (Exploration and Production) Act, Chapter 308, Revised Edition 2012 (1984) < <http://extwprlegs1.fao.org/docs/pdf/ken64182.pdf> > (accessed 3 September 2019)

¹¹⁸ Government of Kenya, The Energy Act No. 12 of 2006 < http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/EnergyAct_No12of2006.pdf > (accessed 3 September 2019)

¹¹⁹ Government of Kenya, The Petroleum Act 2019, Section 10 < http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2019/PetroleumAct_No._2of2019.pdf > (accessed 19 August 2019)

¹²⁰ Government of Kenya, The Petroleum Act 2019, Schedule 18 ‘Model Production Sharing Contract’ < http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2019/PetroleumAct_No._2of2019.pdf > (accessed 19 August 2019)

Trade Law (UNCITRAL) arbitration that is also included under the arbitration mechanisms of the ECT.¹²¹

The objective of the reforms introduced by Petroleum Act 2019 is to enable the country to remain competitive by attracting investors as the country is in its final stages of making its first crude oil sales under the Early Oil Pilot Scheme (EOPS).

The Energy Act 2019 not only repealed Energy Act No. 12 of 2006 but also consolidated all laws related to the Kenyan energy sector. The law restructured three key institutions tasked with managing and regulating the sector: The Rural Electrification Authority became the Rural Electrification and Renewable Energy Corporation (REREC); the Energy Regulatory Commission (ERC) became Energy, and Petroleum Regulatory Authority (EPRC); and Kenya Nuclear Energy Board (KNEB) became the Nuclear Power and Energy Agency (NPEA).¹²² The Energy Act 2019 also replaces feed-in tariffs (FIT) with a competitive auction system and introduces net-metering that seek to reduce consumer prices. The FIT policy of 2008 is currently still implemented as the Ministry of Energy and Energy and Petroleum Regulatory Authority have yet to formulate the regulations for the administration and implementation of royalties charged on licences for geothermal resources.¹²³ Moreover, the Energy Act 2019 states that the Cabinet Secretary can vary or waive the amount of royalties in the interest of promoting investment and development of resources. The Cabinet Secretary is also required to survey and create a renewable energy resources inventory and a resource map later in 2019. Once completed, it is expected to reduce the burden for prospective investors in conducting exploratory and feasibility studies.

The above-mentioned ongoing liberalisation of the electricity market is welcome as it will contribute to the decentralisation of power and encourage private investments in the electricity transmission and distribution lines in the country. It has the potential to foster greater competition over pricing, thus producing better results for the consumers. For investors, the new legislation provides more stability, but investors are also likely to yield lower tariffs and possibly reduce their profit margins. Competitive auctions have proven to be highly effective in South Africa and Zambia, and have produced record low tariffs.¹²⁴

¹²¹ United Nations Commission on International Trade Law, UNCITRAL Arbitration Rules (as revised in 2010) (Apr. 2011) <http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/2010Arbitration_rules.html>

¹²² Government of Kenya, The Energy Act 2019, Part III <http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2019/EnergyAct__No.1of2019.PDF> (accessed 19 August 2019)

¹²³ Peninah Munyaka, 'Highlights of Kenya's Energy Act 2019' [n.d] Rodl & Partner <<https://www.rodnl.com/insights/erneuerbare-energien/2019-05/highlights-of-kenyas-energy-act-2019>> (accessed 19 August 2019)

¹²⁴ Emma Gordon, 'The Politics of Renewable Energy in East Africa', *The Oxford Institute for Energy Studies*, OIES Working Paper EL 29, 2018, <<https://www.oxfordenergy.org/publications/politics-renewable-energy-east-africa/>> , (accessed 17 May 2019)

Moreover, with the ongoing intra-regional transmission connections with Ethiopia, Uganda, Tanzania and Southern African Development Community Members (as highlighted in previous sections), there will be a need for more detailed framework to govern the regional energy markets like the ECT.

The presence of these Acts depicts that the country has a well-developed legal and regulatory framework that will pique the interest of international investors. Yet, a multilateral umbrella framework is still desirable.

4.3.3 Restrictions on Foreign Direct Investments

The quality of a country's institutions determines the country's ability to attract investors and benefit from its natural resources. Often, investment attractiveness depends on a country's taxation mechanism. Therefore, an ineffective system that is marked by tax evasions and arbitrary exemptions, coupled with political patronage, would lead to increased levels of corruption. Similarly, opacity in production sharing agreements (PSAs) tends to breed distrust among stakeholders, especially when details of the revenue sharing model are not in the public domain.¹²⁵ While, PSAs often include beneficial stipulations to host countries such as local content, social responsibility and environmental security, the sustainability of their benefits depends on the host country's implementation capacity. However, PSAs are perceived by some to benefit multinational oil corporations instead of the host countries due to the information asymmetry between the two parties.¹²⁶

Governments mainly restrict private rights through either the law of eminent domain, where it confiscates property to the state or designated agency or police powers, where it uses force for the sake of public interests.¹²⁷ When the law of eminent domain is invoked, people are evicted and rarely compensated.¹²⁸ The state may also derive its authority from various pieces of legislation such as in Kenya where the Environmental Management and Co-ordination Act of 1999 controls land use for the sake of environmental management and sustainable development.¹²⁹

¹²⁵ David Ross Olanya, 'Will Uganda Succumb to the Resource Curse? Critical Reflections', *The Extractives Industry and Society* 2015, 2,1,pp. 46-55

¹²⁶ Ingilab Ahmadov, Anton Artemyev, Kenan Aslanly, Ibragim Rzaev, Ilkham Shaban, 'How to scrutinise a Production Sharing Agreement.' *International Institute for Environment and Development*, Adapted from Ahmadov, I. et al. 2009. (title in Russian) Soros Foundation-Kazakhstan, Kazakhstan. <<http://pubs.iied.org/pdfs/16031IIED.pdf>> (accessed October 17, 2018)

¹²⁷ Focus on Land in Africa, 2013, <<http://www.focusonland.com/countries/government-control-of-private-land-use-in-kenya/>> (accessed 17 May 2019)

¹²⁸ Focus on Land in Africa, 2013, <<http://www.focusonland.com/countries/government-control-of-private-land-use-in-kenya/>> (accessed 17 May 2019)

¹²⁹ Government of Kenya, Environmental Management and Co-ordination Act, Chapter 387, Revised Edition 2012 [1999] <<http://extwprlegs1.fao.org/docs/pdf/ken41653.pdf>> (accessed 3 September 2019)

International investors usually require express and concrete assurance that their rights are protected as much as domestic investors, in order to build their market confidence. Also, a balance has to be struck by governments between attracting investment and the level of regulation.

Recently, Tanzania has put in place various laws with sweeping changes in oil and gas operations. They include the amended Petroleum Act 2015, Oil and Gas Revenue Management 2015, Tanzania Mining Act 2017 and the Petroleum (Local Content) Regulations 2017.¹³⁰ The wave of resource nationalism legislation in the Tanzanian mining sector since 2017 has been subject to controversy mostly over local content policies and conflicts among stakeholders. The deep-sea natural gas discoveries in 2010 coincided with and to some extent spurred the country's wave of resource nationalism.¹³¹ Initially, the institutional reforms over this period strengthened the state's position in the market but over time these changes may provide disincentives.

In 2017, President Magufuli assented to several laws, including the Natural Wealth and Resources Contracts law that allows the government to renegotiate or remove questionable terms from agreements that are 'prejudicial' (in whole or in part) to Tanzanian interests.¹³² A select parliamentary committee investigating Tanzania's contracts with IOCs in the gas sector reported a USD 130 million loss in the gas sector due to contract irregularities.¹³³ In response, Tanzania has expressed that it may renegotiate its natural gas contracts if its review finds unfavourable terms.¹³⁴ President Magufuli also ratified the Natural Wealth and Resources (Permanent Sovereignty) Act 2017 (Sovereignty Act) that requires parliamentary approval for future agreements to secure the interests of Tanzanians.¹³⁵ The law also restricts exports of raw minerals, repatriation of funds and access to an international dispute resolution mechanism.¹³⁶ The Sovereignty Act requires that any natural resource agreement including gas must provide for guaranteed returns into the Tanzanian economy. However, this clause is

¹³⁰ The Citizen 'Tanzania Attorney General Warns Oil and Gas Firms', The Citizen Tanzania, 8 July 2018 <<https://www.thecitizen.co.tz/news/AG-warns-oil-and-gas-firms/1840340-4652148-blklyiz/index.html>> (accessed 14 August 2019)

¹³¹ Peter Bofin and Rasmus Hundsbaek Pedersen 'Challenging Prospects for Upstream Contracting in Tanzania' *Oxford Energy Forum* (2019), 117, pp 19-22 <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/01/OEF-117.pdf>> (accessed 15 May 2019)

¹³² Government of Tanzania, Natural Wealth and Resources Contract (Review and Re-Negotiation of Unconscionable Terms) Act No. 6 of 2017 (7 July 2017) <<https://tanzlii.org/tz/legislation/act/2019/6>> (accessed 3 September 2019)

¹³³ Assaye Risk '20180608-Tanzania Special Committee Report: Oil and Gas' <<https://www.assayerisk.com/20180608-tanzania-special-committee-report-oil-and-gas/>> (accessed 3 September 2019)

¹³⁴ Kenneth Karuri, 'Tanzania May Renegotiate Gas Contracts It Deems Unfavourable' 6 February 2019, Bloomberg <<https://www.bloomberg.com/news/articles/2019-02-06/tanzania-mulls-renegotiating-gas-contracts-it-deems-unfavorable>> (accessed 9 May 2019)

¹³⁵ Government of Tanzania, The Natural Wealth and Resources (Permanent Sovereignty) Act No. 5 of 2017 (7 July 2017) <<https://tanzlii.org/tz/legislation/act/2017/5-0>> (accessed 3 September 2019)

¹³⁶ Kenneth Karuri, 'Tanzania May Renegotiate Gas Contracts It Deems Unfavourable' 6 February 2019, Bloomberg, <<https://www.bloomberg.com/news/articles/2019-02-06/tanzania-mulls-renegotiating-gas-contracts-it-deems-unfavorable>> (Accessed 9 May, 2019)

seemingly vague as it may be interpreted as a minimum limit of oil and gas royalties or a minimum return on state equity.¹³⁷ It could also be interpreted as going beyond fiscal revenues such as participating in corporate social responsibility (CSR).¹³⁸

4.3.4 Sovereignty Disputes

The main issues arising from cross-border energy trade revolve around the following: reconciling the interests of the different state parties involved; lack of an overarching legal regime to regulate the activities; rent sharing; and potential disruption by the transit country.¹³⁹ With significant financial gains at stake, political disputes concerning the sovereignty of transboundary hydrocarbons resources are common. The risk of such conflicts often deters investors and can make the financing of exploration and development activities impracticable.

Sovereignty disputes can also affect exploration projects in the East Africa region. For instance, there is an ongoing maritime border dispute between Kenya and Somalia which was referred to the International Court of Justice (ICJ) in 2014.¹⁴⁰ The dispute concerns a narrow triangle in the Indian Ocean of about 100,000 square kilometres that supposedly has a large oil and gas deposit. Such disputes may provide grounds for political risks which would deter exploration companies and investors from making substantial acquisitions.¹⁴¹ In Africa, regional co-operation therefore plays a significant role in increasing the potential scope of upstream oil and gas developments, creating a larger and more functional market environment for all relevant actors.

4.4 Regional Infrastructure Projects: Challenges and Opportunities

There are also some challenges to regional cooperation in East Africa. The EAC's ambitions for regional cooperation in natural resource development are admirable, but implementation may be problematic. While member states agree on the desired outcomes to increase access and

¹³⁷ Nicola Woodroffe, Matt Genasci and Thomas Scurfield, 'Tanzania's New Natural Resources Legislation: What Will Change?' Briefing, August 2017 Natural Resource Governance Institute, <<https://resourcegovernance.org/sites/default/files/documents/tanzania-new-natural-legislation-what-will-change.pdf>> (accessed 14 August 2019)

¹³⁸ Nicola Woodroffe, Matt Genasci and Thomas Scurfield, 'Tanzania's New Natural Resources Legislation: What Will Change?' Briefing, August 2017 Natural Resource Governance Institute, <<https://resourcegovernance.org/sites/default/files/documents/tanzania-new-natural-legislation-what-will-change.pdf>> (accessed 14 August 2019)

¹³⁹ Ekpen James Omonbude, *Cross-border oil and Gas Pipelines and the Role of the Transit Country: Economics, Challenges and Solutions*. (Basingstoke: Palgrave Macmillan, 2013)

¹⁴⁰ David Auty and Carlos Canales, 'Cross-Border Reserves Development Benefits From Collaboration on Rules, Fiscal Regimes' *Oil and Gas Journal* 2016, 114, 9 <<https://www.ogj.com/articles/print/volume-114/issue-9/exploration-and-development/cross-border-reserves-development-benefits-from-collaboration-on-rules-fiscal-regimes.html>> (accessed 17 May 2019).

¹⁴¹ David Auty and Carlos Canales, 'Cross-Border Reserves Development Benefits From Collaboration on Rules, Fiscal Regimes' *Oil and Gas Journal* 2016, 114, 9 <<https://www.ogj.com/articles/print/volume-114/issue-9/exploration-and-development/cross-border-reserves-development-benefits-from-collaboration-on-rules-fiscal-regimes.html>> (accessed 17 May 2019).

infrastructure for growth, in many cases, the political mindset may give priority to national interest at the expense of collaboration.

On pipeline matters, for instance, the Uganda - Tanzania pipeline route excludes Kenya.¹⁴² Initially, both Tanzania and Kenya were invited to submit a bid to be included in the project. Subsequently however, Kenya was destabilized by terrorism and inter-communal violence, which contributed to the change in decision by the Ugandan government to route the pipeline through Tanzania only.¹⁴³ Despite this, Tanzania's government renewed its pledge to export natural gas to Kenya in 2019 which they hope to start delivering from 2022.¹⁴⁴ These discussions have been ongoing since 2006 when the EAC identified the need for a gas pipeline from Dar es Salaam to Tanga, Zanzibar and Mombasa.¹⁴⁵ In 2011, a feasibility study recommended that the project should either be established as a jointly owned special purpose vehicle in the form of a commercial venture or a public-private partnership.¹⁴⁶ However, as of today, it is not known how Tanzania would fund this infrastructure project.¹⁴⁷ Kenya welcomes this development as it will not only decrease trade tensions between the two countries but also contribute to Kenya's Big 4 development agenda.

In the electricity sector, there are a number of collaborative developments. For instance, the USD 309.26 million Kenya-Tanzania Power Interconnection project has the potential to ensure smooth power transmissions in the coming years between the two countries.¹⁴⁸ The project that is jointly financed by the AfDB and the Japan International Cooperation agency (JICA) is expected to begin in 2020.¹⁴⁹ In addition, Kenya is planning to extend its transmission line to Ethiopia while Tanzania plans to join the Southern Africa Power Pool.¹⁵⁰

¹⁴² KPMG East Africa, 'East Africa Regional Cooperation in Oil and Gas: Possible Reality?' , 2016, <http://www.blog.kpmgafrica.com/east-africa-regional-cooperation-in-oil-gas-possible-reality/> (accessed 17 May 2019)

¹⁴³ Adjoa Anyimadu, 'Tanzania Pipeline Deal Reflects Uganda's Practical and Strategic Concerns' 4 May 2016 <<https://www.chathamhouse.org/expert/comment/tanzania-pipeline-deal-reflects-uganda-s-practical-and-strategic-concerns>> (accessed 3 September 2019)

¹⁴⁴ James Anyanzwa ' Gas Deal to Seal Kenyatta, fix trade disputes' The East Africa 14 July 2019< <https://www.theeastafrican.co.ke/news/ea/Gas-deal-to-seal-uhuru-kenyatta-legacy-fix-trade-disputes/4552908-5194860-eplwfg/index.html>> (accessed 15 August 2019)

¹⁴⁵ Josepg Mwanunyange, ' Tanzania to Export Gas to Kenya; The East African 14 September 2008 < <https://www.theeastafrican.co.ke/business/2560-470382-w0uiwo/index.html>> (accessed 15 August 2019)

¹⁴⁶ James Anyanzwa ' Gas Deal to Seal Kenyatta, fix trade disputes' The East Africa 14 July 2019< <https://www.theeastafrican.co.ke/news/ea/Gas-deal-to-seal-uhuru-kenyatta-legacy-fix-trade-disputes/4552908-5194860-eplwfg/index.html>> (accessed 15 August 2019)

¹⁴⁷ James Anyanzwa ' Gas Deal to Seal Kenyatta, fix trade disputes' The East Africa 14 July 2019< <https://www.theeastafrican.co.ke/news/ea/Gas-deal-to-seal-uhuru-kenyatta-legacy-fix-trade-disputes/4552908-5194860-eplwfg/index.html>> (accessed 15 August 2019)

¹⁴⁸ African Development Fund, 'Kenya – Tanzania Power Interconnection Project Appraisal Report Revised Version' February 2015 <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Boards-Documents/REV-Multinational__AR__Kenya_-_Tanzania__Power__interconnection__Project.pdf>(accessed 3 September 2019)

¹⁴⁹ Bob Karashani, 'Tanzania – Kenya joint power project kicks into high gear', The East African 9 February 2019 < <https://www.theeastafrican.co.ke/business/Tanzania-Kenya-joint-electricity-project/2560-4974190-iuwd57/index.html>> (accessed 15 August 2019) ; Mozambique Mining Post. 'Africa Energia, Tanzania facilitates

4.5 Community Interests and Conflict

The 2010 Kenyan constitution embraced the empowerment of local authorities to address local needs better.¹⁵¹ Various legal and regulatory frameworks may be put in place to protect the local communities, however these should be designed in meaningful communications with all the stakeholders. Taking into account the information asymmetry between local communities and the IOCs, capacity building and technical assistance by international organisations play a vital role. Addressing community interest is particularly timely in newly resource rich countries of East Africa. For instance, in 2019, in relation to the development of oil deposits in the Turkana region, the civil society in Kenya requested stronger community engagement for oil revenues to bring sustainable development to north-western Kenya.¹⁵² Early engagement of impacted communities in the revenue allocation mechanisms, environmental and social impact assessment studies, and decommissioning and rehabilitation studies, should ideally be regulated under binding institutional frameworks guided by international standards. One such instrument is the report prepared by the United Nations Development Programme and its partners which outlines how the oil and gas sector could contribute to nations reaching the Sustainable Development Goals.¹⁵³

Absence of effective community engagement can also trigger conflict and result in the suspension of oil, gas and electricity sector operations. The risk of such community conflict could pose a disincentive for investments. For instance, Kenya's North-eastern and coastal communities have perennial socio-political grievances with the national government that have yet to be resolved since independence. Internal politics can be a significant security deterrent for the oil industry if the planned pipeline and other downstream infrastructure are targeted. The

the Construction of Joint Power Project' 12 February 2019, <<https://mozambiqueiningpost.com/2019/02/12/africa-energia-tanzania-facilitates-construction-of-joint-power-project/>> (accessed 15 August 2019)

¹⁵⁰ Bob Karashani, 'Tanzania – Kenya joint power project kicks into high gear', The East African 9 February 2019 <<https://www.theeastafrican.co.ke/business/Tanzania-Kenya-joint-electricity-project/2560-4974190-iuwd57/index.html>> (accessed 15 August 2019) ; Mozambique Mining Post. 'Africa Energia, Tanzania facilitates the Construction of Joint Power Project' 12 February 2019, <<https://mozambiqueiningpost.com/2019/02/12/africa-energia-tanzania-facilitates-construction-of-joint-power-project/>> (accessed 15 August 2019)

¹⁵¹ Government of Kenya, 'Constitution of Kenya, 2010' <<http://kenyalaw.org:8181/exist/kenyalex/actview.xql?actid=Const2010>> (accessed 3 September 2019)

¹⁵² News Article, DEVEX, Communities flag concerns over Kenya oil project, April 2019 <<https://www.devex.com/news/communities-flag-concerns-over-kenya-oil-project-94672>> (accessed 1 September 2019)

¹⁵³ The United Nations Development Programme (UNDP), the International Finance Corporation (IFC) and IPIECA, the global oil and gas industry association for environmental and social issues, Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas (2017) <<https://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/mapping-the-oil-and-gas-industry-to-the-sdgs--an-atlas.html>> (accessed 01 September 2019)

situation is further exacerbated by the incursion of the Somalia-based militant group, Al-Shabaab, that could delay large-scale investments¹⁵⁴

4.6 Environmental Concerns and Hazards

Following the 2007 BP Deepwater Horizon Oil Spill, stakeholders in the energy sector have become more vigilant in addressing environmental hazards. The East African region hosts landmarks such as the Great Rift Valley and the Indian Ocean, which both present opportunities and challenges in the transportation of petroleum products. Although onshore operations are more visible to the surrounding communities, Joint Developments Agreements (JDAs) and related agreements are required for the establishment of environmental mitigation mechanisms for both onshore and offshore operations.¹⁵⁵

Most transboundary resource agreements tend to include health, safety and environment (HSE) rules as these provide a security of investments. In addition to JDAs, holistic environmental impact assessments (EIA) are also deployed to assess the impact of relevant energy sector activities on the local environment. In Africa, over the last decade, EIA have become a legal requirement in many countries.¹⁵⁶ For instance, Kenya, Tanzania, Mozambique, South Africa, and Angola have all adopted an EIA regulatory regime.¹⁵⁷ However, with climate change, the impacts of extreme weather events such as tsunamis, floods and landslides are becoming more widespread. Therefore, the challenge is now to upgrade the existing EIA processes to integrate implications on climate change and integrate more robust stakeholder involvement.¹⁵⁸

Another issue in this context is the protection of historical and cultural heritage. For example, the Stiegler's Gorge Hydro Power project has been subject to criticism as it threatens the Selous

¹⁵⁴ Luke Patey, 'Kenya: African Oil Upstart in Transition' Oxford Institute for Energy Studies, OIES Working Paper 53, 2014 <<https://www.oxfordenergy.org/publications/kenya-an-african-oil-upstart-in-transition/>> (accessed 17 May 2019)

¹⁵⁵ David Auty and Carlos Canales, 'Cross-Border Reserves Development Benefits From Collaboration on Rules, Fiscal Regimes' Oil and Gas Journal 2016, 114, 9 <<https://www.ogj.com/articles/print/volume-114/issue-9/exploration-and-development/cross-border-reserves-development-benefits-from-collaboration-on-rules-fiscal-regimes.html>> (accessed 17 May 2019).

¹⁵⁶ Cristina Rebelo and José Guerreiro, Comparative Evaluation of the EIA Systems in Kenya, Tanzania, Mozambique, South Africa, Angola, and the European Union, Journal of Environmental Protection, 2017, 8, 603-636 <<https://pdfs.semanticscholar.org/828b/132c9f95fbb4daad47b1950a232fff408df4.pdf>>(accessed 1 September 2019)

¹⁵⁷ Cristina Rebelo and José Guerreiro, Comparative Evaluation of the EIA Systems in Kenya, Tanzania, Mozambique, South Africa, Angola, and the European Union, Journal of Environmental Protection, 2017, 8, 603-636 <<https://pdfs.semanticscholar.org/828b/132c9f95fbb4daad47b1950a232fff408df4.pdf>>(accessed 1 September 2019)

¹⁵⁸ Cristina Rebelo and José Guerreiro, Comparative Evaluation of the EIA Systems in Kenya, Tanzania, Mozambique, South Africa, Angola, and the European Union, Journal of Environmental Protection, 2017, 8, 603-636 <<https://pdfs.semanticscholar.org/828b/132c9f95fbb4daad47b1950a232fff408df4.pdf>>(accessed 1 September 2019)

Game Reserve in Tanzania which has a UNESCO World Heritage status.¹⁵⁹ An environmental impact assessment done in 2009 showed that situating the project in the park would have negative direct impacts and may result in the loss of the World Heritage status of the reserve. Furthermore, the project would affect the downstream Rufiji-Mafia-Kilwa Marine and the upstream Kilombero Valley Ramsar sites (wetlands of international importance).¹⁶⁰ In response to the reaction from international community and environmental groups an Updated Environmental Impact Assessment was carried out in October 2018 for the planned hydropower project, which concluded that ‘the development of the project should not be a matter of serious concern.’¹⁶¹ However, this conclusion was found untenable by the World Heritage Programme.¹⁶²

4.8 Chapter Summary

This chapter has analysed the various challenges and opportunities facing the energy industry in the East African region. These challenges include: lack of adequate investments; regulatory and legal frameworks; political boundaries and sovereignty concerns; devolution and community interests; governance; environmental concerns; and terrorism. It is clear that external financiers will have to consider the above factors, invest in local partnerships and capitalise on local market knowledge. They would have to gain an understanding of local customs and business culture, and create value beyond complying with legal and regulatory frameworks. Taking these steps will enable them to identify risks and plan for uncertainty.¹⁶³ One way of addressing some of these issues is through the International Energy Charter which will be discussed in the subsequent chapter.

¹⁵⁹ Erick Kabendera, ‘World Heritage Status of Tanzania’s Selous Park at Risk’, *The East African*, 3 June 2018, <https://www.theeastafrican.co.ke/news/ea/World-Heritage-status-of-Tanzania-Selous-park-at-risk/4552908-4592764-gsqf7x/index.html> (accessed 17 May 2019)

¹⁶⁰ OECD Watch, Economic Feasibility of the Stiegler’s Gorge Hydropower Project, Tanzania (2019) <<https://www.oecdwatch.org/wp-content/uploads/sites/8/2019/02/Economic-Feasibility-of-the-Stiegler%E2%80%99s-Gorge-Hydropower-Project-Tanzania.pdf>> (accessed 01 September 2019)

¹⁶¹ World Heritage Programme, Technical review of the environmental impact assessment for the Rufiji hydropower project in Selous Game Reserve, Tanzania (2019) <<https://portals.iucn.org/library/node/48425>> (accessed 01 September 2019)

¹⁶² World Heritage Programme, Technical review of the environmental impact assessment for the Rufiji hydropower project in Selous Game Reserve, Tanzania (2019) <<https://portals.iucn.org/library/node/48425>> (accessed 01 September 2019)

¹⁶³ Anton Botes, Andrew Lane and Hannah Edinger, ‘The New Frontier: winning in the African Oil & Gas Industry’ *Deloitte Insights*, 15 March 2019, <<https://www2.deloitte.com/insights/us/en/industry/oil-and-gas/africa-oil-gas-industry-energy-reserves.html>> (accessed 3 May 2019)

Chapter 5: The Energy Charter- A Framework for Regional Cooperation and Promotion and Protection of Investments in the Energy Sector

5.1. Introduction

The ECT dates back to 1994 when nearly 50 countries across Eurasia established this international instrument on investment protection in the energy sector. The ECT entered into legal force in 1998 following its ratification by the 40th signatory country. Since then it has acquired the status of the world's first multilateral energy investment treaty. The ECT provides a legal basis for the protection of energy investments and includes rules for the facilitation of energy and transit and a Protocol on Energy Efficiency and Related Environmental Aspects.¹⁶⁴ While the ECT's founders initially foresaw this mainly as a framework for the protection and promotion of energy investments across Eurasia, during the last decade, the geographical scope of the ECT has expanded beyond this region with new countries like Jordan and Yemen joining the Treaty. Furthermore, in order to reflect the modern global energy challenges, the Energy Charter Conference (the ECT's governing body) decided to expand the political scope of the energy cooperation under the Energy Charter framework under the International Energy Charter. This non-legally binding political declaration modernizes the European Energy Charter political declaration of 1991.¹⁶⁵ It has now been endorsed by over 130 countries and international organisations across the globe since its establishment in the Hague, Netherlands in 2015.¹⁶⁶

Kenya, Uganda, Tanzania and Rwanda are all signatories to 2015 International Energy Charter and are at different levels of acceding to the ECT.¹⁶⁷ The EAC also became an observer to the Energy Charter Conference in 2016, which creates a foundation for the development of meaningful energy cooperation at the regional level.¹⁶⁸ The signatories of the International Energy Charter become observers to the ECT with some significant benefits including the strategic knowledge exchange among all members of this international community. The observers are allowed to participate in some of the Energy Charter Conference meetings to facilitate their understanding of the organisation and they also have the opportunity to have interactions with delegates from other Observer and Contracting Parties. However, accession to the ECT is necessary to enjoy the full spectrum of benefits such as its robust legal framework that is considered advantageous for the attraction of foreign direct investment (FDI). The ECT

¹⁶⁴ International Energy Charter, 'The Energy Charter Treaty', 18 February 2019 <<https://energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/>> (Accessed 17 May 2019)

¹⁶⁵ The International Energy Charter and Consolidated Energy Charter Treaty with Related Documents, 2016, pp10-11. Energy Charter Secretariat. Brussels.

¹⁶⁶ International Energy Charter, 'The International Energy Charter', 18 February 23 June 2016 <<https://energycharter.org/process/international-energy-charter-2015/overview/>> (Accessed 18 August 2019)

¹⁶⁷ International Energy Charter, 'The International Energy Charter', 18 February 23 June 2016 <<https://energycharter.org/process/international-energy-charter-2015/overview/>> (Accessed 18 August 2019)

¹⁶⁸ International Energy Charter, 'The East African Community looks to deepen participation with the Energy Charter Process in 2018' 19 January 2018 <<https://energycharter.org/media/news/article/the-east-african-community-looks-to-deepen-participation-with-the-energy-charter-process-in-2018/>> (accessed 3 September 2019)

would also contribute to the creation of a climate conducive to investment in East Africa as it embodies market-based principles and facilitates capacity development via its coordination of technology transfer.

5.2 Key Provisions of the ECT relevant for energy infrastructure projects

Under Articles 9 and 10 of the ECT, the Contracting Parties to the ECT acknowledge the importance of liberalised markets and encourage the creation of stable, equitable, favourable and transparent conditions for investors of other Contracting Parties.¹⁶⁹ At the same time Article 18 emphasizes States sovereignty over energy resources.¹⁷⁰

The ECT protects foreign investors against non-commercial risks such as discriminatory treatment, direct or indirect expropriation, or the breach of individual investment contracts in Part III of the ECT. This provision is balanced however under the ECC Decision (CCDEC2017 04) which confirms the States' right to regulate in order to achieve legitimate policy objectives.¹⁷¹ In addition, several arbitral tribunals constituted under the ECT dispute settlement mechanism have emphasised that a host state has a right to maintain a reasonable degree of regulatory flexibility to respond to changing circumstances in the public interest.¹⁷²

Article 26 of the ECT details the dispute settlement mechanisms for disputes between foreign investors and host states. These disputes must, if possible, be settled amicably. If amicable and mutual settlement fails and a consultation period of three months passes, the parties can address the matter before the courts or administrative tribunals of the contracting party where investments were made, or in accordance with any applicable, previously agreed dispute settlement procedure. Article 26 of the ECT also allows investors to resort to international arbitration before the International Centre for Settlement of Investment Disputes (ICSID), UNCITRAL, or the Arbitration Institute of the Stockholm Chamber of Commerce. Article 27 of the ECT provides an arbitration procedure for inter-state disputes.

Article 7 of the ECT obliges contracting parties to facilitate transit on a non-discriminatory basis consistent with the principle of freedom of transit. It prohibits interruption of energy flows once established. It also provides specific dispute mechanisms for transit disputes. Trade disputes are

¹⁶⁹ The International Energy Charter and Consolidated Energy Charter Treaty with Related Documents, 2016, pp 52-55. Energy Charter Secretariat. Brussels.

¹⁷⁰ The International Energy Charter and Consolidated Energy Charter Treaty with Related Documents, 2016, pp 66-67. Energy Charter Secretariat. Brussels.

¹⁷¹ Energy Charter Conference, 'Adoption by Correspondence-Best Practices in Regulatory Reform' 11 October 2017, CCDEC 2017 4 INV Energy Charter Secretariat < <https://energycharter.org/fileadmin/DocumentsMedia/CCDECS/2017/CCDEC201704.pdf>> (accessed 18 August 2019)

¹⁷² Cara Dowling 'Q&A with Dr Urban Rusnak, Secretary General, Energy Charter Secretariat' International Arbitration Report Issue 11 October 2018 Norton Rose Fulbright < <https://www.nortonrosefulbright.com/-/media/files/nrf/nrfweb/imported/international-arbitration-review---issue-11.pdf?la=en-be&revision=>> (accessed 18 August 2019)

highlighted in Article 29 and Annex D, which are closely modelled after the World Trade Organisation (WTO) dispute settlement mechanism. Article 6 deals with competition issues and Article 19 focuses on environmental aspects. These provisions provide additional assurance to investors and thus boosts the overall investment climate of the country.

The energy markets are becoming more interconnected and competitive globally. The existence of a multilateral framework is therefore even more crucial for smaller states that are dependent on co-operation with international financial institutions, donor countries and foreign developers. Furthermore, the need for stability in the relationship between investors and host governments is particularly important in developing countries for the attraction of investments. The presence of an investor-state dispute mechanism under Article 26 of the ECT signals that East African countries are ready to apply international standards to their energy sector.¹⁷³ Therefore, once a foreign investment is made in line with a country's national legislation, the ECT is designed to provide a reliable and stable interface between an investor and a host government.

The transit provisions per Article 7 of the ECT are also of particular relevance to the landlocked countries in East and Central Africa which are dependent on the coastlines of Tanzania and Kenya for access to international markets. Article 7(2) of the ECT encourages parties to co-operate in modernising their energy transport facilities, develop and operate energy transport facilities that serve more than one contracting party, take measures to mitigate interruptions in the supply of energy materials and products, and to facilitate the interconnections of the energy transport facilities.¹⁷⁴ Currently, the region is constrained in achieving diversification of export markets and routes. There is a need for infrastructural development in the area and the ECT could provide the foundation for collaboration to modernize, develop and operate energy transport facilities and interconnections in the region.

Furthermore, while the ECT is technology-neutral, it plays a significant role in dealing with climate change issues. The ECT could help East African countries not only with attraction of much needed investment to enable the transition to low carbon and clean energy sources, it can also form a platform for exchange of technology and knowhow among East Africa and countries in Eurasia, particularly the EU which has significant experience in the renewable energy sector development and regional market creation.¹⁷⁵ Further, the process to modernise the ECT includes considerations of climate change . Indeed, in 2019, the EU, which is a Contracting Party,

¹⁷³ Maria Rafique, 'Pakistan and the Energy Charter Treaty' *The Nation*, 20 March 2018 < <https://nation.com.pk/20-Mar-2018/pakistan-and-the-energy-charter-treaty>> (accessed 18 August 2019)

¹⁷⁴ The International Energy Charter and Consolidated Energy Charter Treaty with Related Documents, 2016, pp 48 Energy Charter Secretariat. Brussels.

¹⁷⁵ Cara Dowling 'Q&A with Dr Urban Rusnak, Secretary General, Energy Charter Secretariat' International Arbitration Report Issue 11 October 2018 Norton Rose Fulbright < <https://www.nortonrosefulbright.com/-/media/files/nrf/nrfweb/imported/international-arbitration-review---issue-11.pdf?la=en-be&revision=>> (accessed 18 August 2019)

recommended that the ECT provide for provisions on sustainable development including climate change and the clean energy transition.¹⁷⁶

5.3 The Energy Charter Process in East Africa

The ECT is relevant in all aspects of East Africa's energy value chain. The most prominent difference between the ECT and other bilateral investment treaties (BITs) is that the ECT is the only multilateral treaty that protects investments related to energy sector economic activity.¹⁷⁷ BITs however, typically do not contain restrictions on what claims are permitted.¹⁷⁸

In Africa, there is no instrument that predominantly focuses on energy cooperation in the region, despite the importance of energy for economic and social development, and environmental protection. Institutional weakness and insufficient membership have rendered institutions such as the EAC, COMESA, and others unable to balance out the energy needs and interests in the region.¹⁷⁹ While EAPP under COMESA has made some concrete outputs such as the EAPP/EAC Regional Power System Master Plan, crucial operational and harmonisation systems have yet to be developed.¹⁸⁰

Regional geopolitics have delayed the implementation of the LAPSSET Crude Oil Pipeline project. The EAC Treaty has a broad regional geographical scope and it is supported both by governments and international organizations. However, it does not directly deal with energy governance or energy cooperation issues. Article 101 of the EAC Treaty briefly covers energy infrastructure connections and exploration activities in the EAC member states. However, these provisions are not adequate to tackle complex energy projects in the future.¹⁸¹

¹⁷⁶ European Commission, 'Energy Charter Modernisation : European Commission Presents Draft Negotiating Directives' European Commission 14 May 2019 < <http://trade.ec.europa.eu/doclib/press/index.cfm?id=2017>> (accessed 18 August 2019)

¹⁷⁷ Martin Valasek and Kevin O' Gorman, "Energy Charter Treaty Disputes: Recent Statistics and Developments" International Arbitration Report Issue 11 October 2018 Norton Rose Fulbright < <https://www.nortonrosefulbright.com/-/media/files/nrf/nrfweb/imported/international-arbitration-review---issue-11.pdf?la=en-be&revision=>> (accessed 18 August 2019)

¹⁷⁸ Martin Valasek and Kevin O' Gorman, "Energy Charter Treaty Disputes: Recent Statistics and Developments" International Arbitration Report Issue 11 October 2018 Norton Rose Fulbright < <https://www.nortonrosefulbright.com/-/media/files/nrf/nrfweb/imported/international-arbitration-review---issue-11.pdf?la=en-be&revision=>> (accessed 18 August 2019)

¹⁷⁹ The Citizen, 'Apathy by Member Countries to Blame for EAC Financial Woes' The East African 29 November 2019' <https://www.theeastafrican.co.ke/news/ea/Apathy-by-member-countries-to-blame-for-EAC-financial-woes/4552908-4874154-14frpu4z/index.html> > (accessed 18 August 2019)

¹⁸⁰ Elke Verhaeghe and Sean Woolfrey, 'Understanding COMESA and the East African Power Pool': Incentive-based Institutional Reform?' ECDPM Background Paper 2017 < <https://ecdpm.org/wp-content/uploads/COMESA-Background-Paper-PEDRO-Political-Economy-Dynamics-Regional-Organisations-Africa-ECDPM-2017>> (accessed 18 August 2019).

¹⁸¹ East African Community, 'The Treaty for the Establishment of the East African Community' last amended 2007 < http://www.eala.org/uploads/The_Treaty_for_the_Establishment_of_the_East_Africa_Community_2006_1999.pdf> (accessed 18 August 2019)

The construction of the LAPSSET Crude Pipeline and Uganda-Tanga Pipeline will require a multitude of political, regulatory and investments decisions. The challenges associated with this project need to be addressed at the regional level. Also, for the smooth operation of the project, internationally accepted energy transit regulations and mechanisms for investment protection would need to be adopted.

In this context, it may be in the longer-term interest of the East African countries to re-think their approaches towards energy governance and support for 'energy multilateralism' in the East African region. Kenya, Tanzania and Uganda have all signed the International Energy Charter and may, at a later date, consider acceding to the legally binding ECT. Ratification of the ECT by these countries would facilitate the implementation of all the regional infrastructure project mentioned in this research as they would be regulated by a unified legal and regulatory framework based on shared principles and understandings. The protections granted under the ECT on non-interruption of established energy flows and effective dispute resolution provisions could assist with higher levels of energy security for all parties.

Ultimately, the fundamental aim of the ECT is to strengthen the rule of law on energy investments, establish liberal markets, enhance energy efficiency and to create a level playing field among the Treaty's constituency. It has scope to expand the size of the markets by attracting higher flows of foreign as well as domestic investment.

Chapter 6: Conclusion

Energy Infrastructure in East Africa is taking time to develop. However, there are many prospects for development as exemplified via case examples in this study, as well as some challenges. These include challenges to regional cooperation, institutional capacity, rule of law, development of energy markets and their integration, and attraction of the right investors and capital into the region. While the ECT or any BIT for that matter may not immediately guarantee increased levels of investment, the ECT can assist with attracting accountable and risk averse investors. Alongside this, the East African countries' national frameworks should ideally also offer regulatory stability and predictability, regulate robust environmental protection and social and environmental impact assessment proceedings along with increased transparency and accountability in the sector and effective community engagement. The ECT is mostly known for its investment dispute settlement mechanisms and it remains the most frequently invoked international investment agreement.¹⁸² However, alongside the protections offered under the Treaty, the Energy Charter Process also involves tailor-made capacity building, technical

¹⁸² Energy Charter Secretariat, 'The Energy Charter Treaty (ECT) Remains the Most Frequently Invoked IIA' 11 January 2019 < https://energycharter.org/media/news/article/the-energy-charter-treaty-ect-remains-the-most-frequently-invoked-iaa/?tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Baction%5D=detail&cHash=4b7f59380a66e07d026d71f9d4823302 > (accessed 19 August 2019)

assistance and executive training opportunities for the public sector which is important for avoiding information asymmetry in negotiations with the private sector.

Regional cooperation and enhancing the regions' global competitiveness is vital to translate the benefits from the energy sector in East Africa to development outcomes for the benefit of its citizens. With the recent discoveries of oil and gas resources and with the decreasing costs and innovations in renewable energy sources (which East Africa has sizable potential for) the energy sector can offer many social and economic benefits. The ECT, along with guidance from other international organisations such as the UNDP, could play a valuable role in enabling cross-border cooperation and the stable implementation of energy infrastructure projects for sustainable access to energy in the region.

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