

**ASSESSING THE LEGAL FRAMEWORK GOVERNING CROSS-BORDER  
ELECTRICITY TRADE IN THE EAST AFRICAN POWER POOL: AN ANALYSIS  
OF UGANDA, KENYA, AND TANZANIA**

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**UGANDA CHRISTIAN  
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## DECLARATION

I, **ASHABA SAMORA TUMUSHABE**, declare that this dissertation paper is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature \_\_\_\_\_ Date \_\_\_\_\_

## APPROVAL

This research paper was written under my supervision and has been submitted with my consent and approval.

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DATE

## **ABSTRACT**

This dissertation analyses the legal frameworks that govern cross-border electricity trade within the East African Power Pool, with a particular focus on Uganda, Kenya, and Tanzania. With our sight on the Day Ahead Market intended to be launched in 2025, this study assesses the current international, regional, and national laws governing cross-border electricity trade in order to evaluate how effective they are in facilitating the trade. This research offers insights into understanding the legal aspects of regional electricity trade and energy integration. Furthermore, this study is mainly based on a qualitative research approach through documentary analysis. Relevant legislation, policies, and academic writings were analysed, and this analysis produced the findings in this study. The study also provides for recommendations on how to fill the gaps in the existing legal regimes, for example, the need for specific laws addressing cross-border electricity trade, harmonizing international, regional, and national legislation, among others. These recommendations offer insights for policymakers and key players involved in the electricity sector in East Africa.

## **DEDICATION**

To my parents, whose constant support, encouragement, and belief in me have been source of guidance throughout this endeavour. Their love and sacrifices have been the basis upon which I have nurtured my goals. I dedicate this work to them, with immense love and gratitude.

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# 1 CHAPTER ONE

## 1.1 INTRODUCTION

“Electricity can transform people’s lives not just economically but socially.”

-Puyish Goyal, Minister of Commerce and Industry in India

For there to be social development and economic growth in modern society, energy is a basic need and fulfilling the ever-increasing global energy demands is crucial<sup>1</sup>. The International Energy Outlook 2013 projects that the world’s consumption of energy will increase by 56% between the year 2010 and 2040<sup>2</sup>. Among the energy resources is electricity, which is used as prime energy that promotes the utilisation of a variety of advanced technology, products, and services that essentially better our quality of life and elevates economic productivity.<sup>3</sup> The growth in electricity consumption is usually associated phenomena like globalisation, modernisation, increased technological advancement, and high industrialisation infiltration<sup>4</sup>.

The East African Community (EAC) sees the benefit of energy security and in achieving this, the EAC has a goal of a deeply integrated regional market<sup>5</sup>. The East African Power Pool (EAPP) was established in 2005, and it acts as a necessary platform for harmonising

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<sup>1</sup> M Hasanuzzama, Ummu Salamah Zubir, Nur Iqtiyani Ilham, Hang Seng Che, ‘Global Electricity Demand, Generation, Grid System, and Renewable Energy Policies: A Review’ (2016) 6 Wiley Interdisciplinary Reviews Energy and Environment <<https://doi.org/10.1002/wene.222>>.

<sup>2</sup> U.S. Energy Information Administration, International Energy Outlook 2013 <[www.eia.gov/forecasts/ieo/pdf/0484\(2013\).pdf](http://www.eia.gov/forecasts/ieo/pdf/0484(2013).pdf)> accessed January 20, 2025.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid, note 2.

<sup>5</sup> East African Community, ‘East African Community Adopts Its Energy Security Agenda’ (December 7, 2017) <[https://www.eac.int/press-releases/143-energy/932-east-african-community-adopts-its-energy-security-agenda#:~:text=The%20East%20African%20Community%20\(EAC,region's%20biomass%2C%20electricity%2C%20and%20oil](https://www.eac.int/press-releases/143-energy/932-east-african-community-adopts-its-energy-security-agenda#:~:text=The%20East%20African%20Community%20(EAC,region's%20biomass%2C%20electricity%2C%20and%20oil)> accessed 5 April 2025.

cross-border electricity transactions while promoting the interconnectedness of electricity grids in the East African region<sup>6</sup>. The EAPP proves to be an essential tool for promoting cross-border energy trade, intending to improve resource utilisation and electricity access across the region<sup>7</sup>. The EAPP's effectiveness is dependent on a strong and harmonised legal framework that promotes flawless trade and navigates the unique difficulties that are presented by regional energy exchange<sup>8</sup>. This initiative encompasses thirteen member states<sup>9</sup>. For the purposes of this study, particular focus was given to Uganda, Kenya, and Tanzania. Cross-border electricity trade presents the possibility to address the increasing demand for energy in the EAC, promoting economic growth and improving access to reliable electricity<sup>10</sup>.

Recently, we have seen the revolutionary power of regional interconnectors in unlocking East Africa's energy potential as electricity projects have played a crucial role in motivating more power transactions and encouraging regional and economic cooperation<sup>11</sup>. For example, the Kenya-Tanzania Interconnector<sup>12</sup> and the Lessos-Tororo

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<sup>6</sup> East African Power Pool, 'About EAPP' (August 15, 2023) <<https://eappool.org/#:~:text=The%20Eastern%20Africa%20Power%20Pool,and%20grid%20interconnection%20among%20nations>> accessed 5 April 2025.

<sup>7</sup> East African Power Pool, 'About EAPP' (August 15, 2023) <<https://eappool.org/#:~:text=The%20Eastern%20Africa%20Power%20Pool,and%20grid%20interconnection%20among%20nations>> accessed 5 April 2025.

<sup>8</sup> Ibid.

<sup>9</sup> 'East Africa Power Pool (EAPP), ESMAP' <[https://www.esmap.org/re-mapping/east-africa\\_power\\_pool](https://www.esmap.org/re-mapping/east-africa_power_pool)> accessed 5 April, 2025.

<sup>10</sup> Ibid.

<sup>11</sup> Eng. John Mativo, 'Regional Power Interconnectors will Unlock East Africa's energy potential' Business Daily Africa, December 22, 2024 <[https://www.businessdailyafrica.com/bd/opinion-analysis/columnists/regional-power-interconnectors-will-unlock-east-africa-s-energy-4866658#google\\_vignette](https://www.businessdailyafrica.com/bd/opinion-analysis/columnists/regional-power-interconnectors-will-unlock-east-africa-s-energy-4866658#google_vignette)> accessed 25 February 2025.

<sup>12</sup> Ibid.

line<sup>13</sup>, also known as the Kenya-Uganda interconnector is a confirmation of this progress. In addition to that, Kenya has managed to utilize Ethiopia's hydroelectric power through the Ethiopia-Kenya interconnector which has brought about projected annual savings of at least 10 million USD through electricity imports from its neighbour<sup>14</sup>. The growth of these interconnectors within the EAPP is not only an important engineering achievement but it also presents significant legal implications requiring a strong framework to govern cross-border electricity trade. Therefore, this study analysed the existing legal framework governing cross-border electricity trade between Uganda, Kenya, and Tanzania within the EAPP so as to understand its capability in accommodating the emergent dynamics of this trade, identifying potential gaps and areas for improvement.

## 1.2 BACKGROUND

The global economy is reliant on “energy production, distribution, planning, and financial sustainability”<sup>15</sup>. Energy has played a crucial role in the development of the global community, particularly since the early 1980s<sup>16</sup>. Today, with the increasing globalisation of energy markets and the rapid technology advancement, cross border energy trade has become an essential element of national plans. However, the lack of

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<sup>13</sup> Maureen Kinyanjui, “Kenya Pushes for Harmonised Regulations Ahead of 2025 Power Trade Launch” *The Eastleigh Voice News* (December 11, 2024) <<https://eastleighvoice.co.ke/business/96635/kenya-pushes-for-harmonised-regulations-ahead-of-2025-power-trade-launch> > accessed 25 February 2025.

<sup>14</sup> Ibid.

<sup>15</sup> Sunil, Jasmin Bilalovic, Anju Jha, Nilesh Patel, and Han Zhang, ‘Renewable energy: Present research and future scope of Artificial Intelligence’ (2017) 77(C) *Renewable and Sustainable Energy Reviews* 297.

<sup>16</sup> Muhammad Shahbaz, Amine Lahiani, Salah Abosedra, Shawkat Hammoudeh, ‘The role of globalization in energy consumption: A quantile cointegrating regression approach’ (2018) 71 *Energy Economics* 161-170.

a committed regional legal framework for electricity, presents a challenge to the integration of energy systems across borders<sup>17</sup>.

Furthermore, the smart energy industry is equipped with modern infrastructures such as “supercomputers, power electronics, cyber technologies, information, and bi-directional communication between the control centre and equipment”<sup>18</sup>. This calls for the realisation of the steadily increasing pace of technological advancement, which usually surpass existing laws and regulations<sup>19</sup>. Today, for example, the integration of cyber technologies causes questions about data privacy, security, and responsibility in circumstances where there have been breaches or failures<sup>20</sup>. Additionally, AI technology, which is a relatively new phenomenon, is able to enhance energy distribution, improve grid management, and promote the integration of renewable energy sources, however, they also raise concerns about data privacy, cybersecurity, and regulatory compliance<sup>21</sup>. Simply, traditional legal frameworks may find it difficult to properly address these issues, leading to possible gaps in regulation and enforcement.

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<sup>17</sup> P Niyimbona, 'The Challenges of Operationalizing Power Pools in Africa' (UN Commission for Africa, UNDESA Seminar on Electricity Interconnection, Cairo, 19-21 June 2005).

<sup>18</sup> Tanveer Ahmad, Dongdong Zhang, Chao Huang, Hongcai Zhang, Nyingyi Dai, Yonghua Song, Huanxin Chen 'Artificial intelligence in sustainable energy industry: Status Quo, challenges, and opportunities' (2021) 289 Journal of Cleaner Production 125834.

<sup>19</sup> Ibid.

<sup>20</sup> Kevin Quigley and Jeffrey Roy, 'Cyber-Security and Risk Management in an Interoperable World; An Examination of Governmental Action in North America' (2011) 30(1) Social Science Computer Review 83-94 <[file:///Users/imac/Downloads/Cyber-Security and Risk Management in an Interoper.pdf](file:///Users/imac/Downloads/Cyber-Security_and_Risk_Management_in_an_Interoper.pdf)> accessed 20 February 2025.

<sup>21</sup> FDM Group, 'AI in the Energy Sector' (FDM Group, 7 March 2024) <<https://www.fdmgroup.com/news-insights/ai-in-energy-sector/#:~:text=By%20predicting%20and%20managing%20demand,shift%20toward%20renewable%20energy%20sources>> accessed February 20 2025.

Furthermore, historically, we have seen energy trade being ruled by a patchwork of laws. For example, the World Trade Organization (WTO)<sup>22</sup> and the General Agreement on Trade and Tariffs (GATT)<sup>23</sup>. These particular laws were initially intended to cater to traditional energy sources and trade practices. Additionally, the differences in legal standards and regulatory methods among countries can negatively impact the potential advantages of cross-border energy trade<sup>24</sup>.

### 1.3 PROBLEM STATEMENT

The EAPP presents rather significant potential for economic growth and energy security in the region<sup>25</sup>. However, the success of cross-border electricity trade in the region meets the challenge of a fragmented legal framework<sup>26</sup>. This study presents an assessment of the legal framework governing this trade, particularly focusing on Uganda, Tanzania, and Kenya. The goal of this study was to identify crucial challenges and opportunities for its improvement as well as analyse the existing legal and regulatory frameworks as well as relevant policy instruments.

### 1.4 OBJECTIVES OF STUDY

#### 1.4.1 GENERAL OBJECTIVES

To assess the Legal framework governing cross-border electricity in the East African Power Pool specifically in Uganda, Kenya, and Tanzania.

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<sup>22</sup> World Trade Organization, 'Home Page' <<https://www.wto.org/>> accessed 15 February 2025.

<sup>23</sup> General Agreement on Tariffs and Trade (GATT) (*Geneva*, July 1986)  
<[https://www.wto.org/english/docs\\_e/legal\\_e/gatt47.pdf](https://www.wto.org/english/docs_e/legal_e/gatt47.pdf)> accessed 15 February 2025.

<sup>24</sup> Ibid.

<sup>25</sup> Yunus Kemp, 'East Africa: EAPP Setting up Centralised Energy Market in 2025', (10<sup>th</sup> December, 2024)  
<<https://www.esi-africa.com/business-and-markets/east-africa-eapp-setting-up-centralised-energy-market-in-2025/>> accessed 15 February 2025.

<sup>26</sup> Mabea GA and Okoli PN, "Power Market Coupling: Towards Harmonised Electricity Policies in East African Community" (2019) 38 *Journal of Energy & Natural resources Law* 345  
<<https://doi.org/10.1080/02646811.2019.1687237>> accessed 18 February 2025.

#### 1.4.2 SPECIFIC OBJECTIVES

1. To analyse the current legal frameworks governing cross-border electricity trade in East Africa specifically Uganda, Kenya, and Tanzania.
2. To explore best practices and regulatory models from other regions that could be applicable.
3. To suggest recommendations for creating a solid legal framework that accommodates the growth of cross-border electricity trade.

#### 1.5 RESEARCH QUESTIONS

1. What are the current legal frameworks governing cross-border electricity trade in Uganda, Kenya, and Tanzania within the EAPP?
2. What are the best practices and regulatory models for cross-border trade in other regions, and how can they be adopted for the EAPP context?
3. What specific recommendations can be proposed to create a cohesive legal framework that supports the growth of cross-border electricity trade in the EAPP?

#### 1.6 SIGNIFICANCE OF STUDY

Access to a dependable electricity supply is an important driver for social and economic change, and it has become the foundation of many modern-world economies across the globe<sup>27</sup>. The use of electricity is predicted to rise considerably in the future, as it is an

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<sup>27</sup> Stellan Nakibuuka, 'Reliability of Electricity Supply Essential for Uganda's Socio-Economic Transformation' (January 24, 2022) <<https://www.era.go.ug/index.php/media-centre/what-s-new/415-reliability-of-electricity-supply-essential-for-uganda-s-socio-economic-transformation#:~:text=Access%20to%20a%20Reliable%20Electricity,modern%20economies%20across%20the%20world.>> accessed 18 February 2025.

important aspect of modern economies<sup>28</sup>. It is predicted to make up over half of the energy we use by 2050, compared to just 20% today<sup>29</sup>. This great increase is fuelled by the necessity to reduce greenhouse gas emissions and make our energy systems cleaner as we diverge away from the traditional fossil fuels.<sup>30</sup> This is important in light of Sustainable Development Goal No.7 (Affordable and clean)<sup>31</sup>. Therefore, cross border trade in renewable electricity has the potential to move renewable energy from areas of abundance to areas which are in need of this resource<sup>32</sup>. Therefore, this research paper helps to understand whether the existing legal framework are capable of accommodating all these nuances that accompany cross-border electricity trade.

## 1.7 JUSTIFICATION OF STUDY

East Africa is a hub for many resources necessary for the production of electricity such as gas, geothermal energy, hydro energy, and coal<sup>33</sup>. With proper management, such resources are capable of meeting future energy demands as well as promoting economic growth in the EAC<sup>34</sup>. Between 2022-2040, East Africa is projected to record a much greater increase in economic growth compared to sub-Saharan Africa and other Asian economies that are undergoing rapid industrialisation<sup>35</sup>. Rapid economic growth which

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<sup>28</sup> International Energy Agency, 'Electricity' (IEA, 19 May 2025) <<https://www.iea.org/energy-system/electricity>> accessed 6 February 2025.

<sup>29</sup> International Energy Agency, 'Electricity' (IEA, 19 May 2025) <<https://www.iea.org/energy-system/electricity>> accessed 6 February 2025.

<sup>30</sup> Ibid.

<sup>31</sup> United Nations, 'THE 17 GOALS, Sustainable Development' <<https://sdgs.un.org/goals>> accessed 2 January 2025.

<sup>32</sup> WMO-WTO, 'Opportunities to Unlock Trade in Renewable Electricity' (World Meteorological Organization, November 15, 2024) <<https://wmo.int/media/news/wmo-wto-report-shows-opportunities-unlock-trade-renewable-electricity#:~:text=%22Cross%2Dborder%20trade%20in%20renewable,in%20energy%20supply%20and%20demand>> accessed 11 January 2025.

<sup>33</sup> Robert Tumwesigye, Paul Twebaze, Nathan Makuregye, Ellady Muyambi, 'Key Issues in Uganda's energy sector' (2011) <<https://www.iied.org/sites/default/files/pdfs/migrate/16030IIED.pdf>> accessed 11 February 2025.

<sup>34</sup> Ibid.

<sup>35</sup> Euromonitor International, 'East Africa, The Rising Economic Jewel of Sub-Saharan Africa' (Euromonitor International, 28 September, 2023) <<https://www.euromonitor.com/article/east-africa---the-rising-economic-jewel->

is characterised by modernisation, urbanisation, and demographic changes, will naturally lead to increased energy consumption<sup>36</sup>. Thus, understanding the complex relationship between energy and economic growth becomes essential for both economic experts and law makers<sup>37</sup>.

## **1.8 SCOPE OF STUDY**

### **1.8.1 THEMATIC SCOPE**

This study's thematic scope focused on the legal framework governing cross-border electricity trade in Uganda, Tanzania, and Kenya within the East African Power Pool. This comprised of a comparative examination of the relevant laws associated with cross-border electricity trade in the region. It essentially resulted in identifying areas of consistency as well as inconsistency, possible issues, and opportunities. Additionally, this study ended in recommendations that have been suggested to cater for the identified challenges.

### **1.8.2 GEOGRAPHICAL SCOPE**

This study focused on the East African Power Pool, specifically on Uganda, Tanzania, and Kenya. These particular countries represent a significant part of the EAPP's cross-border electricity trade, and their legal frameworks gave valuable insights into the challenges and opportunities encountered by such trade within the East African region.

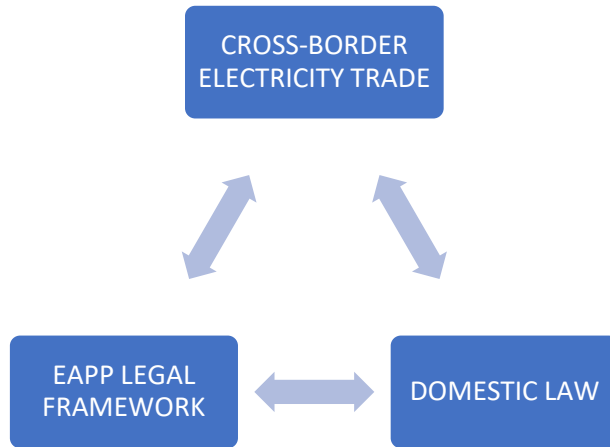
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[of-sub-saharan-africa#:~:text=East%20Africa%20is%20on%20course,integration%20and%20intra%2Dregional%20trade](#)> accessed 13 March 2025.

<sup>36</sup> Mohamed El Hedi Aroui, Adel Ben Youssef, Hatem M'Henni, Christophe Rault, 'Energy Use and Economic Growth in Africa: A Panel Granger-Causality Investigation' (CESifo Working Paper No. 4844, June 2014) <[https://www.cesifo.org/DocDL/cesifo1\\_wp4844.pdf](https://www.cesifo.org/DocDL/cesifo1_wp4844.pdf)> accessed 8 March 2025.

<sup>37</sup> Ibid.

## 1.9 CONCEPTUAL FRAMEWORK



SOURCE: Researcher's own construction.

This study aimed to show that the efficiency of both regional and national legal frameworks is necessary in the facilitation of cross-border electricity trade within the EAPP and the region at large.

## 1.10 LITERATURE REVIEW

Konoplyanik emphasises that in a world characterised by globalisation, where a relationship among energy exporters and importers is clearly growing alongside the increasing routes of cross-border energy networks, the significance of multi-layered laws and guidelines creating fair, equal and efficient frameworks for international cooperation is increasingly valued<sup>38</sup>. In addition to that It was recognised by both the Rio and Johannesburg conferences that trade helps in achieving a more efficient

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<sup>38</sup> A Konoplyanik and T Wälde. 'Energy Charter Treaty and its Role in International Energy' (2006) 24 Journal of Energy & Natural Resources Law. 523 <[http://konoplyanik.ru/ru/publications/articles/417\\_Energy\\_Charter\\_Treaty\\_and\\_its\\_Role\\_in\\_International\\_Energy.pdf](http://konoplyanik.ru/ru/publications/articles/417_Energy_Charter_Treaty_and_its_Role_in_International_Energy.pdf)> accessed 13 February 2025.

allocation of scarce resources, makes it easier for countries, rich and poor, to access environmental goods, services, and technologies<sup>39</sup>.

This idea of regional cooperation in the electricity sector is important at a time like this, where there is increased globalisation as well as the need to achieve affordable and clean energy<sup>40</sup>. Steinbacher defines cross-border cooperation as a partnership between governmental or administrative bodies of at least two countries with a direct electricity interconnection<sup>41</sup>. This definition is crucial in their research as it focuses more on the institutional framework steering electricity trade, hence minimizing their scope of analysis to collaborative projects which are supported by physical infrastructure<sup>42</sup>. Additionally, they highlight how cooperative efforts manifest in the energy sector; from off the record intergovernmental negotiations to the creation of legally recognized bodies<sup>43</sup>. In the field of electricity collaboration usually paints a picture that presents a relationship between private actors like grid operators and utilities and policy makers<sup>44</sup>.

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<sup>39</sup> World Trade Organization, 'Home Page' <<https://www.wto.org/>> accessed 15 February 2015.

<sup>40</sup> United Nations 'THE 17 GOALS, Sustainable Development' <<https://sdgs.un.org/goals>> accessed 11 March 2025.

<sup>41</sup> Dr. Karoline Steinbacher, Henrik Schult, Korinna Jörling, Dr.-Ing.Tobias Fichter, Konstantin Staschus, PhD, Jonas Schröder, Artur Lenkowski, 'Cross-border cooperation for interconnections and electricity trade Experiences and outlook from the European Union and the GCC' (Navigant Energy Germany, September 2019) <<https://guidehouse.com/-/media/www/site/downloads/energy/2020/epstudyinterconnectionsandgovernancefinaloct19pub.pdf>> accessed 20 March 2025.

<sup>42</sup> Ibid.

<sup>43</sup> Steinbacher, supra, note 41.

<sup>44</sup> Katharina Umpfenbach, Andreas Graf, Camilla Bausch Ecologic Institute Camilla, 'Regional Cooperation in the Context of the New 2030 Energy Governance' (DIW Berlin Working Paper, June 2015) <[https://www.diw.de/documents/dokumentenarchiv/17/diw\\_01.c.508432.de/umpfenbach.pdf](https://www.diw.de/documents/dokumentenarchiv/17/diw_01.c.508432.de/umpfenbach.pdf)> accessed 21 March 2025.

### 1.10.1 FUNCTIONALISM, NEO-FUNCTIONALISM, AND INTERGOVERNMENTALISM

David Mitrany<sup>45</sup> is our first instance on the functionalist theory. Lavenex views the European Union in light of functionalism and characterizes the EU's global role as a "conglomerate of loosely coupled sectoral regimes" rather than a single consolidated foreign policy<sup>46</sup>. His analysis underpins the functionalist theory that centres around individual sectors of partnership which becomes advantageous for all states leading to integration in these areas and these systems then exert their influence outward<sup>47</sup>. Lavenex explains that the EU's international influence is not primarily exerted through its visionary diplomatic approaches but rather it mainly stems from the international projection of its domestic sectoral policies, enabled by technical collaboration, the interplay of interdependent economies, and convergent norms within specific functional areas and this is the essence of functionalism<sup>48</sup>. The EU's single market, its regulatory agencies, and its engagement in international technical networks all serve as solid outcomes of this functionalist approach in action<sup>49</sup>.

The functionalist theory stresses the importance of addressing shared, practical needs in various crucial sectors for example; energy, transportation, and communication as a means of building interconnectedness and fostering peace. Unlike realist perspectives like nationalism that prioritise national self-interest, functionalism highlights common interests and the potential for mutual benefit through collaboration<sup>50</sup>.

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<sup>45</sup> Mihai Alexandrescu, 'David Mitrany: From federalism to functionalism' (2007) 16(1) *Transylvanian Review*.

<sup>46</sup> Sandra Lavenex, 'The power of functionalist extension: how EU rules travel' (2014) 21(6) *Journal of European Public Policy* 885.

<sup>47</sup> *Ibid.*

<sup>48</sup> *ibid* note 46.

<sup>49</sup> *ibid* note 46.

<sup>50</sup> *Ibid* note 46.

Much as functionalism seems logical in promoting cross-border electricity trade, there are many hindrances that can impede its full realization. Political sensitivities and deeply ingrained notions of national sovereignty often act as substantial barriers to deeper integration in the energy sector<sup>51</sup>. Concerns about energy independence and the potential for reliance on neighbouring countries can make nations hesitant to fully embrace interconnected power systems. Furthermore, existing political rivalries and geopolitical tensions between countries can easily disrupt or altogether halt efforts towards cross-border energy cooperation<sup>52</sup>. Finding a balance between safeguarding national interests and capitalizing on the numerous benefits of regional energy interdependence remains a critical challenge for policymakers<sup>53</sup>.

When it comes to the Neo-functional theory, it supplements the Functionalist theory. Renner's paper explores how the Energy Community in Southeast Europe has its foundation built on the theory of neo-functionalism<sup>54</sup>. He explains that in neo-functionalism when countries cooperate on a particular sector like energy it can lead to further cooperation and bring peace which we could translate as energy security for the purposes of this study<sup>55</sup>. He explains further how the European Commission was key

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<sup>51</sup> E Hotchkiss, National Renewable Energy Laboratory, 'Cross-Border Power Trade to Support Resilience' (National Renewable Energy Laboratory, December 2019) <<https://docs.nrel.gov/docs/fy20osti/75153.pdf>> accessed 9 March 2025.

<sup>52</sup> Centre for Global Affairs, 'The Geopolitics of Cross-Border Electricity Grids' (NYU SPS, 12 February 2024) <<https://www.sps.nyu.edu/homepage/academics/divisions-and-departments/center-for-global-affairs/highlights/2024/geopolitics-of-cross-boarder-electricity-grids.html>> accessed 7 May 2025.

<sup>53</sup> National Renewable Energy Laboratory, 'Reports Identify Regulatory Coordination Key to Optimizing Cross-Border Electricity Trade in South Asia' (NREL News, 7 January 2020) <<https://www.google.com/search?q=https://www.nrel.gov/news/detail/program/2020/reports-identify-regulatory-coordination-key-to-optimizing-cross-border-electricity-trade-in-south-asia.html>> accessed 7 May 2025.

<sup>54</sup> Stephan Renner, 'The Energy Community of Southeast Europe: A Neo-Functionalist Project of Regional Integration' (2009) 13 European Integration Online Papers <<https://eiop.or.at/eiop/pdf/2009-001.pdf>> accessed 7 March 2025.

<sup>55</sup> Ibid.

in setting up the Energy Community and countries involved agreed to follow these uniform laws on energy, the environment and competition<sup>56</sup>. This study analyses electricity trade in the EAPP which is an example of a sector specific integration, and it aims to assess whether the legal framework is suitable enough to incite a positive impact on the East African Region. Renner's paper highlights the EU's external influence and its role in spreading its energy rules to Southeast Europe.<sup>57</sup> This study looks to find and explore international best practices and other regional energy agreements that can positively influence the energy legal framework in the region. Furthermore, Renner explains how the institutional structure of the Energy community is designed to foster cooperation.<sup>58</sup> This study involved analysing the legal and institutional framework of the EAPP, asking similar questions about its design, effectiveness, and promotion of cooperation among Uganda, Kenya, and Tanzania.

A core tenet of the neo-functionalist theory is the 'spill-over' effect which Renner explains as a spill of the prosperity from the technical energy sector into other policy spheres<sup>59</sup>. This study explored whether the legal framework governing electricity trade in the region explicitly or implicitly allow for or encouraged 'spill-over' effects. For example, could prosperous electricity trade in the region lead to greater harmonisation in environmental regulations related to power projects, or social benefit sharing mechanisms among others?

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<sup>56</sup> Ibid note 54.

<sup>57</sup> Ibid note 54.

<sup>58</sup> Ibid note 54.

<sup>59</sup> Ibid note 54.

However, Okafor critiques the theory of neo-functionalism arguing that it falls short of understanding the unique historical context of Africa<sup>60</sup>. He explains that this Euro-centric model fails to account for Africa's colonial history, the setbacks and complexities caused by this past and it fails to explain the continued economic dependence<sup>61</sup>. This makes us question our current systems in place. They note that contemporary African integration efforts are significantly influenced by European models like the theory of neo-functionalism<sup>62</sup>. Whether we are still following our coloniser's ideas or are our law makers taking into account Africa's unique position post-colonialism. This way of thinking informs our laws and how to move forward as a region. Okafor et al calls for Paradigm Shift<sup>63</sup>. Additionally, this same paper by Okafor points out issues like partitioning which has continued to haunt Africa for many years after colonialism, reinstating the fragmentation of African economies<sup>64</sup> just like we see in the East African region and the drive for cross border electricity trade through the EAPP can be seen as an effort to overcome this fragmentation in such a critical sector like energy. This study explored whether the current EAPP framework reflects older, potentially less suitable models, or if it showed signs of evolving towards a more Africa-centric approach that takes into account our singular challenges as a region.

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<sup>60</sup> Jude C Okafor and Ernest Tooche Aniche, 'Deconstructing Neo-Functionalism in The Quest for a Paradigm Shift in African Integration: Post-Neo-Functionalism and The Prognostication of the Proposed Continental Free Trade Area in Africa' (2017) 22(2) IOSR Journal of Humanities and Social Science 60-72 < <https://www.iosrjournals.org/iosr-jhss/papers/Vol.%2022%20Issue2/Version-1/J2202016072.pdf>> accessed 11 March 2025.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid note 60.

<sup>63</sup> Ibid note 60.

<sup>64</sup> Ibid note 60.

Moravcsik provides another take on the European integration, and this is the liberal intergovernmentalist theory<sup>65</sup>. He explains that this theory says that states are the forces behind how the EU operates, engaging in actions that serve to advance their perceived individual advantage<sup>66</sup>. Simply, one may liken the EU to a club where states join because of the advantages they gain from joining. A key idea by Moravcsik is that there is a two-level match; when states negotiate, which is level 1, they have to consider what their citizens want, hence level 2<sup>67</sup>. This study aims at exploring the influence of national utilities like the Uganda Electricity Transmission Company Limited (UETCL), Kenya Electricity Transmission Company Limited (KETRACO), Kenya Power and Lighting Company (KPLC) and Tanzania Electricity Supply Company Limited (TANESCO) as well as energy regulators like Uganda's Electricity Regulatory Authority (ERA), Kenya's Energy and Petroleum Regulatory Authority (EPRA) and Tanzania's Energy and Water Utilities Regulatory Authority (EWURA) and the government ministries responsible for energy and trade in the respective countries. A decision internationally depends hugely on whether it will be accepted domestically. Moravcsik explains that negotiations do not mean much when countries bargain basing on their power and how a particular decision is likely to benefit them<sup>68</sup>. Just as in the EU, states are the main actors in the EAPP hence forth analysing the Legal framework from an intergovernmental Lense is fitting.

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<sup>65</sup> Andrew Moravcsik, 'Liberal intergovernmentalism', (Oxford Research Encyclopaedia of Politics, 27 August 2020) <<https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-1065>> accessed 7 May 2025.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid note 65.

<sup>68</sup> Ibid note 65.

### 1.10.2 REGIONAL UNDERSTANDING OF EAST AFRICA

Straeten's<sup>69</sup> investigation of the historical evolution of electricity grids in East Africa focuses influence of colonial history of the region and the post-colonial situation that the region presented<sup>70</sup>. His view is that East African's electrification steps have been defined by colonial neglect<sup>71</sup>. Straeten believes that electricity trade obviously becomes grounds for political and social disagreement in such circumstances, emphasising that there is a relationship between infrastructure, knowledge, production, and power dynamics when the conversation around East African development avails itself<sup>72</sup>.

Otieno<sup>73</sup> provides a rather comprehensive analysis of East Africa's energy landscape emphasising the region's potential as well as its barriers<sup>74</sup>. The authors discuss the many opportunities for energy development in an effort promote growth and improve the quality of life of East African citizens<sup>75</sup>. However, they also discuss the hindrances encountered by the energy sector, for example, financial constraints, environmental concerns, and policy shortcomings<sup>76</sup>. Additionally, they emphasize the need for sustainable resource utilisation, and they advocate for an integrated energy strategy

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<sup>69</sup> Straeten J, "Measuring Progress in Megawatt: Colonialism, Development, and the 'Unseeing' Electricity Grid in East Africa" (2021) 63 *Centaurus* 651 <<https://onlinelibrary.wiley.com/doi/full/10.1111/1600-0498.12415>> accessed 1 March 2025.

<sup>70</sup> Ibid.

<sup>71</sup> Ibid note 69.

<sup>72</sup> Ibid note 69.

<sup>73</sup> Herick O. Otieno, Joseph L. Awange, *Energy Resources in East Africa: Opportunities and Challenges* (1<sup>st</sup> edn, Springer Berlin, Heidelberg 2006).

<sup>74</sup> Ibid.

<sup>75</sup> Herick O. Otieno, Joseph L. Awange, *Energy Resources in East Africa: Opportunities and Challenges* (1<sup>st</sup> edn, Springer Berlin, Heidelberg 2006).

<sup>76</sup> Ibid.

that harmonize diverse energy the region's need with the need to minimise environmental impact<sup>77</sup>.

Wilbert TK<sup>78</sup> refers to the Community as “a creature of modern dynamics in regionalism,”<sup>79</sup> which means that the East African Community is a product of today's world. He goes on further to quote Heitne<sup>80</sup> who differentiates the new from the old; “the new regionalism differs from the old regionalism which was based on security interests in the bi-polar cold war context in that it is a spontaneous process from within a region, is more comprehensive and multi-dimensional and encourages non-state actors and incorporates issues of accountability and legitimacy”<sup>81</sup>. Wilbert TK further goes on to say that the East African Community has grown as a channel for economic integration rather than a result of political solidarity<sup>82</sup>. This demonstrates that the EAC is not just mere political cohesion, but it presents a more profound sense of interconnectedness, which breeds an environment for economic development.

### **1.10.3 ARTIFICIAL INTELLIGENCE (AI)**

Marvin Minsky, one of the pioneers of AI, defined AI as enabling machines to do things that require human intelligence<sup>83</sup>. AI has the potential to significantly transform energy access in Africa by improving equitable energy access, fostering innovation, and

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<sup>77</sup> supra note 75, 18.

<sup>78</sup> Wilbert TK, Kaahwa, 'The Institutional Framework of the EAC' in East African Community Law (Brill Nijhoff 2017).

<sup>79</sup> Ibid.

<sup>80</sup> M Lundahl and B.J. Ndulu (eds), *New Directions in Development Economics: Growth, Environmental Concerns and Government in the 1990* (Routledge, 1996).

<sup>81</sup> Ibid.

<sup>82</sup> Wilbert TK, Kaahwa, 'The Institutional Framework of the EAC' in East African Community Law (Brill Nijhoff 2017).

<sup>83</sup> Yuchen Jiang, Xiang Li, Hao Luo, Shen Yin, Okyay Kaynak, 'Quo Vadis Artificial Intelligence?' (2022) 2 *Discover Artificial Intelligence* (4) 1 <<https://link.springer.com/content/pdf/10.1007/s44163-022-00022-8.pdf>> accessed 12 February 2025.

optimizing energy production and consumption<sup>84</sup>. Over the next year, we might see various intricate transitions in global trade, especially with the rise of AI in the energy sector which will bring about and increase in geopolitical hurdles for example, restrictions on exporting AI technology and tariffs on key components like energy-efficient GPUs and<sup>85</sup>. From this we see that it is crucial for legal structures to adjust in order to tackle the intricacies and shifts brought about by these advancements in technology.

This age of AI technologies, particularly automation and predictive analytics, presents a serious challenge to traditional trade patterns and market dynamics, especially in the context of trade barriers and discriminatory practices<sup>86</sup>. Schneider<sup>87</sup> has examined the influence of AI on global trade flows and economic globalization<sup>88</sup>. This study creates a direct link between AI and a state's trade ecosystem<sup>89</sup>. This study recommends that due to AI's impact on international trade systems, states need to alter their legal frameworks to accommodate this phenomenon<sup>90</sup>.

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<sup>84</sup> 'AI can help provide universal access to energy in Africa' (*Africa at LSE*, July 24, 2024) <<https://blogs.lse.ac.uk/africaastle/2024/07/24/ai-can-help-provide-universal-access-to-energy-in-africa/>> accessed 3 February 2025.

<sup>85</sup> Slaughter and May, 'Duelling Dynamics: Insights into the AI-Energy Transition Nexus' (Slaughter and May, 2024) <<https://www.slaughterandmay.com/horizon-scanning-2025/energy-transition-2025/duelling-dynamics-insights-into-the-ai-energy-transition-nexus/#:~:text=Complex%20international%20trade%20challenges%20and,opportunities%2C%20while%20navigating%20regulatory%20complexities>> accessed 15 February 2025.

<sup>86</sup> Ibid.

<sup>87</sup> Schneider, Johannes, Rene Abraham, Christian Meske, and Jan Vom Brocke, 'Artificial intelligence governance for businesses' (2023) 40(3) *Information Systems Management* 229 <<https://doi.org/10.1080/10580530.2022.2085>> accessed 11 March 2025.

<sup>88</sup> Ibid.

<sup>89</sup> Schneider, Johannes, Rene Abraham, Christian Meske, and Jan Vom Brocke, 'Artificial intelligence governance for businesses' (2023) 40(3) *Information Systems Management* 229 <<https://doi.org/10.1080/10580530.2022.2085>> accessed 11 March 2025.

<sup>90</sup> Ibid.

#### 1.10.4 THE EUROPEAN INTELLIGENCE ACT<sup>91</sup>

In 2020, the European Commission, committed to promote the acceptance of AI and address the legal risks presented by this new technology<sup>92</sup>. Initially the European Commission took up a soft-law approach with its non-binding 2019 Ethics Guidelines for Trustworthy AI and Policy and investment recommendations<sup>93</sup>. The AI Act is intended to “ensure that AI systems in the EU are safe, and respect fundamental rights and values and its objectives are to foster investment and innovation in AI, enhance governance and enforcement, and encourage a single EU market for AI”<sup>94</sup>. This study recognised the European AI Act as the only sector specific legislation available that specifically addresses issues of AI.

#### 1.10.5 CONCLUSION

In conclusion, the literature available acknowledges the need for better legal frameworks to address the issues that are presented by cross-border electricity trade. From the above, see that indeed the issue of lacking legal frameworks is prevalent, and the literature calls for regional cooperation/integration. Many authors see this achievable through many lenses for example, functionalism and neofunctionalism as well as intergovernmentalism. However much so, there is a clear need for this

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<sup>91</sup> Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (OJ L, 12.7.2024).

<sup>92</sup> European Commission, ‘White Paper on Artificial Intelligence: A European Approach to Excellence and Trust (COM(2020) 65 final)’ < [https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020\\_en.pdf](https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf) > accessed 20 February 2025.

<sup>93</sup> High-Level Expert Group on Artificial Intelligence, ‘Ethics Guidelines for Trustworthy AI’ (European Commission, 2019) < <https://ec.europa.eu/newsroom/dae/redirection/document/60419> > accessed 6 March 2025.

<sup>94</sup> EY, ‘The EU AI Act: What it Means for Your Business’ < [https://www.ey.com/en\\_ch/insights/forensic-integrity-services/the-eu-ai-act-what-it-means-for-your-business](https://www.ey.com/en_ch/insights/forensic-integrity-services/the-eu-ai-act-what-it-means-for-your-business) > accessed 6 March 2025.

cooperation. Additionally, the literature also acknowledges the new phenomenon known as AI and how it has the potential to disrupt trade ecosystems, calling for the need to have laws that accommodate the complexities that come with AI and how they affect energy trade. These studies highlight the advantages and the challenges of electricity trade. However, they do not go in depth to analyse the specific laws and discover whether they can accommodate the growing energy demands or not. In addition to that, there is limited literature on the EAPP, being a relatively new power pool as well as the East African region. This is where this study comes in.

## **1.11 METHODOLOGY**

### **1.11.1 INTRODUCTION**

The research methodology for this study is described in this chapter. The entire research approach, data collection method, analysis process as well as processes implemented to ensure the rigor and trustworthiness of the findings, is explained in this chapter. Owing to the research questions, a deep understanding of legal texts, policies and scholarly analysis was required, and a qualitative approach focused solely on a thorough examination of necessary documents was viewed as the most suitable method.

### **1.11.2 RESEARCH APPROACH**

This study adopted a qualitative research approach. Qualitative research involves collecting and analysing non-numerical data to understand concepts, opinions, or experiences<sup>95</sup>. It is an explanatory approach that aimed to comprehend sophisticated phenomena, investigate perspectives, and gain a deep understanding of meanings and

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<sup>95</sup> P Bhandari, 'What Is Qualitative Research? Methods & Examples' (Scribbr, 2020)  
<<https://www.scribbr.com/methodology/qualitative-research>> accessed 19 May 2025.

contexts. For the purposes of legal investigation, a qualitative approach gives way for a thorough analysis and interpretation of legal texts, policy documents, and academic writings to comprehend the variations, intentions, and possible effects of regulatory frameworks<sup>96</sup>.

### 1.11.3 RESEARCH METHOD

Documentary analysis carried out through literature review was the main method employed in this study. Document analysis is a systematic procedure for reviewing or evaluating documents, both printed and electronic material<sup>97</sup>. For the purposes of this study, a number of documents were analysed for example; treaties, laws, regulations, policy papers, reports, academic papers as well as action plans.

The following factors informed the decision to rely on solely on documentary analysis made possible by a systematic review of the literature;

- **Type of the Research Questions:** The research questions for this study concentrate on examining and explaining the existing legal and policy frameworks. These legal and policy documents are essentially documented in many forms of official and academic literature.
- **Scope of the Study:** Documentary analysis gives way for broad exploration of the necessary documents henceforth, the purpose of this study was to consolidate the already existing legal provisions, policies, and academic writings as opposed

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<sup>96</sup> P Ishwara Bhat, 'Qualitative Legal Research: A Methodological Discourse' in *Idea and Methods of Legal Research* (Delhi, 2020; online edn, Oxford Academic, 23 January 2020).

<sup>97</sup> Glenn Bowen, 'Document Analysis as a Qualitative Research Method' (2009) 9 *Qualitative Research Journal* 27.

to creating fresh new data in regard to the impact or implementation of these frameworks.

- **A basis for Legal Analysis:** A comprehensive documentary examination gave an important foundation by recognising the relevant legal instruments and provisions, understanding the history behind them while illustrating possible areas of disagreement or coordination between both the regional and national laws.

#### **1.11.4 PROCESS**

In order to ensure thoroughness and reduce biases in the identification and interpretation of the documents, a documentary analysis was employed following an organized method. The process can be seen below;

##### **1.11.4.1 IDENTIFICATION OF THE DOCUMENTS**

The first step was to identify important documents through searching electronic databases like Google Scholar, JSTOR, ScienceDirect as well as national legal databases for Uganda, Kenya, and Tanzania. Websites of regional bodies like the EAPP, COMESA, ECOWAS as well as national regulators of the three countries were also accessed. In relation to important theories, keywords used to search were formulated for example; “EAPP,” East African Power Pool,” “energy law,” “electricity law” among others. Furthermore, additional relevant sources were identified by checking reference lists of important legal texts and academic articles.

#### **1.11.4.2 ASSESSMENT AND SORTING OF DOCUMENTS**

There are four factors a researcher is to consider when deciding which documents to include; authenticity, credibility, representativeness and meaning<sup>98</sup>. All this was considered in identifying the necessary documents. After the documents were identified, they were assessed to see if they fit the study's requirements. A number of things were considered for example; important legal documents like laws and treaties, policy papers, and research articles that have been peer reviewed. In this study, things that were excluded included opinions that lacked a legal standing, outdated laws and documents that were not related to international trade.

#### **1.11.4.3 DATA EXTRACTION AND ANALYSIS**

Once the identification process was done, important information was extracted. This included; key legal provisions, rules and requirements, challenges and possibilities related to cross-border electricity trade as well as relevant insights from policies like objectives, problems, and opportunities. This process involved coding the relevant data through recognising recurring themes, regulatory approaches, legal concepts as well as academic writings. This was then categorised into larger themes for example, aspects of the various legal frameworks, harmonisation, transmission access, dispute resolution mechanisms and the tariff methodologies. Lastly, the data acquired was combined to provide a comprehensive analysis of the legal framework and challenges and opportunities were identified for further development or clarity. This allowed for the formation of a comprehensive and sophisticated understanding of the already existing

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<sup>98</sup> Uwe Flick, *An Introduction to Qualitative Research* (6th edn, Sage 2018).

legal framework governing cross-border electricity trade in the EAPP, with a specific focus on Uganda, Kenya, and Tanzania.

#### **1.11.4.4 ENSURING VALIDITY AND RELIABILITY**

To ensure that the documentary analysis was valid and reliable, the following measures were taken: A clear search strategy was employed, for example, defined databases and search terms meant to make sure that the recognition of the relevant documents was understandable and would be reproducible. Secondly, each document was analysed carefully for its authority and relevance. lastly, comparing, and contrasting insights from the legal framework of three different countries enhanced the depth of the analysis, which permitted the identification of similarities, disparities, and possible areas for harmonisation.

### **1.12 LIMITATIONS**

The limitations associated with conducting a documentary analysis do not mean that this method is a less worthy approach to research<sup>99</sup>. However, these limitations are inevitable, and they include;

- **Availability of Documents:** The availability and accessibility of some documents restricts this analysis. Some of documents may not be publicised.
- **It is possible for Interpretation to be different:** Legal texts can be interpreted differently, and analysis is anchored in the researcher's own interpretation.

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<sup>99</sup> Charles Teddlie, Abbas Tashakkori, 'A General Typology of Research Designs Featuring Mixed Methods' (2009) 14/7 The Qualitative Report 12.

- **The law v Reality:** This analysis mainly focused on the legal framework as documented. However, it does not reflect the reality of how the framework is implemented, enforced, or the day-to-day hindrances faced by the parties involved in this trade.

### 1.13 CONCLUSION

In conclusion, a qualitative research approach was employed for this study and documentary analysis through a systematic literature review was the method of data collection used.

## 2 CHAPTER TWO: NON-LEGAL ASPECTS

### 2.1 ECONOMIC CONSIDERATIONS

Regional power pools just like the EAPP greatly lessen electricity supply costs by allowing less expensive sources of generation to supersede the expensive ones<sup>100</sup>. The Day Ahead Market is predicted to reduce costs<sup>101</sup>. Interconnected grids also improve energy safety through resource distribution in times where there is a deficit<sup>102</sup>. This essentially promotes stability within the economy<sup>103</sup>. Furthermore, the energy sector in East Africa is matched with a great need for investment<sup>104</sup>. For example, the EAPP Master Plan needs about US\$3.7 billion for the EAPP to be functional over a 30-year period<sup>105</sup>. Similarly, Africa typically requires around US\$45 billion per year in order to carry out generation of power till 2030<sup>106</sup>. This in mind, it is important to note that only

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<sup>100</sup> The World Bank, 'Powering Africa: The Transformational Impact of Regional Energy Projects in West Africa' (World Bank, 6 February 2025) <<https://www.worldbank.org/en/results/2025/02/06/powering-africa-the-transformational-impact-of-regional-energy-projects-in-west-africa>> accessed 20 May 2025.

<sup>101</sup> Yunus Kemp, 'East Africa: EAPP setting up centralised energy market in 2025' (ESI-Africa, 10 December 2024) <<https://www.esi-africa.com/business-and-markets/east-africa-eapp-setting-up-centralised-energy-market-in-2025/>> accessed 20 May 2025.

<sup>102</sup> Ibid.

<sup>103</sup> 'East Africa Power Market will launch a 'Day-ahead market'' (Castalia Advisors, 20 January 2025) <<https://castalia-advisors.com/east-africa-power-market-day-ahead-market/>> accessed 20 May 2025.

<sup>104</sup> The Energy Charter Secretariat, *Energy Infrastructure Investment in East Africa* (Occasional Paper No 13, January 2017) <[https://www.energycharter.org/fileadmin/DocumentsMedia/Occasional/Energy\\_Infrastructure\\_Investment\\_in\\_East\\_Africa.pdf](https://www.energycharter.org/fileadmin/DocumentsMedia/Occasional/Energy_Infrastructure_Investment_in_East_Africa.pdf)> accessed 20 May 2025.

<sup>105</sup> The World Bank, *Project Information Document (PID) Appraisal Stage: Regional Eastern Africa Power Pool Program* (June 2012) <<https://documents1.worldbank.org/curated/en/340231468765608812/txt/PID0Appraisal0006201201336327380446.txt>> accessed 20 May 2025.

<sup>106</sup> James Nyamongo and Lilian K Nyamongo, *Energy Infrastructure Investments in East Africa and the Relevance of the Energy Charter Treaty* (Energy Charter Secretariat 2019).

1% of the world’s private energy capital is received by Africa<sup>107</sup>. Therefore, attracting investment in the private sector is crucial<sup>108</sup>. For this to be attainable, a predictable and transparent regulatory environment is necessary<sup>109</sup>. This means that harmonisation of energy laws is essential in reducing the uncertainty and potentially attract the investment necessary for the region to prosper through the energy sector<sup>110</sup>.

## 2.2 SOCIAL IMPACT

In regard to energy poverty Uganda currently stands at 41% while Tanzania is at 38%<sup>111</sup> which is a testament of the situation in East Africa, registering some of the lowest rates in East Africa. “Universal access to affordable, reliable, and sustainable energy by 2030” is among the main objectives of regional energy initiatives, which is in sync with SDG 7<sup>112</sup>. It is important to strive for regional integration and cross-border trade in order to boost access to energy<sup>113</sup>. The Integrated market promotes the availability of electricity within the region as it enables countries with energy-surpluses to supply

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<sup>107</sup> Ibid.

<sup>108</sup> GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), Study: Renewable Energy Transition Africa (n.d.) <[https://www.giz.de/en/downloads/Study\\_Renewable%20Energy%20Transition%20Africa-EN.pdf](https://www.giz.de/en/downloads/Study_Renewable%20Energy%20Transition%20Africa-EN.pdf)> accessed 20 May 2025.

<sup>109</sup> Metassebia Hailu Zeleke, 'The Importance of a Harmonized Legal Framework for Africa's Electricity Market' (FurtherAfrica, 29 April 2025) <<https://furtherafrica.com/2025/04/29/the-importance-of-a-harmonized-legal-framework-for-africas-electricity-market/>> accessed 20 May 2025.

<sup>110</sup> A Tharani 'Harmonization in the EAC' East African Community Law: Institutional, Substantive and Comparative EU Aspects, Emmanuel Ugirashebuja et al (eds) Brill (2017) <<http://www.jstor.org/stable/10.1163/j.ctt1w76vj2.34>> accessed 30 April 2025.

<sup>111</sup> Global Energy Monitor, 'Power Sector Transition in East Africa (EACOP region)' (Global Energy Monitor, 7 May 2025) <[https://www.gem.wiki/Power\\_Sector\\_Transition\\_in\\_East\\_Africa\\_\(EACOP\\_region\)](https://www.gem.wiki/Power_Sector_Transition_in_East_Africa_(EACOP_region))> accessed 20 May 2025.

<sup>112</sup> Government of the United Republic of Tanzania, *National Energy Compact for United Republic of Tanzania* (2025).

<sup>113</sup> Metassebia Hailu Zeleke, 'The Importance of a Harmonized Legal Framework for Africa's Electricity Market' (FurtherAfrica, 29 April 2025) <<https://furtherafrica.com/2025/04/29/the-importance-of-a-harmonized-legal-framework-for-africas-electricity-market/>> accessed 20 May 2025.

countries in need<sup>114</sup>. However, much as we aim for increased energy access, we must also note that issues of affordability come into question<sup>115</sup>. This shows that a balanced approach is necessary if energy access for all is the goal: “robust regional grid infrastructure to support industrial and urban centres, complemented by decentralized, localized solutions for remote and underserved communities”<sup>116</sup>.

Additionally, universal access to affordable energy is an important precondition for alleviating poverty as well as for improving the livelihood of the citizens of East Africa<sup>117</sup>. Statistics show that for every 1 million US dollars that is invested in energy, at least 25 jobs are created<sup>118</sup>. For example, projects like the Bujagali Hydropower project in Uganda has provided temporary employment for approximately 3,400 people<sup>119</sup>. Additionally, solar power initiatives across Tanzania, Kenya, and Uganda have

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<sup>114</sup> Ibid.

<sup>115</sup> GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), Study: Renewable Energy Transition Africa (n.d.) <[https://www.giz.de/en/downloads/Study\\_Renewable%20Energy%20Transition%20Africa-EN.pdf](https://www.giz.de/en/downloads/Study_Renewable%20Energy%20Transition%20Africa-EN.pdf)> accessed 20 May 2025.

<sup>116</sup> GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), Study: Renewable Energy Transition Africa (n.d.) <[https://www.giz.de/en/downloads/Study\\_Renewable%20Energy%20Transition%20Africa-EN.pdf](https://www.giz.de/en/downloads/Study_Renewable%20Energy%20Transition%20Africa-EN.pdf)> accessed 20 May 2025.

<sup>117</sup> Deng Duot Bior-Barr, 'Uganda-South Sudan Energy Sector Interdependency: The Social and Economic Implications of the Karuma Hydroelectricity on South Sudan Energy Market Demands' (PaanLuel Wël: South Sudanese Bloggers, 15 January 2025) <<https://paanluelwel.com/2025/01/15/uganda-south-sudan-energy-sector-interdependency-the-social-and-economic-implications-of-the-karuma-hydroelectricity-on-south-sudan-energy-market-demands/>> accessed 20 May 2025.

<sup>118</sup> GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), Study: Renewable Energy Transition Africa (n.d.) <[https://www.giz.de/en/downloads/Study\\_Renewable%20Energy%20Transition%20Africa-EN.pdf](https://www.giz.de/en/downloads/Study_Renewable%20Energy%20Transition%20Africa-EN.pdf)> accessed 20 May 2025.

<sup>119</sup> European Investment Bank, *Bujagali Hydroelectric Project (Construction of a 250 MW power plant)* (2007).

successfully trained over 1,500 people who have gone on to be entrepreneurs<sup>120</sup>. Beyond direct employment, energy access profoundly enhances livelihoods<sup>121</sup>.

Furthermore, energy is crucial for the delivery of important basic needs like healthcare as well as access to safe drinking water among others<sup>122</sup>. Nonetheless, the development of such large-scale energy projects has the potential to negatively impact the environment for example, water resources<sup>123</sup>. For instance, the Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile has brought up worries about the possible reduction in water flow among states like Uganda, Kenya, and Tanzania, which depend on the Nile Basin's water resources<sup>124</sup>.

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<sup>120</sup> Mott Foundation, 'In sub-Saharan Africa, solar power is benefitting people, communities and the planet' (Mott Foundation, 8 May 2025) <<https://www.mott.org/news/articles/in-sub-saharan-africa-solar-power-is-benefitting-people-communities-and-the-planet/>> accessed 20 May 2025.

<sup>121</sup> Mott Foundation, 'In sub-Saharan Africa, solar power is benefitting people, communities and the planet' (Mott Foundation, 8 May 2025) <<https://www.mott.org/news/articles/in-sub-saharan-africa-solar-power-is-benefitting-people-communities-and-the-planet/>> accessed 20 May 2025.

<sup>122</sup> GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), Study: Renewable Energy Transition Africa (n.d.) <[https://www.giz.de/en/downloads/Study\\_Renewable%20Energy%20Transition%20Africa-EN.pdf](https://www.giz.de/en/downloads/Study_Renewable%20Energy%20Transition%20Africa-EN.pdf)> accessed 20 May 2025.

<sup>123</sup> Grey Magaiza and others, 'Land use and land cover changes in QwaQwa: implications for service delivery 30 years after democracy' (HSRC, 20 March 2025) <<https://hsrc.ac.za/news/food-security/land-use-and-land-cover-changes-in-qwaqwa-implications-for-service-delivery-30-years-after-democracy/>> accessed 20 May 2025.

<sup>124</sup> International Crisis Group, 'Bridging the Gap in the Nile Waters Dispute' (Crisis Group, 20 March 2019) <<https://www.crisisgroup.org/africa/horn-africa/ethiopia/271-bridging-gap-nile-waters-dispute>> accessed 20 May 2025.

### 3 CHAPTER THREE: FINDINGS - ASSESSMENT OF THE INTERNATIONAL AND REGIONAL LEGAL FRAMEWORK

#### 3.1 INTERNATIONAL FRAMEWORK

##### 3.1.1 THE WORLD TRADE ORGANIZATION (WTO) AND GENERAL AGREEMENTS ON TRADE AND TARIFFS (GATT)

To establish the General Agreement on Tariffs and Trade (GATT) we must first go back in time to the 1944 Bretton Woods Conference, which laid ground for the post-World War II financial system and led to the establishment of two key entities, the International Monetary Fund<sup>125</sup> and the International Bank for Reconstruction and Development currently known as the World Bank<sup>126</sup>. Despite its institutional insufficiencies, the GATT was able to operate as “a de facto international organization, sponsoring eight rounds of multilateral trade negotiations”<sup>127</sup>. The Uruguay Round, conducted from 1987 to 1994 was the largest ever international trade agreement<sup>128</sup>, and it resulted in to the Marrakesh Agreement,<sup>129</sup> which led to the establishment of the World Trade Organization (WTO)<sup>130</sup>. The WTO incorporates the principles of the GATT and provides continuing framework<sup>131</sup>.

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<sup>125</sup> ‘International Monetary Fund (IMF)’ (*IMF*, March 3, 2025) < <https://www.imf.org/en/Home> > accessed 8 April 2025.

<sup>126</sup> Georgetown Law Library, ‘From GATT to the WTO: An Overview’ < <https://guides.ll.georgetown.edu/c.php?g=363556&p=4108235> > accessed 8 April 2025.

<sup>127</sup> Georgetown Law library, ‘From GATT to the WTO: An Overview’ < <https://guides.ll.georgetown.edu/c.php?g=363556&p=4108235> > accessed 8 April 2025.

<sup>128</sup> Department of Trade and Industry, The Uruguay Round of Multilateral Trade Negotiations 1986-94 (HSMO, 1994) < <https://assets.publishing.service.gov.uk/media/5a7b7fb3ed915d131105fa24/2579.pdf> > accessed 8 April 2025.

<sup>129</sup> World Trade Organization, ‘Marrakesh Agreement Establishing the World Trade Organization’ < [https://www.wto.org/English/docs\\_e/legal\\_e/04-wto\\_e.htm](https://www.wto.org/English/docs_e/legal_e/04-wto_e.htm) > accessed 19 May 2025.

<sup>130</sup> World Trade Organization < <https://www.wto.org/> > accessed 19 May 2025.

<sup>131</sup> *Ibid.*

Following the World Trade Organization (WTO) Appellate Body report in the Canada - Renewable Energy (2013) dispute,<sup>132</sup> the need for reforming the WTO Agreement on Subsidies and Countervailing Measures (SCM) has been increasingly voiced in the literature, in particular with a view to safeguarding ‘policy space’ for government support for renewable energy (RE)<sup>133</sup>. Additionally, “energy trade and the GATT/WTO rules seem to largely operate in isolation from one another was that, for the most part, these agreements contain rules of general application”<sup>134</sup>. Neither refers to “energy” or deals explicitly with energy issues, much as the attention of the GATS includes obligations on market access on many types of services equally necessary for the energy sector<sup>135</sup>. So much as neither of the two legislations refer to energy specifically, there is nothing in the provisions of the GATT 1947 or WTO Agreements stipulating that trade in energy is actually excluded from their scope.<sup>136</sup>

The GATT's core objective is to ensure reduction of barriers<sup>137</sup>. This may be specific to goods, but it can be applied to cross-border trade. Be that as it may, this proves the challenge of the laws not expressly providing for products like electricity. The GATT and the WTO provide a foundational legal framework for cross-border transactions through several key principles, for example, Article 1 of the GATT introduces to us the Most Favoured Nation Principle (MFN) that necessitates that the benefits granted to products

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<sup>132</sup> Appellate Body, Canada – Certain Measures Affecting the Renewable Energy Generation Sector (WT/DS412/AB/R) and Canada – Measures Relating to the Feed-in Tariff Program (WT/DS426/AB/R) (WTO, 2013)

<sup>133</sup> L Rubini, ‘Ain’t Wastin Time No More: Subsidies for Renewable Energy, the SCM Agreement, Policy Space and Law Reform’ (2012) 15(2) JIEL 525.

<sup>134</sup> Timothy J Richards and Lawrence Herman, *Relationship between International Trade and Energy* (World Trade Organization 2018).

<sup>135</sup> Ibid.

<sup>136</sup> A Marhold, ‘The World Trade Organization and Energy: Fuel for Debate (European Society of International Law Series) < [https://esil-sedi.eu/post\\_name-411/#\\_ftn2](https://esil-sedi.eu/post_name-411/#_ftn2) > accessed 6 March 2025.

<sup>137</sup> General Agreement on Tariffs and Trade, 1947.

from one-member country must be granted “immediately and unconditionally” to similar products from other member countries<sup>138</sup>. The National Treatment principle in Article 3 of the GATT requires that imported products be treated the same as domestic products without any favouritism<sup>139</sup>. In regard to this study, these provisions establish principles that imply that electricity traded should not be subject to higher taxes or tariffs. Article 5 of the GATT provides for freedom of transit of goods<sup>140</sup>. This particular provision is essential to cross-border electricity trade as it is the whole essence of this transaction. Furthermore, the GATT promotes regional integration through Article 24, which authorises the formation of customs unions and free trade areas<sup>141</sup>. Power Pools like the EAPP match the spirit of such a provision.

### **3.1.2 THE ENERGY CHARTER TREATY**

The Energy Charter Treaty (ECT) is a specialized agreement focused on promoting cross-border energy cooperation. It encompasses trade, transit, investment, and energy efficiency<sup>142</sup>. This is different from the broader GATT/WTO framework as the ECT provides more specialized definitions relevant to energy as well as provides for specific provisions on energy movement through infrastructure like pipelines<sup>143</sup>. Particularly, Article 7 of the ECT addresses transit ensuring freedom of transit for energy materials

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<sup>138</sup> Ibid.

<sup>139</sup> Ibid note 137.

<sup>140</sup> Ibid note 137.

<sup>141</sup> Ibid note 137.

<sup>142</sup> Energy Charter Secretariat, ‘Energy Charter Treaty 1994’ < <https://www.energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/> > accessed 19 May 2025.

<sup>143</sup> Ibid.

and products<sup>144</sup>. Article 7 reflects the spirit of Article V of the GATT, which speaks on freedom of transit, providing a more specific framework for the energy sector<sup>145</sup>. Furthermore, the ECT extends beyond trade in goods to include investment protection, an area that the WTO is silent on<sup>146</sup>. Within the EAPP and the East African region at large there is no principal act that exists like the Energy Charter Treaty. Therefore, this treaty is essential as it acts as an example for the region.

## 3.2 REGIONAL FRAMEWORK

### 3.2.1 THE EAST AFRICAN COMMUNITY TREATY AND THE COMMON MARKET PROTOCOL

The Treaty Establishing the EAC provides for cross-border electricity trade through its all-inclusive objective of economic integration and specifically provides for the common market in Articles 5 and 76, which includes free movement of capital and services<sup>147</sup>. Article 101 of the treaty provides for energy and encourages cross-border electricity trade through energy cooperation<sup>148</sup>. However, this is the only instance that we find the energy trade mentioned in the treaty.

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<sup>144</sup> Energy Charter Secretariat, The International Energy Charter: Consolidated Energy Charter Treaty with Related Documents, 15 January, 2016 < <https://www.energycharter.org/fileadmin/DocumentsMedia/Legal/ECTC-en.pdf> > accessed 19 May 2025.

<sup>145</sup> Konoplyanik, Andrei, and Thomas Walde, 'Energy Charter Treaty and its role in international energy' *J. Energy Nat. Resources L.* 24 (2006): 523.

<sup>146</sup> A Marhold, 'The World Trade Organization and Energy: Fuel for Debate' (European Society of International Law series) < [https://esil-sedi.eu/post\\_name-411/#\\_ftn2](https://esil-sedi.eu/post_name-411/#_ftn2) > accessed 19 May 2025.

<sup>147</sup> Treaty for the Establishment of the East African Community, signed 30 November 1999, entered into force 7 July 2000.

<sup>148</sup> Ibid.

Ugirashebuja et al<sup>149</sup> draws our attention to the wording of the EAC treaty, highlighting that the treaty lacks a comprehensive list of powers conferred to it by the partner states<sup>150</sup>. It is further explained that the treaty instead mainly imposes direct obligations on partner states through phrases like 'the Partner states shall' and 'the partner states agree' and this wording points to the fact that the EAC's nature is one that is a partner state lead Organisation that operates on an intergovernmentalism approach to integration<sup>151</sup>. This means that the EAC is fundamentally controlled by member states who retain considerable sovereignty and make decisions through cooperation, mutual understanding, and agreement among themselves rather than a central EAC authority having independent power over them. Here we see the theory of intergovernmentalism at play within the East African Community. This then brings the question, to what extent are these regional obligations enforceable? Ugirashebuja goes on to note however that some articles have paragraphs inserted in them that refer some power to the EAC. Articles where language like 'the council shall' has been used. He further refers to A G Toth<sup>152</sup> who suggests that whenever a provision contains such a paragraph, it should be construed as conferring competence to the Community<sup>153</sup>.

Regional electricity markets are essentially the interconnection of already existing national electricity markets<sup>154</sup>. Rubanda et al. discuss the four crucial features of

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<sup>149</sup> Emmanuel Ugirashebuja, "East African Community Law Institutional, Substantive and Comparative EU Aspects" Brill Nijhoff, 2017.

<sup>150</sup> Ibid.

<sup>151</sup> Ibid note 149.

<sup>152</sup> A G Toth, 'The Principle of Subsidiarity in the Maastricht Treaty' (1992) 29 *Common Market Law Review* 1079, 1080.

<sup>153</sup> Ibid.

<sup>154</sup> G. Kyriakarakos, 'Harmonizing the Electricity Markets in Africa: An Overview of the Continental Policy and Institutional Framework towards the African Single Electricity Market Sustainability,' (2022) 14 *Sustainability*.

electricity market integration; coordinated physical infrastructure development, harmonised and standardised operation procedures, existence of market competition, and coordinated institutional governance<sup>155</sup>. All these are leading us to realise the need for a harmonised legal framework so as to create a seamless and efficient trade of electricity across borders.

Existing writings attribute the slow growth of electricity trading in the region to uncoordinated institutions and policies<sup>156</sup> among other issues. Kyriakarakos examined both institutional and policy frameworks in Africa Power Pools and found that the lack of regional collaboration at both political and technical levels essentially led to the slowed infrastructure investment for cross-border electricity trading<sup>157</sup>.

The East African Common Market<sup>158</sup>, established in 2010, represents the second major regional integration milestone within the East African Community<sup>159</sup>. Subsequently, a strategic plan (2013-2038 Master Plan) to deliver infrastructure outlay for power trading within the region was adopted<sup>160</sup> after the establishment of the East African Power Pool in 2012.

It is important to note that the EAC Common Market Protocol itself does not specifically use the term "electricity trade". However, the provisions concerning free movement of

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<sup>155</sup> M.E. Rubanda, L. Senyonga, M. Ngoma, M.S. Adaramola, 'Electricity Trading in Energy Market Integration: A Theoretical Review Energies' (2023) Energies.

<sup>156</sup> G. Kyriakarakos Harmonizing the Electricity Markets in Africa: An Overview of the Continental Policy and Institutional Framework towards the African Single Electricity Market Sustainability, (2022) 14 Sustainability.

<sup>157</sup> Ibid.

<sup>158</sup> East African Community 'Common Market' < <https://www.eac.int/common-market> > accessed 19 May 2025.

<sup>159</sup> Ibid.

<sup>160</sup> A. Herskovits, H. Amadou Power Africa Transmission Roadmap to 2030 a Practical Approach to Unlocking Electricity Trade Power Africa and African Development Bank (2019).

services and capital are read to apply to cross-border electricity trade within the Community. Part F of the protocol provides for free movement of services<sup>161</sup>. Article 16 ensures the free movement of services<sup>162</sup>. Article 17 provides for national treatment as partner states are necessitated to treat services and service suppliers from other partner states and their own domestic services without any favouritism<sup>163</sup>. The protocol implementing this principle is essential for ensuring fair competition in cross-border electricity trade. We also see the Most Favoured National Treatment in Article 18 that mandates that partner states accord services from other partner states treatment no less favourable than that granted to those from any third party<sup>164</sup>. This is crucial as it prevents discrimination<sup>165</sup>. Part G of the Act provides for free movement of capital<sup>166</sup>. Article 24 promotes the elimination of restrictions on capital. this promotes investments<sup>167</sup>. We see the protocol's stance with policy coordination in Article 30, 31, 32 and 38. These provisions provide for coordination of economic, monetary, and financial policies, harmonizing tax policies and coordinating transport policies and infrastructure development<sup>168</sup>. Such coordination is necessary to develop a conducive environment for cross-border electricity trade.

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<sup>161</sup> Protocol on the Establishment of the East African Community Common Market (2009) < <https://eacj.org/wp-content/uploads/2012/08/Common-Market-Protocol.pdf> > (accessed 13 May 2025).

<sup>162</sup> Ibid.

<sup>163</sup> Ibid note 161.

<sup>164</sup> Ibid note 161.

<sup>165</sup> Ibid note 161.

<sup>166</sup> Protocol on the Establishment of the East African Community Common Market (2009) < <https://eacj.org/wp-content/uploads/2012/08/Common-Market-Protocol.pdf> > (accessed 13 May 2025).

<sup>167</sup> Ibid.

<sup>168</sup> supra note 166, 36.

The EAC Common Market Protocol has great potential for promoting cross-border electricity. However, there are potential loopholes for cross-border electricity trade and these include the progressive liberalisation of services rather than immediate implementation in Article 16 and Article 23<sup>169</sup>, the possibility for member States to abuse measures restricting services for general and security reasons specifically in Article 21 and 22<sup>170</sup>, the control over access to land by national laws in Article 15<sup>171</sup> which could possibly aggravate infrastructure development, and the effectiveness of being reliant on the actual implementation and monitoring efforts by Partner States and the EAC Council in Article 50<sup>172</sup>.

We see the EAC treaty, and the Common Market Protocol actively involve the principles presented by the GATT and the WTO, hence a harmonisation of laws is seen between the four documents which is essential for promoting cross-border electricity trade through the legal lens.

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<sup>169</sup> Protocol on the Establishment of the East African Community Common Market (2009) < <https://eacj.org/wp-content/uploads/2012/08/Common-Market-Protocol.pdf> > (accessed 13 May 2025).

<sup>170</sup> Ibid.

<sup>171</sup> Ibid note 169.

<sup>172</sup> Ibid note 169.

### 3.2.2 EAST AFRICAN POWER POOL

#### 3.2.2.1 INTER-GOVERNMENTAL MEMORANDUM OF UNDERSTANDING (IG-MOU) AND THE INTER UTILITY MEMORANDUM OF UNDERSTANDING (IU-MOU)

The Deloitte report<sup>173</sup> gives essential criteria for the success of any regional power pool<sup>174</sup>. It states that the starting point towards the creation of any regional power pool is for governments to define a common legal and regulatory framework<sup>175</sup>. It points out that this will involve consensus-building activities that involve the preparation, negotiation, and adoption of two key documents, namely the IG-MOU and the IU-MOU.<sup>176</sup> Uganda, Kenya and Tanzania have variedly adopted these two documents.

Deloitte emphasises that there are critical success factors that must be considered if the EAPP is to emerge into a fully integrated and operational power pool drawing from the growth of already existing African power pools like the SAPP<sup>177</sup>. Among these success factors is a Legal and regulatory framework and harmonisation of legal and operational framework<sup>178</sup>.

The Inter-Governmental Memorandum of Understanding (IG-MOU) serves as the foundational document for regional integration in the energy sector in the EAPP<sup>179</sup>. As of today 13, member states have signed this memorandum including Uganda, Kenya,

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<sup>173</sup> Deloitte, 'The roadmap to a fully integrated and operational East African Power Pool (EAPP)' 2015. <[https://africa-energy-portal.org/sites/default/files/2019-12/ER\\_Power%20TL.pdf](https://africa-energy-portal.org/sites/default/files/2019-12/ER_Power%20TL.pdf)> accessed 19 May 2025.

<sup>174</sup> Ibid.

<sup>175</sup> Ibid note 173.

<sup>176</sup> Ibid note 173.

<sup>177</sup> Deloitte, 'The roadmap to a fully integrated and operational East African Power Pool (EAPP)' (2015) <[https://africa-energy-portal.org/sites/default/files/2019-12/ER\\_Power%20TL.pdf](https://africa-energy-portal.org/sites/default/files/2019-12/ER_Power%20TL.pdf)> accessed 19 May 2025.

<sup>178</sup> Ibid.

<sup>179</sup> East African Power Pool, 'Eastern Africa Power Pool (EAPP)' <<http://mmeipa.africa-eu-energy-partnership.org/eastern-africa-power-pool-eapp>> accessed 19 May 2025.

and Tanzania. The IG-MOU introduces to us the organisational structure of the EAPP, and within this structure, we have six organs, among which are the Council of Ministers (COM) and the Independent Regulatory Board (IRB)<sup>180</sup>. The importance of the establishment of these bodies within the foundational agreement of the EAPP manifests how crucial it is to have both regulatory oversight and high-level policy direction.

Preceding the IG-MOU is the Inter-Utility Memorandum of Understanding (IU-MOU). The IU-MOU addresses the functional and directive aspects of the power pool<sup>181</sup>. The agreement was signed by the Chief Executive Officers (CEOs) or Managing Directors of the power utilities within the member countries<sup>182</sup>. As of today, fourteen utilities from the EAPP's thirteen member countries are signatories to the IU-MOU<sup>183</sup>. The primary purpose of the IU-MOU is to define the essential elements that control the management and day-to-day operations of the EAPP<sup>184</sup>.

A report by the UN Commission for Africa emphasizes that Power pools should be adopted as the best way to deal with the evenly distributed energy resources and Africa's energy problems<sup>185</sup>. However, the report takes into account that most sub-Saharan African power pools do not meet the requirements to have an operational power pool; a legal framework for cross-border electricity exchanges as well as trust

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<sup>180</sup> East African Power Pool, 'The EAPP Establishment' (*Eastern Africa Power Pool*, April 29, 2023) <<https://eappool.org/the-eapp-establishment/>> accessed 19 May 2025.

<sup>181</sup> Ibid.

<sup>182</sup> Ibid note 180.

<sup>183</sup> East African Power Pool, 'Eastern Africa Power Pool (EAPP)' < <http://mmeipa.africa-eu-energy-partnership.org/eastern-africa-power-pool-eapp> > accessed 19 May 2025.

<sup>184</sup> Ibid.

<sup>185</sup> P Niyimbona, UN Commission for Africa, 'The Challenges of Operationalizing Power Pools in Africa.' (UN Economic Commission for Africa, UNDESA Seminar on Electricity Interconnection, Cairo, Egypt, 19-21 June 2005) < [https://sdgs.un.org/sites/default/files/statements/3214interconnection\\_powerpools.pdf](https://sdgs.un.org/sites/default/files/statements/3214interconnection_powerpools.pdf) > accessed May 2025.

and confidence among pool members; and regional regulation and mechanism for dispute resolution which brings us back to a legal framework<sup>186</sup>. It goes on to mention that the benefits of an operational power pool include; optimization of generation resources, improved investment climate, increases interstate electricity trade as well as the development of a regional market for electricity which essentially improve accessibility to electricity in the region<sup>187</sup>.

### 3.2.2.2 EAPP GRID CODE

A grid code is a set of documents that legally establishes technical and operational requirements for the connection to and use of an electrical system in a manner that will ensure reliable, efficient, and safe operation<sup>188</sup>. Interconnection allows member countries to utilize the surplus electricity generation in some areas while addressing deficits in others<sup>189</sup>. Ultimately, the EAPP Interconnection Code serves as an important guide, intending to shape the design and ongoing operation of electricity interconnections within the Eastern African region<sup>190</sup>.

The principles and standards that the EAPP Grid Code presents have influenced and been adopted by national grid codes within member countries. Take for example, the Ethiopian National Electricity Transmission Grid Code (ENTGC) in its preamble explicitly states that it is partially based on the EAPP Interconnection Code<sup>191</sup>. Similarly in the

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<sup>186</sup> Ibid note 185.

<sup>187</sup> Ibid note 185.

<sup>188</sup> Energy Regulatory Commission, 'Regulatory Impact Assessment of the Kenyan National Transmission Grid Code and the Kenyan National Distribution Code' May 2016 <[https://www.ketraco.co.ke/sites/default/files/downloads/RIA\\_11\\_May\\_2016.pdf](https://www.ketraco.co.ke/sites/default/files/downloads/RIA_11_May_2016.pdf) > accessed 20 February 2025.

<sup>189</sup> World Bank, 'Regional Energy Transmission and Decarbonisation Project RETRADE EAST,' 21 May, 2024.

<sup>190</sup> East African Community, 'Power' < <https://www.eac.int/energy/power> > accessed 19 May 2025.

<sup>191</sup> Ethiopian Electric Agency, 'EEA Draft Grid Code' (February 2018) < [https://www.eep.com.et/wp-content/uploads/2023/12/01.-EEA-Draft-Grid-Code\\_Feb-2018.pdf](https://www.eep.com.et/wp-content/uploads/2023/12/01.-EEA-Draft-Grid-Code_Feb-2018.pdf) > accessed 1 May 2025.

preamble of the Kenya's National Transmission Grid Code (KNTGC) we see that the code has been developed with the EAPP Grid Code in consideration taking a step to show the obligation to comply with the minimum EAPP standards<sup>192</sup>.

### 3.3 INSIGHTS FROM AFRICAN POWER POOLS

#### 3.3.1 SOUTH AFRICAN POWER POOL

The South African Power Pool is notably the most successful Power Pool in Africa. The IG-MOU, the IU-MOU legal and the agreement between operating members act as the basis of the legal framework governing the SAPP, and this has been crucial in the development of a power grid connecting twelve Southern African Countries<sup>193</sup>. The successful establishment of a common market for electricity in the region is greatly attributed to the legal foundation of the power pool, which has greatly bolstered Cross-border electricity trade in the region as well as cooperation<sup>194</sup>. In addition to that the SADC region successfully established and operationalised the Day-Ahead Market (DAM) in 2006 and the Intra-Day Market in 2016 and this success is greatly linked to its legal framework<sup>195</sup>. The DAM is currently an integral part of the SAPP and has been operational for fifteen years now and it has been an example for other power pools in Africa<sup>196</sup>. We see that the operational and procedural rules within the legal framework

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<sup>192</sup> Kenya National Transmission Grid, 'The Kenya Electricity Grid Code' (2025) <<https://www.epra.go.ke/sites/default/files/2025-03/The%20Grid%20Code%20Part%201%20%28KNTGC%29.pdf> > accessed 1 May 2025.

<sup>193</sup> Southern African Power Pool (SAPP), 'About SAPP' <<https://www.sapp.co.zw/about-sapp>> accessed 11 May 2025.

<sup>194</sup> P Niyimbona, 'The Challenges of Operationalizing Power Pools in Africa' (2005) <[https://sustainabledevelopment.un.org/content/documents/3214interconnection\\_powerpools.pdf](https://sustainabledevelopment.un.org/content/documents/3214interconnection_powerpools.pdf)> accessed 11 May 2025.

<sup>195</sup> Ibid.

<sup>196</sup> Ignacio J Pérez-Arriaga, 'The Southern Africa Power Pool (SAPP)' (Presentation, The Pan-Arab Energy Trade Conference, Cairo, 6 November 2019) <<https://www.arabfund.org/wp-content/uploads/2024/03/CAIRO-2019-SAPP-Perez-Arriaga.pdf>> accessed 11 May 2025.

have fostered and led to competitive trade within the region<sup>197</sup>. Furthermore, due to the new amendments of the IG-MOU and the IU-MOU, Independent Power Producers are now able to become members of the SAPP which in turn increases participation<sup>198</sup>. This inclusion has greatly attracted investment to the region hence increasing cross-border electricity trade.

### 3.3.2 WEST AFRICAN POWER POOL (WAPP)

The principal goal of the WAPP is to guarantee constant and dependable electricity supply for the citizens of the ECOWAS member states while sustaining a competitive market<sup>199</sup>. We can trace the success of the WAPP to its legal framework starting with decision of the Twenty Second Summit of the ECOWAS authority Heads of State as well as the adoption of the Articles of agreement for WAPP organisation and functions in 2006<sup>200</sup>. WAPP was officially set up as an expert agency through these legal documents, bestowing upon its authority and diplomatic protections needed to function successfully in the member states<sup>201</sup>. Additionally, the ECOWAS Energy Protocol reinforced the WAPP's legal standing by offering a safe and foreseeable environment for investments<sup>202</sup>. This comprehensive legal structure proactively encourages the integration of regional electricity networks, which in turn manifests a fully operational

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<sup>197</sup> Ibid.

<sup>198</sup> Africa Energy Forum, 'Southern African Power Pool (SAPP)' <<https://www.africa-energy-forum.com/sponsors/southern-african-power-pool-sapp>> accessed 11 May 2025.

<sup>199</sup> ECOWAS, 'The West African Power Pool (WAPP)' <[https://www.ecowas.int/special\\_agency/the-west-african-power-pool-wapp/](https://www.ecowas.int/special_agency/the-west-african-power-pool-wapp/)> accessed 12 May 2025.

<sup>200</sup> Africa-EU Energy Partnership, 'Regional Power Pools in Africa' <<http://mmeipa.africa-eu-energy-partnership.org/index.php/taxonomy/term/25>> accessed 11 May 2025.

<sup>201</sup> ECOWAS, 'The West African Power Pool (WAPP)' <[https://www.ecowas.int/special\\_agency/the-west-african-power-pool-wapp/](https://www.ecowas.int/special_agency/the-west-african-power-pool-wapp/)> accessed 11 May 2025.

<sup>202</sup> NSO Ghana, 'WAPP' <<https://nsong.org/Pages/WAPP.aspx>> accessed 11 May 2025

regional electricity Market<sup>203</sup>. Among the WAPP's achievements was the official launch of its interconnected regional market, which trailed over a decade of committed institutional and procedural unification, all targeted towards creating consistent regional rules and procedures for energy exchanges<sup>204</sup>. Furthermore, history notes the success of WAPP's legal framework through its facilitation of successful interconnections like the established trading arrangements between Côte d'Ivoire and Nigeria as well as the power exchange between Niger<sup>205</sup>. Current achievements include the interconnection that connects Senegal, Mauritania, and Mali, improving energy security and access within the region<sup>206</sup>. It is important to note that the advancement of understandable and quantifiable guidelines to harmonise the planning and execution of pooled electricity networks across the region is one of the directives of WAPP's legal framework<sup>207</sup>. This dedication to standardisation is necessary for guaranteeing productive and reliable functioning of the regional power system.

As seen from the discussion above, the WAPP and the SAPP have greatly benefited from have robust legal frameworks that they have established. The EAPP is already following in the shoes of the SAPP with the IG-MOU and the IU-MOU which is a clear step in the

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<sup>203</sup> ECOWAS, 'The West African Power Pool (WAPP)' <[https://www.ecowas.int/special\\_agency/the-west-african-power-pool-wapp/](https://www.ecowas.int/special_agency/the-west-african-power-pool-wapp/)> accessed 11 May 2025.

<sup>204</sup> N. Song, 'West African Power Pool (WAPP)' <<https://nsong.org/Pages/WAPP.aspx>> accessed 12 May 2025.

<sup>205</sup> P Niyimbona, 'The Challenges of Operationalizing Power Pools in Africa' (UN Economic Commission for Africa, UNDESA Seminar on Electricity Interconnection, Cairo, Egypt, 19-21 June 2005) < [https://sustainabledevelopment.un.org/content/documents/3214interconnection\\_powerpools.pdf](https://sustainabledevelopment.un.org/content/documents/3214interconnection_powerpools.pdf) > accessed 11 May 2025.

<sup>206</sup> P Niyimbona, 'The Challenges of Operationalizing Power Pools in Africa' (UN Economic Commission for Africa, UNDESA Seminar on Electricity Interconnection, Cairo, Egypt, 19-21 June 2005) < [https://sustainabledevelopment.un.org/content/documents/3214interconnection\\_powerpools.pdf](https://sustainabledevelopment.un.org/content/documents/3214interconnection_powerpools.pdf) > accessed 11 May 2025.

<sup>207</sup> ECOWAS, 'The West African Power Pool (WAPP)' <[https://www.ecowas.int/special\\_agency/the-west-african-power-pool-wapp/](https://www.ecowas.int/special_agency/the-west-african-power-pool-wapp/)> accessed 12 May 2025.

right direct. This solidifies the argument that strong legal frameworks are necessary for the flourishing of cross-border electricity trade within the region

## 4 CHAPTER FOUR: FINDINGS - DOMESTIC LAW APPRECIATION

### 4.1 UGANDA

Uganda's power legal framework encompasses the Electricity Act<sup>208</sup>, the Energy Policy of 2002<sup>209</sup>, and the Renewable Energy policy of 2007<sup>210</sup>. The Electricity Act of 1999<sup>211</sup> ushered in a new era of competition by dismantling the monopoly of the Uganda Electricity Board (UEB)<sup>212</sup> and privatising its operations<sup>213</sup>. The Electricity Regulatory Authority (ERA)<sup>214</sup> was established under this Act, vested with the authority to issue licenses for generation, transmission, distribution, supply, and cross-border imports<sup>215</sup>. The Act's goal was to promote a competitive electricity sector, promoting the generation, transmission, distribution, sale, and utilisation of electricity.<sup>216</sup> This reform paved the way for the formation of the Uganda Electricity Generation Company (UEGCL)<sup>217</sup>, tasked with power generation<sup>218</sup>. The introduction of Independent Power Producers (IPPs) through licensing has further intensified the competition with the generation of electricity sector<sup>219</sup>. The Uganda energy policy prioritises the security of

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<sup>208</sup> The Electricity Act Cap 157.

<sup>209</sup> The Energy Policy of 2002.

<sup>210</sup> The Renewable Energy Policy of 2007.

<sup>211</sup> Ibid.

<sup>212</sup> UEDCL, 'Uganda Electricity Distribution Company Limited (UEDCL)' < <https://www.uedcl.co.ug/> > accessed 19 May 2025.

<sup>213</sup> Mabea GA and Okoli PN, 'Power Market Coupling: Towards Harmonised Electricity Policies in East African Community' (2019) 38 Journal of Energy & Natural resources Law 345.

<sup>214</sup> ERA Electricity Regulatory Authority < <https://www.era.go.ug/> > accessed 19 May 2025.

<sup>215</sup> Ibid.

<sup>216</sup> Mabea GA and Okoli PN, "Power Market Coupling: Towards Harmonised Electricity Policies in East African Community" (2019) 38 Journal of Energy & Natural resources Law 345 <<https://doi.org/10.1080/02646811.2019.1687237>>.

<sup>217</sup> Uganda Electricity Generation Company Limited (UEGCL), 'Uganda Electricity Generation Company Limited (UEGCL) – Be the Leading Power producers in the Great Lakes Region' (Uganda Electricity Company Ltd, January 17, 2024) < <https://www.uegcl.com/> > accessed 19 May 2025.

<sup>218</sup> Ibid.

<sup>219</sup> Ibid note 20.

electricity supply, ensuring access to affordable and modern energy sources, fostering sustainable economic growth, and mitigating environmental impacts associated with energy production<sup>220</sup>.

#### **4.1.1 THE ELECTRICITY ACT OF UGANDA CAP 157**

The long title of this Act reads “An Act to provide for the establishment of the Electricity Regulatory Authority; to provide for its functions, powers and administration; to provide for the generation, transmission, distribution, sale and use of electricity; to provide for the licensing and control of activities in the electricity sector; to provide for plant and equipment and matters relating to safety; to liberalise and introduce competition in the electricity sector; to provide for a successor company to the Uganda Electricity Board and for related matters”<sup>221</sup>. Much as the long title does not explicitly mention cross-border electricity trade, the object of the Act in Section 1 is “to regulate the generation, transmission, distribution, sale, export and import of electrical energy in and out of Uganda”<sup>222</sup>. This particular section is our first instance of seeing the Act recognise cross-border electricity trade.

Article 3 of the Act establishes the Electricity Regulatory Authority (ERA)<sup>223</sup>. Furthermore, Article 9 of the Act provides for the functions of the ERA, and the ERA is mandated by this Act to issue electricity generation, Transmission, Distribution, Sale, and Import Licenses, set license conditions and ensure compliance to license conditions

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<sup>220</sup> supra note 202, 42.

<sup>221</sup> The Electricity Act Cap 157.

<sup>222</sup> Ibid.

<sup>223</sup> Ibid note 184.

by licensees<sup>224</sup>. ERA is also mandated to establish a tariff structure, approve rates of charges, among other functions<sup>225</sup>. Additionally, Article 17 of the Act provides for an energy policy and energy plan to be prepared by the Minister, which will be reviewed every five years<sup>226</sup>. This shows the commitment of the law in ensuring that energy issues are continuously accounted for.

The Act provides for a transparent licensing process through public participation in Articles 30 and 35 of the Act<sup>227</sup>. Furthermore, as per Articles 29 and 33, the licensing process requires due diligence as it requires a detailed assessment of the applicants' capabilities, project details, technical or economic feasibility as well as environmental and social impacts<sup>228</sup>. In addition to that we also see regulatory oversight by the ERA in Article 33(4) throughout the licensing process<sup>229</sup>. The issue however, with this licensing process is designed mainly for domestic projects. On top of that much as this process can still apply to regional projects, it still brings an issue for potential delays. This is because there is a multi-stage process that could discourages investors as well.

## 4.2 KENYA

The reform on the electricity energy in Kenya started with the Transformation of the then Kenya Power and Lighting Company (KPLC)<sup>230</sup> into the Kenya Electricity Generating Company (KenGen)<sup>231</sup> in 1997, the creation of the independent Energy Regulator and

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<sup>224</sup> Electricity Regulatory Authority, 'Who We Are – Electricity Regulatory Authority' (2005) <<https://www.era.go.ug/index.php/about-us/era/who-we-are>> accessed 19 May 2025.

<sup>225</sup> Ibid.

<sup>226</sup> The Electricity Act Cap 157.

<sup>227</sup> Ibid.

<sup>228</sup> Ibid note 211.

<sup>229</sup> Ibid note 211.

<sup>230</sup> Kenya Power and Lighting Company Plc, KPLC <<https://www.kplc.co.ke/>> accessed 19 May 2025.

<sup>231</sup> KenGen, 'KenGen' <<https://www.kengen.co.ke/>> accessed 19 May 2025.

the Rural Electrification Authority (REA) in 2007<sup>232</sup>. Additionally, in 2008 the Kenya Electricity Transmission Company Limited (KETRACO)<sup>233</sup> and the Geothermal Development Company Limited (GDC)<sup>234</sup> were put in place as “special purpose corporations to oversee the extension of the transmission network and speedy realisation of renewable energy respectively”<sup>235</sup>. This particular restructuring ushered in the entry of many standalone Power Producers and the Kenya Nuclear Electricity Board (KNEB)<sup>236</sup>. The KenGen and KPLC have since undergone further partial privatisation<sup>237</sup>. These reforms were initiated at the acceptance of the 2004 Sessional Paper No. 4 on energy<sup>238</sup>. The paper highlighted two main objectives, namely: first, “to allow power generators to access bulk electricity consumers through the power transmission network, and second, to create a domestic power pool that will allow the formation of a robust wholesale and retail market<sup>239</sup>”. The Energy Act of 2006 mandated the restructuring of the energy sector<sup>240</sup>. Additionally, the Kenya Electricity Grid Code offers a united standard of practices in the supply of electricity<sup>241</sup>. This Code provides

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<sup>232</sup> Rural Electrification and Renewable Energy Corporation <<https://www.rerec.co.ke/>> accessed 13 May 2025.

<sup>233</sup> Kenya Electricity Transmission Company Ltd, KETRACO <<https://www.ketraco.co.ke/>> accessed 13 May 2025.

<sup>234</sup> Geothermal Development Company, ‘Home - Geothermal Development Company’ (*Geothermal Development Company*, March 11, 2025) <<https://www.gdc.co.ke/>> accessed 5 May 2025.

<sup>235</sup> Mabea, Geoffrey A/Okoli, Pontian N (2019b). Power market coupling: towards harmonised electricity policies in the East African Community, in: *Journal of Energy & Natural Resources Law*, Vol. 38(4), 345.

<sup>236</sup> Energy Regulatory Commission (ERC), ‘Least Cost Power Development Plan’ (Energy Regulatory Commission 2012).

<sup>237</sup> *Supra* note 215, 44.

<sup>238</sup> Ministry of Energy, Sessional Paper No 4 on Energy (Nyayo House, Nairobi 2004).

<sup>239</sup> Mabea, Geoffrey A/Okoli, Pontian N (2019b). Power market coupling: towards harmonised electricity policies in the East African Community, in: *Journal of Energy & Natural Resources Law*, Vol. 38(4), 345.

<sup>240</sup> The Energy Act 2006, s 12(5)(d), (Cap 314).

<sup>241</sup> ERC, Kenya Electricity Grid Code (Energy Regulatory Commission 2008).

for “scheduling and dispatch process, system security, ring fencing and transmission, and distribution network system<sup>242</sup>”.

#### **4.2.1 THE ENERGY ACT OF KENYA**

Article 122 of the Act provides that any person wishing to carry out the exportation or importation of electricity requires a licence<sup>243</sup>. It is imperative to note that the act’s language is intentional in including exporting and importing electricity, and this shows that the law acknowledges this diverse sector. Furthermore, Article 123 of the act makes carrying out such activities without a licence an offence<sup>244</sup>. The Energy and Petroleum Regulatory Authority (EPRA) as is established by Article 9 of the Act,<sup>245</sup> is responsible for regulating and licensing the importation and exportation of electrical energy as provided for in Article 10<sup>246</sup> and an application for the license shall be made to this authority as prescribed by Article 119 of the Act<sup>247</sup>.

Additionally, Article 8 of the Act proves that the Act is pro investment as it proves that: “The Cabinet Secretary shall develop a conducive environment for the promotion of investments in energy infrastructure development, including formulation of guidelines in collaboration with relevant county agencies on the development of energy projects and to disseminate the guidelines among potential investors”<sup>248</sup>.

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<sup>242</sup> ERC, Kenya Electricity Grid Code (Energy Regulatory Commission 2008).

<sup>243</sup> Energy Act 2019.

<sup>244</sup> Energy Act 2019.

<sup>245</sup> Energy Act 2019.

<sup>246</sup> Energy Act 2019.

<sup>247</sup> Energy Act 2019.

<sup>248</sup> Energy Act 2019.

With a transmission licence, a licensee may connect its network to another transmission or distribution network within or outside Kenya as seen in Article 135 of the Act<sup>249</sup>. This provision facilitates imports and exports as it permits transmission networks to be connected to networks outside of Kenya, which enables the country to purchase electricity from its neighbours when domestic generation is not sufficient enough.

The Act establishes a system operator under Article 138 of the Act and one of its functions is to “coordinate with system operators of the countries whose electric power systems is interconnected with the Kenyan system so as to ensure efficient operations”<sup>250</sup>. This is important because it breeds the necessary environment for harmonisation of procedures and standards within the region.

Furthermore, Article 163 of the Act provides for contracts for bulk supply and network services, and it stipulates that contracts for the sale of electrical energy and provision of transmission and distribution network services between licensees will all be submitted to the Authority for approval before execution<sup>251</sup>. Additionally, subsection 3(a) is to the effect that the Authority is authorised to ensure that the tariffs and charges are just and reasonable, which is crucial in fostering cross-border electricity trade within the region<sup>252</sup>.

The Energy Act of Kenya is evidently pro-regional electricity trade as we see the clear licensing process as seen in Part VI of the Act. The establishment of the EPRA as a regulatory authority under Articles 9,10 and 11 of the Act provides a central body that

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<sup>249</sup> Energy Act 2019.

<sup>250</sup> Energy Act 2019.

<sup>251</sup> Energy Act 2019.

<sup>252</sup> Ibid.

oversees cross-border trade activities. The provision for interconnection and open access to networks as seen in Article 135 of the Act. As well as the system operator and the approval of the contracts.

#### **4.2.2 THE ENERGY (ELECTRICITY MARKET, BULK SUPPLY AND OPEN ACCESS) REGULATIONS 2024**

The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024, were introduced to enhance competition, efficiency, and transparency within Kenya's electricity market<sup>253</sup>. Regulation 2 of the Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024 provides that these regulations shall be applicable “to generation, importation, exportation, transmission, distribution and retail supply of electrical energy”<sup>254</sup>. The regulations are intentional in providing for cross-border electricity trade by mentioning that they apply to both importation and exportation, and this provides a foundational legal basis for cross-border trade of electrical energy. Regulation 13 specifically provides for cross-border electricity trade, and it stipulates that the Kenyan electricity market rules “shall be in accordance with the rules of the (EAPP) on cross-border electricity trade”<sup>255</sup>. We see a harmonisation of the laws here. It shows an alignment with regional rules, which essentially eases integration and the operation of interconnected systems, and it reduces barriers that potentially hinder this necessary trade. However, we still note that regulation 13 much as it points specifically to cross-border electricity trade, it is limited in detail and only primarily

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<sup>253</sup> KO Advocates LLP, 'Open Access Market for the Energy Sector in Kenya' <<https://koassociates.co.ke/insight/open-access-market-for-the-energy-sector-in-kenya/>> accessed 7 May 2025.

<sup>254</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

<sup>255</sup> Ibid.

refers to alignment with EAPP rules<sup>256</sup>. Depending on external EAPP rules, while logical, indicates that the regulations are not an independent guide for cross-border operations.

Regulation 14 provides for Ancillary Service Provisions and stipulates that the provision of system ancillary services shall be in accordance with the grid code<sup>257</sup>. Grid code in these particular regulations refer to the Kenya National Transmission Grid Code and the Kenya National Distribution Grid Code<sup>258</sup>. This code specifically references the EAPP Interconnection code and stipulates compliance with EAPP standards<sup>259</sup>.

Regulation 7 provides for non-discriminatory open access to transmission or distribution systems for use by any licensee or eligible consumer upon payment of prescribed charges<sup>260</sup>. This is essential in allowing electricity consumers and generators in the neighbouring countries to utilize the existing network to wheel power across borders.

Regulation 8 specifically sub-regulation 2 lays down the market role of a transmission licensee to include providing the network to wheel purchased bulk electrical energy in an efficient, reliable, and safe manner in the wholesale manner<sup>261</sup>. This ensures that a transmission network is available for the easy movement of electricity between markets.

The concept of bulk supply between licenses in Regulation 19 is an essential element when it comes to fostering cross-border electricity trade by enabling electricity to be

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<sup>256</sup> *ibid* note 239.

<sup>257</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

<sup>258</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

<sup>259</sup> ERC, Kenya Electricity Grid Code (Energy Regulatory Commission 2008).

<sup>260</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

<sup>261</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

supplied in bulk from a generator or supplier in one country to another country via the transmission network<sup>262</sup>. This provision is complemented by Regulation 28, that provides for multiple suppliers which stipulates that a licensee requiring bulk supply may enter into contracts with other licensees, which could include licensees in other countries<sup>263</sup> hence benefiting cross-border electricity trade.

Additionally, the regulations make mention of a coordination centre, however, its specific functions, authority and interaction with the Kenyan system operator and other external system operators are not detailed within these regulations<sup>264</sup>.

We see the mention of wheeling challenges, for example, in Regulation 7 and Regulation 31<sup>265</sup>. However, the specific methodologies or considerations for setting tariffs for the cross-border movement of electricity are not clearly defined.

Regulation 12 and Part V of the regulations generally outline dispute resolution mechanisms<sup>266</sup>. However, it is important to note that specific processes for resolving disputes arising from cross-border electricity trade transactions are not defined.

### 4.3 TANZANIA

In April of 1992, Tanzania developed the first National Energy Policy (NEP)<sup>267</sup>. Since then, the energy sector and the overall economy has undergone a series of structural changes culminating in the Electricity Act of 2008<sup>268</sup>. This Act is “meant to provide for

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<sup>262</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

<sup>263</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

<sup>264</sup> Ibid.

<sup>265</sup> The Energy (Electricity Market, Bulk Supply and Open Access) Regulations, 2024.

<sup>266</sup> Ibid.

<sup>267</sup> 1992 Energy Policy of Tanzania.

<sup>268</sup> Electricity Act of 2008 (No.10 of 2008) Cap 131.

the facilitation and regulation of generation, transmission, transformation, distribution, supply and use of electric energy, to provide for cross-border trade in electricity and the planning and regulation of rural electrification and to provide for related matters”<sup>269</sup>. Additionally, the same act facilitated the establishment of the Energy and Water Utilities Regulatory Authority (EWURA)<sup>270</sup>, Rural Energy Fund (REF)<sup>271</sup> and the Rural Energy Agency (REA)<sup>272</sup>. Despite this policy, participation in the private sector was particularly low and over-dependence on government subsidies to develop power plants was on a high<sup>273</sup>. The NEP<sup>274</sup> was then reviewed to address these issues and in turn, it produces the set-up of a legal, supervisory, and regulatory framework for an Independent System Operator (ISO), an Independent Market Operator (IMO)<sup>275</sup>. Furthermore, this policy also emphasises prioritising focused financial assistance for key energy infrastructure investments<sup>276</sup>. However, Mabea points out that much as this policy seems to benefit consumers, it is not conducive enough to accommodate competitive electricity markets<sup>277</sup>. “Electricity markets should be left to compete

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<sup>269</sup> Ibid.

<sup>270</sup> Energy and Water Utilities Regulatory Authority, ‘EWURA Overview - Energy and Water Utilities Regulatory Authority’ April 4, 2023 <<https://www.ewura.go.tz/>> accessed 5 March 2025.

<sup>271</sup> REA, ‘The Rural Energy Fund’ <<https://rea.go.tz/Projects/The-Rural-Energy-Fund#:~:text=About%20Us,rural%20areas%20of%20Mainland%20Tanzania>>.

<sup>272</sup> Ibid.

<sup>273</sup> Mabea, Geoffrey A/Okoli, Pontian N (2019). Power market coupling: towards harmonised electricity policies in the East African Community, in: *Journal of Energy & Natural Resources Law*, Vol. 38(4), 345.

<sup>274</sup> Ibid.

<sup>275</sup> Mabea, Geoffrey A/Okoli, Pontian N (2019). Power market coupling: towards harmonised electricity policies in the East African Community, in: *Journal of Energy & Natural Resources Law*, Vol. 38(4), 345.

<sup>276</sup> Ibid.

<sup>277</sup> Mabea, Geoffrey A/Okoli, Pontian N (2019b). Power market coupling: towards harmonised electricity policies in the East African Community, in: *Journal of Energy & Natural Resources Law*, Vol. 38(4), 345.

freely so that the price of electricity is cost-reflective and gives each participant equal ground in the supply bid”<sup>278</sup>.

The Tanzanian government in 2016 developed the Electricity Act regulations<sup>279</sup> which apply to: “re-organisation of the electricity market; promotion of competition in generation, transmission, and distribution of electricity; and promotion of competition in consumer services and private sector participation in the electricity sub-sector”<sup>280</sup>. Additionally, several Independent Power Producers (IPPs), Emergency Power Producers (EPPs) and Small Power Producers (SPPs) are participating in the electricity generation<sup>281</sup>. However, there is evidently still significant state control, which is likely to continue in the short term<sup>282</sup>. Mabea discusses that Tanzania will benefit from integrating the power markets in the region and realises the importance of expanding the market at the regional level<sup>283</sup>.

#### **4.3.1 THE ELECTRICITY ACT 2008 OF TANZANIA**

The long title of the Electricity Act of Tanzania reads; “An Act to provide for the facilitation and regulation of generation, transmission, transformation, distribution, supply and use of electric energy, to provide for cross-border trade in electricity and the planning and regulation of rural electrification and to provide for related matters”<sup>284</sup>. This shows that the law makers were intentional in providing guidance for

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<sup>278</sup> Ibid.

<sup>279</sup> The Electricity (Market Re-organization and Promotion of Competition) Regulations 2016.

<sup>280</sup> Ibid.

<sup>281</sup> OJ Mdee, ‘Assessment of Hydropower Sources in Tanzania’ (2018) 3 Renewable Energy Environmental Sustainability.

<sup>282</sup> Mabea, Geoffrey A/Okoli, Pontian N (2019b). Power market coupling: towards harmonised electricity policies in the East African Community, in: Journal of Energy & Natural Resources Law, Vol. 38(4), 345.

<sup>283</sup> Ibid.

<sup>284</sup> Electricity Act, 2008.

cross border electricity trade. Additional to that Article 3 of the Act defines cross-border electricity trade as “trading in electricity between two states sharing a common border through an inter-connector power line, or between more than two states not sharing common border, but linked through a power pool which involves export or import of electric energy between the states”<sup>285</sup>. Defining cross-border electricity trade is important as it provides clarity and shows that the laws acknowledge the need for regulation.

The Act specifically recognises cross-border electricity trade under Article 22<sup>286</sup>. In addition to that, the Act has a number of provisions that provide for the facilitation of cross-border electricity trade; Article 8 of the Act provides those entities wishing to carry out cross-border electricity trade need licences to do so<sup>287</sup>. Additional to that, Article 22 provides that the authority (EWURA) established by the Energy and Water Utilities Regulatory Authority Act under Article 4<sup>288</sup> is responsible for making the rules and setting the terms and conditions for these licences<sup>289</sup>. The legal need for licensing provides regulatory oversight for cross-border transactions. this essentially promotes transparency and in turn promotes a coordinated trade within the EAPP. Much as, the Act gives the Authority the power to make rules in regard to licencing, the specifics of these rules are however not provided for. Potentially, this could lead to differences in how cross border electricity trade is regulated in the other EAPP states. Resolution of

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<sup>285</sup> *ibid* note 269, 52.

<sup>286</sup> *ibid* note 269, 52.

<sup>287</sup> *ibid* note 269, 52.

<sup>288</sup> Energy and Water Utilities Regulatory Authority Act, 2001.

<sup>289</sup> Electricity Act,2008.

conflicts between national regulations and regional power pool agreements is not provided for in the Act.

Article 4 of the Act makes the Minister responsible for formulating policies by which electricity may be imported and exported. This is essential because it provides strategic direction and leads to an alignment of regional trade objectives with national interests<sup>290</sup>. However, there is a need to see mechanisms that combine the minister's policy direction and the Authority's rulemaking and licensing functions in regard to this trade and for a coherent legal framework to be possible, this interaction is important. Despite that, we see some interaction between the two in Article 6, which puts an obligation on the EWURA to consult the Minister on issues that revolve around cross-border electricity trade<sup>291</sup>. This is important because it promotes the need for harmonisation, which is important in this trade.

Furthermore, the Act provides for a system operator under Article 20, which has been licensed to monitor cross-border electricity trade<sup>292</sup>. This monitoring is essential for making sure there is easy and reliable operation of the interconnected systems as well as data collection for cross-border flows. However, the Act does not expound on the scope of the monitoring role as well as the reporting mechanisms and how this oversight merges with the regulatory as well as the policy aspects of this trade.

Article 42 of the Act provides for dispute resolution<sup>293</sup>. This is important because this provides for a way to resolve disputes that may arise. However, the Act does not provide

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<sup>290</sup> *ibid* note 274,53.

<sup>291</sup> *ibid* note 274, 53.

<sup>292</sup> *ibid* note 274, 53.

<sup>293</sup> *ibid* note 274, 53.

for mechanisms that address conflicts that arise out of International cross-border electricity trade.

#### **4.3.2 ENERGY AND WATER UTILITIES REGULATORY AUTHORITY ACT, 2001**

Article 6(a) of the Act instructs the Authority to "promote effective competition and economic efficiency"<sup>294</sup>. This essentially motivates a competitive and efficient domestic market. Additionally, Article 7(1) provides for functions of the Authority, and among these are regulating rates and charges<sup>295</sup>. This is reiterated in Article 17 of the Act<sup>296</sup>. This is crucial because it establishes standards and guidelines for supply as tariff structures are predictable and transparent, which is necessary when wanting to attract investors. Particularly in Article 17, the law requires EWURA to take into consideration "any relevant benchmarks including international benchmarks for prices, costs and return on assets in comparable industries," the consumer as well as the investor and also the "desire to promote competitive rates and attract market."<sup>297</sup> This suggests attention of the Act towards regional competitiveness, which is essential for cross-border electricity trade.

Article 7 also provides that the EWURA is entrusted with overseeing the performance or regulated sectors encompassing levels of investment, availability, quantity, and standard of services as well as the efficiency of production and distribution of services<sup>298</sup>. This is key as it supports sufficient generation and efficient transmission,

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<sup>294</sup> Energy and Water Utilities Regulatory Authority Act, 2001.

<sup>295</sup> Ibid.

<sup>296</sup> Ibid note 279.

<sup>297</sup> Ibid note 279.

<sup>298</sup> Ibid note 279.

which leads to the development of a surplus in electricity, and this is a prerequisite for export.

Furthermore, Article 7 also provides that among the functions of the EWURA is to consult with other regulatory authorities<sup>299</sup>. This in itself is a notable enabler for cross-border electricity trade. This means that EWURA can engage with other electricity regulatory authorities of neighbouring states. This breeds harmonisation of regulatory frameworks and operational protocols necessary for integrated regional electricity markets. Additionally, Article 7 gives one of the functions of EWURA as "to facilitate the resolution of complaints and disputes"<sup>300</sup>. While this is mostly at the domestic level, this can extend to disputes arising at a regional level. this provides a level of certainty, encouraging trade and investments as well.

Much as we see instances where the Act promotes cross-border electricity trade, there are some discrepancies. For example, the Act does not explicitly mention 'cross-border trade' or 'regional power integration' or 'electricity export and import'. it is largely domestically focused. this shows that the EWURA does not directly support the trade, but rather it does so indirectly. this causes an ambiguity in regard to its role in regional transactions. the Act's provisions on open access principles of transmission under Article 40<sup>301</sup> are broad as the language mentions access to facilities owned or controlled by 'another person'. this shows that whereas the act can be read and interpreted to support cross-border trade, it is mainly a domestically centred legislation.

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<sup>299</sup> Supra note 279, 55.

<sup>300</sup> Supra note 279, 55.

<sup>301</sup> Supra note 279, 55.

## 5 CHAPTER FIVE: RECOMMENDATIONS AND CONCLUSION

The World Energy Council in 2005 emphasised the increasing importance of an integrated energy market, which shows that the traditional way of restricting energy issues to the national level has negatively impacted the enhancement of energy accessibility in Africa<sup>302</sup>.

According to Aleem Tharani<sup>303</sup>, the EAC member States need to look at regional integration and harmonisation of policies and laws as way to promote such trade at the same time making sure that all Partner States are harness energy and power<sup>304</sup>. In this regard, it is crucial to have binding legal documents to bolster the growth of the energy sector and attract investment, as well as welcome private-public partnerships.

The African Union, in its Action Plan<sup>305</sup>, also agrees with the increasing need for an integrated market. Hence, the action plan directs for “the harmonisation of policies, legislation, regulatory and institutional frameworks at not only regional but also continental levels”<sup>306</sup>. Because of this, the “Strategy for the Development of a Harmonised Regulatory Framework” was established to clear a path for the harmonisation of supervisory frameworks for Africa’s electricity market, with the vision of achieving a completely unified, competitive, and harmonised electricity market<sup>307</sup>.

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<sup>302</sup> African Union, Action Plan: Harmonised Regulatory Framework Electricity Market

<[https://au.int/sites/default/files/documents/40437-doc-ActionPlan\\_HarmonisedRegulatoryFrameworkElectricityMarket.pdf](https://au.int/sites/default/files/documents/40437-doc-ActionPlan_HarmonisedRegulatoryFrameworkElectricityMarket.pdf)> accessed 30 April 2025.

<sup>303</sup> A Tharani ‘Harmonization in the EAC’ East African Community Law: Institutional, Substantive and Comparative EU Aspects, Emmanuel Ugirashebuja et al (eds) Brill (2017) at 486  
< <http://www.jstor.org/stable/10.1163/j.ctt1w76vj2.34> > accessed 30 April 2025.

<sup>304</sup> Ibid.

<sup>305</sup> African Union, Action Plan: Harmonised Regulatory Framework Electricity Market

<[https://au.int/sites/default/files/documents/40437-doc-ActionPlan\\_HarmonisedRegulatoryFrameworkElectricityMarket.pdf](https://au.int/sites/default/files/documents/40437-doc-ActionPlan_HarmonisedRegulatoryFrameworkElectricityMarket.pdf)> accessed 30 April 2025.

<sup>306</sup> Ibid.

<sup>307</sup> Supra note 305, 60.

This document identifies the following five pillars, around which the regulatory harmonization approach can revolve on national, regional and continental levels: “Creating a robust economic regulatory framework; Establishing a solid technical regulatory framework; Creating an enabling electricity market; Enhancing renewable energy framework; establishing the norms, standards and frameworks for energy efficiency”<sup>308</sup>.

The African Union further points out that the energy sector, its policies, laws, institutions, and master plans of different states are currently at different phases of the growth process<sup>309</sup>. The Action Plan provides that this circumstance is typified by diverse and fragmented systems, which are as many and varied as the number of member states<sup>310</sup>. Given her history with colonialism, Africa is gradually recovering from this situation<sup>311</sup>. The plan further recognises that a blend of solutions is required to address the current issues with legislation<sup>312</sup>.

A 2018 study report by the African Development Bank (AfDB) on a workshop that brought together energy experts and stakeholders to validate the framework and initial reports for harmonising electricity tariffs and cost assessments within the COMESA region supports the call for a harmonisation process as it can provide significant benefits<sup>313</sup>. The report emphasises that among these benefits is that harmonisation can potentially

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<sup>308</sup> Supra note 305, 60.

<sup>309</sup> African Union, Action Plan: Harmonised Regulatory Framework Electricity Market <[https://au.int/sites/default/files/documents/40437-doc-ActionPlan\\_HarmonisedRegulatoryFrameworkElectricityMarket.pdf](https://au.int/sites/default/files/documents/40437-doc-ActionPlan_HarmonisedRegulatoryFrameworkElectricityMarket.pdf)> accessed 30 April 2025.

<sup>310</sup> Ibid.

<sup>311</sup> Ibid note 309.

<sup>312</sup> Ibid note 309.

<sup>313</sup> African Development Bank Group ‘Study Report on Harmonisation of Petroleum Policies, Legal, Regulatory and Institutional Frameworks in the East African community,’ African Natural Resources Centre (2018).

make operational processes more effective and efficient<sup>314</sup>. In addition to that, it could also define the region as a stable and predictable area for investments<sup>315</sup>. Lastly, harmonisation will foster the political and institutional process of developing the EAC<sup>316</sup>. In light of the AfDB report, it would truly be phenomenal that 13 countries could be able to implement the same rules, essentially creating a more stable and predictable environment for this trade to occur, which in turn makes the region more credible<sup>317</sup>.

The ECOWAS Energy Policy also emphasises the central significance of a robust legal and regulatory framework in realising regional energy integration ambitions<sup>318</sup>. Particularly under strategic objective 1, the policy aims to “improve the governance and performance of the energy sector”<sup>319</sup>. Under this specific objective, the policy gives importance and urgency to actions like the harmonisation of laws and policies, both at a regional and national levels<sup>320</sup>. This supports the core premise of this study, that effective legal frameworks are necessary for promoting prosperous cross-border electricity trade in the East African Region.

From Deloitte, we see that Power pools such as the WAPP and the SAPP are considering the idea of an Independent Regional Regulator<sup>321</sup>. This IRB is meant to monitor as well as manage the numerous features relating to the operation of power pools for example, issues to do with compliance with technical standards and electricity codes as well as

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<sup>314</sup> Ibid.

<sup>315</sup> Ibid note 313.

<sup>316</sup> Ibid note 313.

<sup>317</sup> Supra note 309, 61.

<sup>318</sup> ECOWAS, ‘ECOWAS Energy Policy, updated version’ (2023).

<sup>319</sup> Ibid.

<sup>320</sup> Ibid note 318.

<sup>321</sup> Deloitte ‘The roadmap to a fully integrated and operational East African Power Pool (EAPP)’ (2015) <[https://africa-energy-portal.org/sites/default/files/2019-12/ER\\_Power%20TL.pdf](https://africa-energy-portal.org/sites/default/files/2019-12/ER_Power%20TL.pdf)> accessed 19 May 2025.

easing the entry of Independent Power Producers<sup>322</sup>. The author notes that the EAPP has already established an IRB to carry out the roles mentioned before as well as regulate the price of transmission lines<sup>323</sup>. Much as this is so, there is still need for amendment of national legislation in order for the IRB to be able to make binding decisions<sup>324</sup>. This in turn creates certainty and safety within the trade.

Additionally, Deloitte also emphasises the need to breed real political commitment to regional solutions so as to promote cross-border electricity trade<sup>325</sup>. The report goes on to add that supplementary aspects to consider include a “robust framework for power trading to take place, arrangements for systems operations, a system for equitably setting the tariffs for use of the transmission infrastructure as well as agreed principles and procedures for dispute resolution”<sup>326</sup>.

In conclusion, this study recommends that harmonisation of laws should be a key goal in the EAPP alongside adoption of specific laws that cater for cross-border electricity trade as a whole. For example, laws regarding standard dispute resolution mechanisms that apply on a regional level. The core issue that this research discovered is that most of the national laws only apply in the domestic sense and they would have to be read to apply to the regional context which is not efficient enough. Additionally, there is a need for political will if these recommendations are to be realised.

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<sup>322</sup> Ibid.

<sup>323</sup> Ibid note 321.

<sup>324</sup> Deloitte ‘The roadmap to a fully integrated and operational East African Power Pool (EAPP)’ (2015) <[https://africa-energy-portal.org/sites/default/files/2019-12/ER\\_Power%20TL.pdf](https://africa-energy-portal.org/sites/default/files/2019-12/ER_Power%20TL.pdf)> accessed 19 May 2025.

<sup>325</sup> Deloitte ‘The roadmap to a fully integrated and operational East African Power Pool (EAPP)’ (2015) <[https://africa-energy-portal.org/sites/default/files/2019-12/ER\\_Power%20TL.pdf](https://africa-energy-portal.org/sites/default/files/2019-12/ER_Power%20TL.pdf)> accessed 19 May 2025.

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