

Exploring Regulations for Electric Energy Services through the GATS Lens The Case of Kenya



This study is published as part of the “Support to Enhance Development of Trade in Services Negotiations” initiative jointly undertaken by ILEAP, CUTS International Geneva and the University of Sussex’s CARIS. It aims to contribute to the increased and more effective participation of Least Developed, Low and Lower-Middle Income Countries and their Regional Economic Communities in multilateral, regional and bilateral services trade negotiations.

The initiative promotes understanding among policy makers, regulators and negotiators about their services sectors and the role that trade negotiations can play in pursuing their strategic interests therein.

Author:

Krista Joosep Alvarenga

Published by:**INTERNATIONAL LAWYERS AND
ECONOMISTS AGAINST POVERTY (ILEAP)**

1240 Bay Street, Suite 600,
Toronto, Ontario, Canada
Tel: +1 416 309 2330
Fax: +1 416 309 2331
Email: tradeinservices@ileap-jeicp.org
Web: www.ileap-jeicp.org

CUTS INTERNATIONAL, GENEVA

37-39, Rue de Vermont
1202 Geneva, Switzerland
Ph: +41.22.734.6080
Fax: +41.22.734.3914
Email: geneva@cuts.org
Web: www.cuts-geneva.org

**CENTRE FOR THE ANALYSIS OF REGIONAL
INTEGRATION AT SUSSEX (CARIS)**

University of Sussex
Sussex House, Brighton, BN1 9RH, United
Kingdom
Tel: +44 (0)1273 606755
Email: information@sussex.ac.uk
Web: www.sussex.ac.uk/caris

Funding support

This publication should be cited as:

ALVARENGA K. (2015). 'Exploring Regulations for Electric Energy Services through the GATS Lens: The Case of Kenya'. Toronto, Geneva and Brighton: ILEAP, CUTS International Geneva and CARIS.

Cover image: © Duke Energy

© 2015.

The material in this publication may be reproduced in whole or in part and in any form for education or non-profit uses, without special permission from the copyright holders, provided acknowledgment of the source is made. The publishers would appreciate receiving a copy of any publication, which uses this publication as a source. No use of this publication may be made for resale or other commercial purposes without prior written permission of the copyright holders.

Table of Contents

Abbreviations.....	2
Foreword	3
Introduction.....	4
Importance of energy services.....	5
1. Importance of energy services.....	5
2. What are electric energy services ?	7
What are the informational needs of trade and energy officials?.....	20
3. Ownership and commercial presence.....	21
4. Regulatory measures.....	27
5. Measures on licensing.....	31
6. Measures on the movement of natural persons	34
7. Universal services obligations.....	35
Conclusion	37
References	38

Abbreviations

CPC	Central Product Classification
EIB	European Investment Bank
ERC	Energy Regulatory Commission
ESI	Electricity Supply Industry
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GoK	Government of Kenya
ICB	International Competitive Bids
IDA	International Development Agency
IPP	Independent Power Producers
KenGen	Kenya Electricity Generating Company Limited
KETRACO	Kenyan Electricity Transmission Company
KPLC	Kenya Power and Lighting Company
KSh	Kenyan Shillings
KWh	Kilowatt-hour
LDCs	Least Developed Countries
LICs	Low Income Countries
LMICs	Lower Middle Income Countries
NT	National Treatment
MA	Market Access
MFN	Most Favoured Nation
MoEP	Ministry of Energy and Petroleum
MW	Megawatt
NSE	Nairobi Stock Exchange
OECD	Organization of Economic Cooperation and Development
PPA	Power Purchasing Agreements
REP	Rural Electrification Programme
SO	System Operator
TPA	Third Party Access
WB	World Bank
WTO	World Trade Organization

Foreword

Services and services trade can play a central role in promoting sustainable development, supporting inclusive economic growth, and reducing poverty in modern economies. However, LDCs, LICs, and LMICs continue to face challenges in catalysing or sustaining progress across this diverse range of economic activities. With respect to trade policy and related negotiations, services have become an increasingly visible feature of discussions - domestically, regionally, as well as at the bilateral and multilateral levels.

A number of challenges impacting services trade negotiations and policy-making have been identified however. Many lack access to reliable services trade data on which to base analysis and decision-making, and skills for processing and analysing existing services trade data to underpin conclusions. Ineffective interactions between stakeholders to support decision-making - within government, and between the government and the private sector, civil society, and other non-state actors - is also a major challenge.

Against this backdrop, ILEAP, CUTS International Geneva and the University of Sussex's CARIS have partnered to undertake a series of interventions that seek to contribute to the increased and more effective participation of LDCs, LICs, LMICs and RECs in multilateral, regional and bilateral services trade negotiations.

With funding support from the UK Trade Advocacy Fund, a set of studies, toolkits and trainings are developed to assist these countries in increasing their participation in services trade. Target beneficiaries range from negotiators, policymakers, regulators, statistical officers and various non-state actors.

This case study explores regulations for electric energy services through the GATS Lens, drawing on the Kenyan experience.

Introduction

One of the reasons for the lack of participation of Least Developed Countries (LDCs), Low Income Countries (LICs) and Lower Middle Income Countries (LMICs) in services negotiations has been on the one hand, the lack of understanding by the trade officials of the specifics of services sectors and on the other hand, the trade aspects by the sectoral service officials. This case study examines the link between electric energy services regulation and policy and services trade aspects under the World Trade Organization (WTO) General Agreement on Trade in Services (GATS) with the aim of understanding what the trade dimension within the electric energy services is.

Energy sector officials do not necessarily understand the trade concepts enshrined in GATS, such as modes of trade in services, services classification, general obligations on monopoly powers, domestic regulations, concepts of most favoured nation (MFN), market access (MA), national treatment (NT); or competition issues on pricing and third party access (TPA). The trade officials do not understand the energy sector specific and the concerns within. This case study brings together the informational needs on both sides.

The study draws examples from Kenya, as it represents electric energy sector development close to those of LICs, LDCs, or LMICs. In Kenya, some competition has been introduced within the electric energy sector through unbundling of the energy generation from energy distribution and transmission; an independent energy regulatory authority exists; while, as is the case among all lower and least developed countries, specific commitments in energy sector, despite few

offers, have not been made under the WTO GATS.

In the case study, section I introduces electric energy services specifics and talks about trade in services under GATS. Section II draws out the trade-specific issues that trade official would need to know for trade talks on electric energy services and energy regulators should comprehend when making regulation on a services sector that could be potentially traded.

Section 1

Importance of energy services

1. Importance of energy services

World Bank (WB) data shows a linear link between wealth generation and consumption of energy as demonstrated in Figure 1, representing how poorer countries consume less and wealthier more (Llyod, 2012). Consequently, access and availability of energy is critical for the overall economic development of a country. In Kenya, only 23 per cent of the population had direct access to energy in 2014.¹ Electricity consumption accounted for 9 per cent of overall energy consumption while petroleum was 22 and renewable energy 69 per cent. Large and big companies are the main consumers of electricity, followed by domestic and small commercial consumers² (Institute of Economic Affairs, 2015).

Energy cost for household in Kenya is USD 0.150 per kWh, while in South Africa USD 0.040 and Colombia USD 0.064 (Institute of Economic Affairs, 2015). In comparison,

1 There is a variation in numbers. According to the Energy Bill, as at 30th June 2014, 35 % of the population was connected to electricity compared to only 15% at 30th June 2004. The existing medium voltage (33 kV and 11 kV) distribution lines already cover areas in which about 63% of Kenya's population of 40 million live. However, the connectivity rate is still low at about 40% in high-density urban areas and 10% in other areas (Republic of Kenya, 2015).

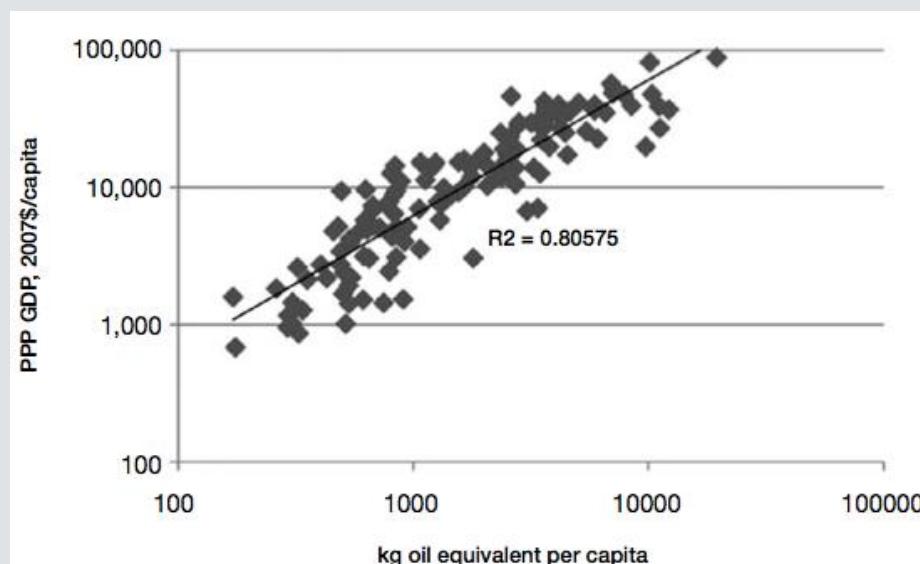
2 The facts that big firms benefited from an earlier access to electricity and are currently subject to advantageous tariffs are the principal reason to this dominant position. An interesting trend in the consumption of electricity in Kenya is the decreasing per capita consumption over the last 8 years, which might be due to people who have become connected to the grid not having actually the resources to consume the energy and thus do not.

the cost of energy in the EU-28 countries varies from USD 0.09 kWh in Bulgaria to USD 0.33 in Denmark, with the EU-28 average at USD 0.23 per kWh (Eurostat, May 2015). In 2010, 70% of Kenyan companies had installed additional generation systems in case of power interruptions and electricity interruptions are estimated to cost 2% of GDP per year (Institute of Economic Affairs, 2015).

Demand for energy has however been growing and is projected to rise from 1512MW in December 2014 to 5,359MW by 2018. To meet this demand, an additional 5,000 MW of new generation is to be developed by 2017 to bring total installed capacity to at least 6,600MW. It is anticipated that by 2030, peak demand will be 18,000MW against an installed capacity of 24,000MW (Republic of Kenya, 2015). This requires not only development of generation capacity but also expansive development of the transmission and distribution networks (for transportation of energy).³ The Government of Kenya (GoK) transmission company is undertaking expansion of transmission network, projected to develop 5,000km of new transmission lines by 2019 and by 2031 16,000km (Kenya MoEP, 2015).

3 Currently there are 3,767km of high-voltage transmission lines and 46,031km of low-voltage distribution lines, 3,076 transmission and 2,800 distribution substations (2013), which since 2008 has increased by 12% and 43% respectively.

FIGURE 1 THE RELATION BETWEEN ENERGY CONSUMPTION AND WEALTH CREATION AS MEASURED BY GDP FOR 132 COUNTRIES IN 2007



Source: *Llyod, 2012*

Currently Kenya has a double circuit transmission line with Uganda and cross-border agreements with Tanzania and Ethiopia. A Lesso (Kenya) - Tororo (Uganda) and an Eastern Africa Electricity Highways projects on transmission are under way; some funding has been secured and there is a detailed design for the transmission line between Arusha (Tanzania) and Nairobi (Kenya); and further feasibility studies are underway to transfer energy from hydro power plants from Ethiopia to Kenya. There is also anticipated interconnection to the South African Power Pool countries (Regulatory Assistance Programme, 2011, p18) (Kenya MoEP, 2015).

Cross-border trade in electric energy happens largely on a regional basis, as electric power is economically non-storable and depends on networks for its transportation (requiring interconnections between neighbours'

electricity grids). Cross-border trade can help to alleviate access to energy but countries are reluctant to trade energy across borders. Global exports of electricity in 2014 stood at about 3 per cent of all energy produced (Pollitt and McKenna, 2014). Investment in generation (commercial presence) makes up half of world's energy-sector investments. These investments are not only used toward the costs of the physical power plants but also toward energy services, such as construction, design, maintenance, scientific testing, engineering and building power plants, transmission and distribution lines, or providing transportation services on the power lines.

The energy sector is capital intensive with large sunk cost into infrastructure. Developing countries are often unable to mobilize the domestic resources to make the investments into energy sector and

investment institutions, multilateral or otherwise are only able to provide about 15% of the investment needed (OECD 2003). Private-sector involvement is often necessary in developing countries to secure needed investments. In Kenya, development of the 5000 MW generation capacity will cost about 18 billion US\$, of which GoK will raise 6 billion US\$ through credits and other means,⁴ and the rest will be sourced by Kenya Electricity Generating Company Limited (KenGen) and independent power producers (IPP). The credit is raised from the International Development Agency (IDA) arm of the World Bank and European Investment Bank (EIB) (Ngugi, 2012).

2. What are Electric Energy Services?

Energy sector can be divided into sub-sectors of oil and gas, coal, renewable energy, nuclear energy, electricity, and, other energy related sectors, such as carbon capture and storage and energy efficiency (WTO, 2010). This study discusses only a sub-set of energy services, which are electric energy services as well as some services related to electricity (construction, engineering, etc). First thing is to define what electric energy services are and a good starting framework for trade in services would be the GATS classification system.

The WTO GATS framework uses a classification system for different services that were considered tradable at the time. As such, this classification system should be seen in the context of 1994, when GATS was agreed (WTO, 1991) (DESA, 2002). In the classification system, energy services were specifically mentioned in three different places: services incidental to mining; services incidental to energy distribution; and pipeline transportation of fuels. However, it is important to note that, mostly energy

services fall under WTO under other headings, such as construction, distribution and transport services; professional, technical, and business services (Monkelbaan, 2013). The reality is that, over the past 20 years, opportunities to provide different services in energy sector have exponentially increased (WTO, 2010). To discuss energy services within the WTO classification context would require a thorough revision of the WTO classification system.⁵ However, the limitations of the WTO classification do not stop us from analysing these services and the potential trade-related issues they exhibit.

The UN Central Product Classification (CPC) system classifies a variety of the energy services in more detail, which is taken as a basis for the categorization of services below. Though, even there, some specific energy-related activities appear not to have an appropriate entry, such as metering and billing. Nevertheless, taking the UN classification systems, or the WTO one, as the basis of reference is useful, as it is the common language the trade officials could employ in energy services discussions with potential trading partners in the world.

Annex I provides a table on the classification of energy services according to the CPC version 2 (UNSTATS, 2008). The table includes most core energy services and energy-related services, though there could be some omissions. The table contains services, such as maintenance, repair and installation (except construction) [87156]; support services to electricity transmission and distribution [8631]; electricity transmission and distribution services (on a fee or contract basis) [86311-86312]; engineering advisory services (e.g. preparatory technical feasibility studies and projects impact studies for the construction

⁴ Annual government budget support and accrued steam sales revenues.

⁵ At the WTO Committee on Specific Commitments under the collective request energy services have been classified on an ad hoc basis into twelve sub-sectors applying onshore and offshore: business services (engineering, management consulting services, technical testing, services incidental to mining, etc.), construction services, and distribution services (WTO, 2010).

of a power line, study of the environmental impact of a project) [83310]; management consulting and management services (e.g. project management services for preparing, running and completing a project) [8311]; wholesale trade services of energy on a fee or contract basis [612997]; general construction services of local cables and related works [54252]; general construction services of long-distance communication and power lines (cables) [54242], etc.

An important issue to clarify within the GATS context is that since the commodity of electricity differs from other commodities, in that it is not economically storable and its demand fluctuates over time, it has been long debated if electricity itself is a good or a service. It could be considered a good as producing electricity requires a manufacturing process of transforming fuel into electrons. At the same time, it could be considered a service since it cannot be stored and needs to be consumed as it is produced (Evans, 2002). Within the existing WTO framework, the generation of electricity is considered a good and thus comes under the scope of the General Agreement on Tariffs and Trade (GATT). The transmission and distribution of electricity, alongside energy-related services such as construction, maintenance and operation of generation plants and power transmission and distribution networks, are services however and thus come under the scope of GATS (WTO, 1998) (WTO, 2010).

Countries wishing to liberalize some of the above services and to furthermore bind a certain level of openness can make commitments in electrical energy services in their specific schedules of commitments under GATS. However, they are under no obligation to make any such commitments.⁶

⁶ GATS allows countries, especially developing countries and LDCs, to undertake market opening commitments (i.e. market access and national treatment) in only those sectors in which they choose. Furthermore, where Members wish to retain specific restrictions, they can do so by scheduling 'limitations' to the commitments being undertaken.

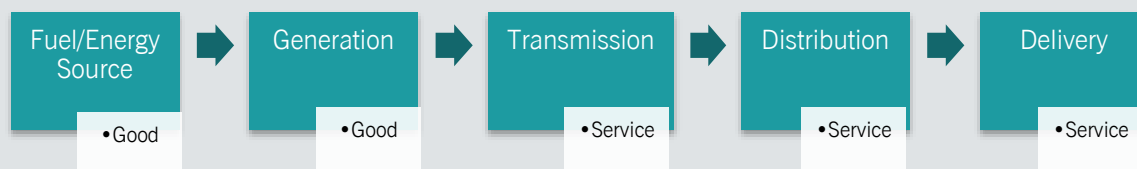
Kenya, as a WTO Member has such a schedule of specific commitments, however, as of right now, they have made no commitments in the energy sector. According to the Ministry of Foreign Affairs and International Trade, Kenya has no plans currently to undertake commitments on energy services within GATS, as they prefer to build their own capacity and markets at their own pace. Kenya is still a net importer of energy services and needs to still develop the sector. This is the case for many developing countries.

2.1. Core services

The electricity supply industry (ESI) value chain is composed of five essential activities, as shown below.

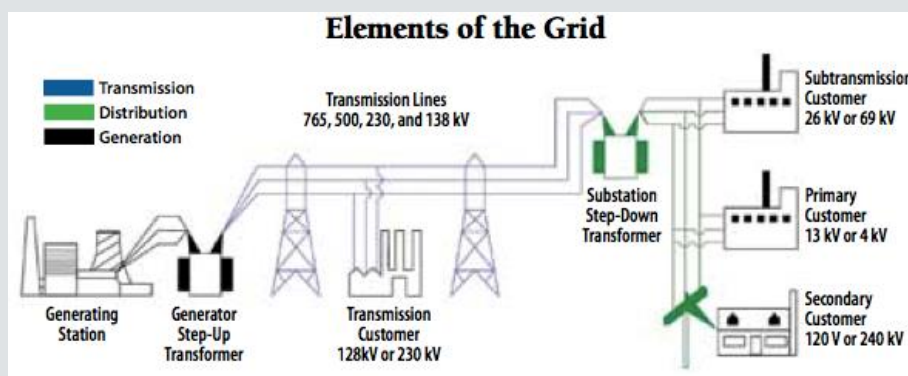
Power chain starts from generation, which requires a fuel source (e.g. hydro, geothermal, petroleum or wind energy) and a power plant to extract electric energy from the fuel source. Then the generated electricity is transformed (stepped up) for transmission over high voltage power lines (about 240-765 kV) and the system operator (SO) will coordinate the demand with supply. Third step is distribution where electricity is transformed once again (stepped down) and distributed to consumers through an extended network of low voltage power lines (about 0.4-240 kV) and substations. Final step is delivery or supplying energy to customers, which comprises in it commercial retailing activities, such as procuring, pricing, selling, metering, billing and revenue collection (Kenya MoEP, 2015). Figure 2 provides a pictorial representation of the core services.

FIGURE 2 MOST ESSENTIAL ELEMENTS OF THE POWER GRID: GENERATION, TRANSMISSION, AND DISTRIBUTION FACILITIES



Source: CUTS International, Geneva (2015)

FIGURE 3



Source: Regulatory Assistance Programme (RAP, 2011)

The electricity sector used to be associated only with vertically integrated state-owned enterprises responsible for all the core activities of power generation, transmission, distribution, and end-users supply. Like telecommunications and rail transport, the energy sector has a specific infrastructural nature. Governments have to ensure constant electricity supply to fluctuating demand. At the same time storing electricity is not economically viable. Therefore the aspects of storage and transportation create an environment of a natural monopoly (WTO, 2010). Natural monopolies have usually “high capital costs, significant economies of scale, and an output so essential to society that price fluctuations do not result in corresponding changes in demand—are such that the cost of their output is minimized not through economic competition, but by being provided by a single supplier” (Eleff, 2012). Since the market is not able to provide regulation in the

natural monopoly sections of the industry, it is the government’s intervention into the sector through economic regulation that will enable the provision of the services at a reasonable price and quantity (RAP, 2011).

Generation, transmission, system operations (SO), and distribution are physical functions, while wholesaling and delivery/retailing are merchant or commercial functions. Competition is usually introduced in the generation and commercial activities. The network/transportation services (transmission and distribution) and SO are sometimes still considered natural monopolies, as it does not make sense to build two or more sets of distribution lines next to each other, however, transmission does not have to be a natural monopoly (Ni, 2005), and lines could run parallel, and distribution can be separated from end-user supply. The SO is always non-competitive as it coordinates the flow of electricity

throughout the whole system⁷ (Kenya MoEP, 2015).

Already in the 1980s, some countries⁸ started choosing to introduce competition in the electricity sector (WTO, 2010). Central to competition is the notion of unbundling, meaning separating in formerly vertically integrated state-owned utility companies generation from transmission/system operators, generation from distribution, and/or distribution from end-user supply. Breaking up public monopolies and unbundling vertically integrated utilities is the number one market access issue toward liberalization in the electric energy sub-sector (WTO, 1998). Reforms in the electricity sector are driven by the belief that economic efficiency could be enhanced, excess generating capacity better used and prices to consumers reduced or equalized to what is paid in other places of the world or even within a country. Unbundling thus helps to separate competitive activities from monopoly activities (OECD/IEA, 2001).

Restructuring through unbundling in the energy supply chain generates services that can be provided by suppliers other than the government but the extent of the opportunities therein depends on the degree of restructuring. There are four core unbundling options: 1) integrated monopoly, 2) single buyer, 3) wholesale competition, 4) and, retail competition model (Republic of Tanzania, 2014).

Integrated monopoly means that a single company is in charge of electricity generation, transmission, distribution, which controls the

⁷ As large batteries for electricity storage are very expensive, electricity cannot be stored inexpensively. It must be produced as it is consumed. This requires management of power plants and transmission lines to provide adequate supply of energy, which takes into account the fluctuating demand and capacity of supply. SO are the ones that do the coordination of flow of electricity on the high-voltage transmission lines (planning and coordination of the minute-to minute supply and demand). The main services provided is safeguarding that electricity supplied matches electricity demanded. System operation always remains a monopoly whether the system operator owning the transmission lines or only providing system operation coordination services. Often this work is undertaken by non-for-profit organizations. Some areas can be services by the large utility owners themselves rather than a SO (RAP, 2011). The set-up of SOs is costly and complex (OECD/IEA, 2001).

⁸ Argentina, Chile, Spain, the United Kingdom and others.

sales to the final customers. There is no competition in services that are being delivered over transmission and distribution lines and customers have no choice of supplier (Republic of Tanzania, 2014).

The **single buyer model** (comparable to 'third party access' model sometimes used), introduces competition into generation. Other generators, such as IPPs may sell to a single buying company on the basis of Power Purchasing Agreements (PPA) (long-term contracts) (monopsony upstream, which is a market form in which only one buyer faces many sellers). The single buyer transmits the electricity to distribution companies (monopoly downstream, which is a market form in which only one seller faces many buyers) and the distribution companies to their customers who do not have a choice of distributors. The main advantage of this model is that the private investors can construct the power plants, which can help to alleviate power deficiency and provide the needed investment. However, a drawback is that at the same time the monopsony player has the control over its suppliers in the same manner that a monopolist controls the market for its buyers (Republic of Tanzania, 2014).

The **wholesale competition model** allows generators to sell directly to distributors and retailers can choose between wholesale suppliers. Thus competition is allowed in generation and the wholesale market but retailing (i.e. sales to final consumers) remains a monopoly. The generators compete to supply to wholesale market. Generators, which can be many, have access to the transmission grid in order to be able to supply electricity. Supply of energy on transmission networks is guaranteed by contracts that enable matching supply with demand. However, customers still do not get to choose their own suppliers. The wholesale competition model used to be linked to wholesalers supplying energy through a 'power pool,' where the supplier itself could hedge price risks through bilateral financial contracts, giving rise to a wholesale brokerage services. Recently another way called the 'multi-market model' has emerged where the generators can choose either the power pool or bilateral contracts to trade the energy they supply. The

pool itself gives a “spot price,” which works as an indicator to how much energy is demanded and should be supplied (in case of excess demand, the prices upsurge indicate to the investors a need for increased supply). Setting up and operating a wholesale market is complex and requires a very good systems in place between the generators, distributors, marketers, and those in charge of controlling the flow on the transmission lines (system operators). In this model, retailing remains a monopoly and requires to be regulated (Republic of Tanzania, 2014).

The **retail competition model** allows competition in generation and retail trade. The generators compete to sell directly to the distributors, retailers, and final customers. Distribution can be done by the retailers or there can also be retailers that are not distributors. Generators have direct access to both the transmission as well as the distribution lines. It means that all stages of the value added chain are vertically disintegrated and operated by detached businesses. The regulator regulates prices and trading rules govern transmission and distribution. The customers get to choose the suppliers and buy electricity directly from retailer, retailer/distributor, or a generator (Republic of Tanzania, 2014) (Hirschhausen and Opitz, 2001).

An important side note here is that even in the United States of America or European Union member countries, the above models were not strictly adhered to in order to increase competition and effectiveness, thus the models allow some flexibility. There are many possible different combinations and the effectiveness will be contingent upon individual countries’ institutional endowments and existing infrastructure. Changes in ownership of generation plants or transmission or distribution grid, and structural or regulatory reform can be done independently of each other. Some countries have third party access (single buyer model), which is regulated; others a single buyer system with regulated third party access,⁹ etc (Ni, 2005).

9 Third Party Access (TPA) as defined by the European Commission in 1992 is a regime providing for an obligation on companies operating or owning transmission and distribution networks for offering services to the third parties to the extent that there is capacity available. It is based on the

To sum up, different levels of vertical unbundling are possible: separation of transmission and distribution from generation; transmission from generation; distribution from generation; or distribution from end user supply. Also transmission itself could be separated into operating system operators and the owners of the transmission networks, which however requires a complex governance structures. The owners of the generation, transmission, and distribution may be different entities, helping to further curb discrimination (OECD/IEA, 2001). The overall difference between these reform models is in the degree of vertical integration; the stage in which the value added chain is opened for competition; and the regulation of the remaining activities (tariffs) (Hirschhausen and Opitz, 2001). Please see Table 1 for different stages of unbundling and the associated services.


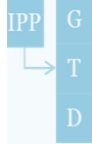
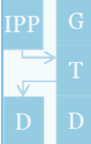
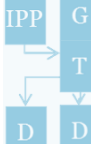


Kenya is currently operating under the single buyer model (third party access model). For that they have undertaken fundamental reforms in the energy sector since 1990s.¹⁰ According to Eberhard, Kenya’s reforms in the electric power sector have been largely driven by multilateral and bilateral development institutions, such as the World Bank, and the loan agreements since 1997. The unbundling of generation from transmission and distribution was a necessary undertaking to demonstration commitment to competition and private sector participation (national or foreign) (Eberhard and Gratwick, 2007).

In 1998, the Kenyan electricity sector saw the first step of gradual vertical unbundling. The Kenyan Power Company, which was previously a vertically integrated company, was divided into two different companies: a generating company and a transmission and distribution company (ERC, 2008). Power generation became the responsibility of a state-owned company Kenya

non-discriminatory rule, which can be considered as open access rules, meaning all the shippers have the right to be served according to contracted service (<http://fsr-encyclopedia.eui.eu/third-party-access-tpa/>).

10 Reforms and restructuring took place after the enactment of the Electric Power Act (1997), Sessional Paper No. 4 of 2004 and the Energy Act No.12 of 2006, as well as the Energy Bill of 2015.

Table 1: Different Market Models

					
Chad, Niger, Malawi	Ethiopia, Rwanda, Tanzania	South Africa	Thailand	Kenya	Ghana, Nigeria, Uganda
<ul style="list-style-type: none"> ● Vertically intergraded ● No private sector ● Lack of investment in: Generation, transmission, and distribution 	<ul style="list-style-type: none"> ● Private sector in market as IPPs ● First stage of reform ● Usually vertically integrated buyer buys energy from IPPs ● Investment in IPP generation ● Grid access could be limited ● Sometimes IPPs sell also to large customers 	<ul style="list-style-type: none"> ● Other distributors exist ● Private sector in market as IPPs ● First stage of reform ● Usually vertically integrated buyer buys energy from IPPs ● Sometimes IPPs sell also to large customers ● Threat of too many distributors, thus loss of governance and economies of scale 	<ul style="list-style-type: none"> ● IPPs specifically contracted to increase rural generation and access ● Distribution horizontally unbundled; separation of rural an urban distribution areas ● - Local authorities required to provide electricity services. 	<ul style="list-style-type: none"> ● Private sector in market as IPPs ● First step in gradual vertical unbundling ● Generation company (KenGen) is potentially competitive and can attract investment ● SO and independent buyer (KPLC) exist within transmission, which secures a neutral base to procure new generation capacity from KENGEN or IPPs ● Management of distribution and transmission are integrated 	<ul style="list-style-type: none"> ● Private sector participates as IPPs ● Final stage of vertical unbundling ● SO can procure and contract IPPs or state generators non-discriminatory ● Distribution companies can contract directly with generators or procurer from Power Exchange or Traders ● Not applicable to countries with small electricity markets ●

Notes: G-Generation; T-Transmission; D-Distribution; IPPs-Independent Power Producers; SO- System Operator.

Source: Republic of Tanzania, 2014

Electricity Generating Company Ltd (KenGen) and transmission and distribution of the Kenya Power and Lighting Company (KPLC) (Institute of Economic Affairs, 2015). There are four forms of operationalizing the separations¹¹ (OECD/IEA, 2001). In Kenya they have divestiture of ownership separation, which means separation of generation and transmission into separate legal entities.¹² Generation has not fully been separated from distribution.¹³ In 1998, the regulatory agency, Energy Regulatory Commission (ERC) and in 2008 Kenyan Electricity Transmission Company (KETRACO) were established.

However, here it is important to note that as of October 2014, the Government of Kenya (GoK) was still the major shareholder in KenGen, KPLC, and KETRACO. KenGen is a State Corporation with 70 per cent shareholding by GoK and private shareholding 30 per cent. KPLC is a state corporation with GoK holding 50.1 per cent and private shareholding rest of the shares. The GoK owns 100 per cent of KETRACO (Kenya MoEP, 2015). Reforms have brought

about separation of services provision but the ownership in the core energy functions has not been affected by the unbundling thus far.

Yet, opening the Kenyan market for Independent Power Producers (IPPs) has been perhaps the most significant achievement of the unbundling. In 1997 the first contracts were signed with IPPs and these IPPs are now becoming increasingly more important for electric power generation. In 2014, the nine IPPs¹⁴ generated about 24% of Kenya's energy (ERC, n.d), compared to 11.3% in 2008 (Onyango, et al, 2009). KenGen generates the rest of the overall energy consumed in Kenya (Institute of Economic Affairs, 2015). The IPPs must have favourable conditions to operate in Kenya, as there are IPPs from the first round of contracts that have extended their agreements and have continued supplying energy in Kenya. Two of them are for example Iberafrica, with majority shares held by Spain's Union Fenosa (80 per cent and 20 per cent by KPLC Pension Fund) and OrPower4, owned 100% by Ormat, which is a US-Israeli firm (ERC, n.d). The GoK sees IPPs investment in energy sector as one of the main ways of implementing Kenya's energy strategy (Institute of Economic Affairs, 2015).

IPPs are non-utility generators, which sell their power to the utilities in Kenya on the basis of long-term contracts,¹⁵ called Power Purchasing Agreements (RAP, 2011). KenGen, IPPs, Uganda Electricity Transmission Company Limited and Tanzania Electric Supply Company Limited sell bulk power to Kenya Power and Lighting Company (KPLC). KPLC purchases it and retails to customers. KPLC undertakes the tasks of the SO, network service provider (transmission on old transmission lines and all distribution), and public electricity supply

11 The four forms are: 1) separation of accounts for generation and transmission within the same vertically integrated entity, which charges same price for transmission for itself as it charges for others; 2) functional separation, means accounting separation as well as separation of transmission from power sales; 3) operational separation, ownership of the transmission grid remains with the owners of the generation but the operation and investment decision into the transmission grid are made by an entity independent of generation owners (system operator); and, 4) divestiture of ownership separation, which means separation of generation and transmission into separate legal entities. Ownership separation gets rid of motivations and power to discriminate (OECD/IEA, 2001).

12 When investment decisions are separated between generators and transmission line owners, it might be not most optimal as sometimes rather than constructing new generation facilities, only transmission lines could be built by which to transmit already existing generation capacity to new areas. But regulators can regulate away some of the bottlenecks here as, congestion costs can be put on the transmission company, which will incentivize it to invest and eliminate congestion (OECD/IEA, 2001).

13 Similar ways of reforming the distribution system as for separating generation and transmission (see footnote 10), except for distribution it does not make sense to have different entities own the grid and operate the grid (operation separation). Ownership divestiture is the best way of unbundling generation from distribution (OECD/IEA, 2001).

14 Iberafrica, Tsavo, OrPower4, Rabai, Imenti Tea, Mumias, James Finlay, Unilever, Gulf Power, Triumph, Thika Power, etc (ERC, n.d.).

15 Depending on the reforms, IPPs could also sell to wholesale marketers or directly access customers through brokers.

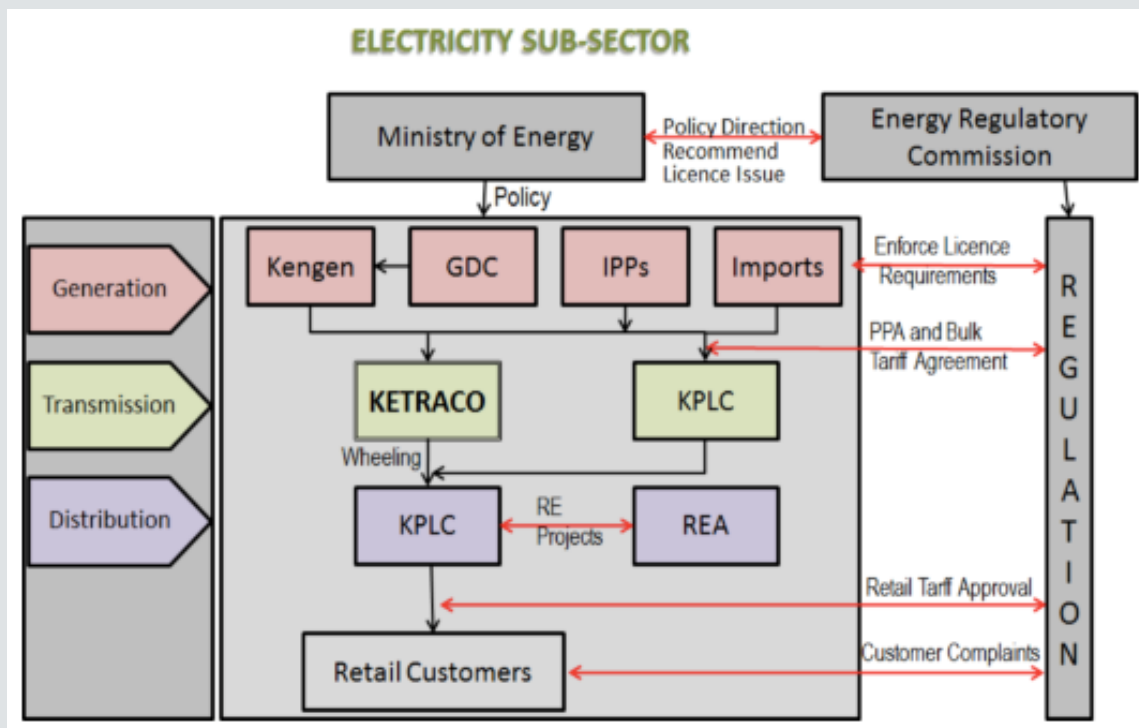
(supplying electricity to the retail consumers) (ERC, 2008). It sells to domestic consumers and all industry (small, medium, large) (Institute of Economic Affairs, 2015). KPLC as distribution network service provider is also responsible for providing, and maintaining in good condition the meters that measure consumers' consumption of electricity. KPLC also undertakes the metering function, as well as testing and maintaining the metering equipment (ERC, 2008).

Since the establishment of KETRACO, transportation services (transmission and distribution) have partially been separated into two different entities. KPLC used to carry

out both the transmission and distribution exclusively, owning, operating, and maintaining these lines (Kenya MoEP, 2015). Today, the new transmission network is owned and operated by KETRACO, as it is in charge of developing new electricity transmission infrastructure. KETRACO undertakes the transmission for new transmission and KPLC does the transmission on the old transmission lines (Institute of Economic Affairs, 2015). Figure 3 shows the energy sector players in Kenya. The ERC enforces the licences, formulates Power Purchasing Agreements (PPAs) and regulates tariffs.

Figure 3: Energy sector players in Kenya (KETRACO, n.d)

FIGURE 4 ELECTRICITY SUB-SECTOR



*REA – Rural Electrification Authority; RE- Rural Electrification; Wheeling – transportation of electric power over transmission lines; GDC – Geothermal Development Company Ltd (develops geothermal resources).

2.2. Energy-related services

Due to the fact that only the generation of electricity is liberalized in Kenya, as apart from transmission and distribution, competition in core services is limited. However, looking at the arduous situation in the country and the future expansion plans they have, investment in the generation market alone is not sufficient to meet increasing electricity needs. Complementary development of the transmission grid and distribution system need to be promoted as new generation comes on-line to avoid creating downstream bottlenecks to transporting electricity to the customers. In Kenya, there are a plethora of energy-related services, which the SO, generators, and transmission and distribution services provider have to undertake. These include safety and scientific testing, commissioning and constructing, installation, related engineering, design, business, associated

As KPLC is responsible for distribution service, it is also responsible for design, construction, installation, operation and maintenance of distribution systems (Republic of Kenya, 2015). KETRACO develops the national transmission network, and has similar responsibilities. However, there are capacity and technology problems to provide these services, as power transmission and distribution losses averaged 16.9% in 2011 (Institute of Economic Affairs, 2015). GoK finances the distribution and transmission projects through loans, including via the World Bank (WB). Such WB loans are usually governed under specific government procurement rules, which are exempt from the GATS (GATS Article XIII:1). Therefore, certain elements of the rules that may govern energy-related services trade in Kenya are defined by the terms of the loans financing the specific activities. In many cases, these WB loans and grants allow for the participation of both national and foreign service providers (IBRD, Rev 2010).

maintenance services (many of those listed in Annexes I).

Many of the energy-related services to be discussed cut across other services sectors and are not necessarily exclusive to energy. For example general construction work for civil engineering and installation and assembly work are energy-related services, which under the WTO's W/120 classification falls under construction and related engineering services. They are however essential services for electric energy. General construction work for civil engineering and installation service are used for all the core electricity activities of generation, transmission, and distribution. Indicative of the challenges for services trade policy-making and negotiations, adequately disaggregated trade flow data is not available for Kenya in this sector.

Currently, among others, there are open KPLC tendering processes for design, supply and installation of distribution and transmission lines; and tendering for provision of security consultancy services, design, supply, and installation of fuel tank at Merti Power Station, etc (KPLC, 2015). If International Expressions of Interest are not allowed, it is specified under tender notices (KPLC, 2015). Some of the rules that apply to these tenders will be discussed below together with the other trade-related questions that the trade officials would ask from the energy officials. Even if the IBRD loans define some of the trade rules, the trade aspects specified in the IBRD or GATS rules still deal with similar issues. In this study's context, the reason to bring out the IBRD loans is to show that in Kenya services trade is happening in energy-related services, even if trade in core energy services is currently limited.

Under GATS, services are traded in four different ways (in trade-speak reference is made to four "modes" of supplying services).

The way in which the service is provided depends on the location of the service provider and that of the service consumer at the time of the transaction.¹⁶ Box 1 gives illustrative examples on trade in energy services within the four modes for transmission (core service) and engineering or construction (energy-related services).

Three out of the four modes are particularly relevant for electric energy services: cross-border supply (mode 1), commercial presence (mode 3), and movement of natural persons (mode 4) (WTO, 1998). Due to their nuanced differences from more traditional concepts of 'trade', and the potential implications for the involvement of foreign suppliers in national energy markets, it is important for energy officials to understand these different 'modes of supply' for services trade.

Box 1: Four Ways of Trading (modes of supply)

(Mode 1) Cross-border supply: service delivered to a territory of a country from the territory of another country.

- Engineering: A Ugandan engineer sends a grid connection study to a client in Kenya by using the Internet.
- Transmission: Cross-border transmission of electricity through interconnected grids between Uganda and Kenya.

(Mode 2) Consumption abroad: consumer from one country goes to enjoy services within another country

- Engineering: Kenyan executives travelling to Uganda to receive advice on designing grid connections (consumer travels to 'import' the service).
- Transmission: (this mode is not feasible for core electric energy services).

(Mode 3) Commercial presence: foreign services provider will establish commercially or operate an entity (branch, subsidiary, etc) on the territory of another country.

- Engineering and transmission: Ugandan construction and engineering company will open a branch in Kenya to provide consultancy and engineering services on transmission and distribution grids.

(Mode 4) Movement of natural persons: a natural person (foreigner) will move temporarily to another country to supply its service there.

- Transmission and engineering: Ugandan person will come to live temporarily in Kenya to provide construction services on transmission grid.

Sources: WTO, 2001.

¹⁶ This differs with statistical concepts of services trade, such as those found under the Balance of Payment (BoP) national accounts, wherein the latter focuses on transactions between residents and non-residents (hence the omission from BoP data of investment flows (under GATS mode 3 – commercial presence) which tends to involve only residents of the country concerned).

As mentioned above, under GATS, each country can undertake specific commitments vis-à-vis sectors and sub-sectors if they so choose but there is no obligation to do so. Should they choose to, they can specify precisely the conditions governing both the entry of foreign services or services suppliers into their market (e.g. market access (MA)) as well as the treatment these foreign services or services suppliers may face once already in the domestic market (e.g. national treatment (NT)). In undertaking specific commitments in a sector or sub-sector, the conditions as set out in the schedule (including any limitations on market access or national treatment) indicate the guaranteed minimal treatment to foreign services or services suppliers in that sector. Apart from any scheduled MA and NT commitments, as a signatory to the GATS, all WTO Members also are bound by certain general commitments, such as rules on restrictive business practices by incumbent monopoly players or certain transparency clauses. Furthermore, there are GATS rules that touch on domestic regulatory issues (with potential new disciplines to be negotiated in the future), such as licensing and tariffs, which may be relevant in the context of trade in electrical energy and related services.

Examples of possible limitations on MA and NT for energy services are listed in Table 2. As can be seen here, these limitations can often be similar in nature, but with some variation. For example, specific limitations on transmission services would be related to limited access to the transmission grid, limited transit rights, or unfair transmission fees. On the other hand, limitations related to engineering and construction services are often also relevant for a broader range of

other sectors. Typically engineering services are provided in modes 1, 3 and 4 but construction services in modes 3 and 4. Engineering services have to do with consulting, conceptual design, detailed design, and supervision. The consulting and design services are provided during preparation and supervision during construction of the project. Usually engineering services are provided by a small number of highly qualified experts (drawers, technically licenced and experienced people). While these services can be provided cross-border, there are often issues of foreign licensing and accreditation that arise. Despite the beneficial side of technical skills and technology that engineering companies often bring to a country, they face market access limitations because engineering companies in developing countries are often less developed compared to developed countries, due to the nature of highly skilled workers of the service.

Construction services, on the other hand, have to do with site preparation, civil work, building and procurement. A few people are responsible for construction management but actual civil construction itself requires many unskilled manual workers. Construction companies depend on bringing their equipment, capital, and materials to the construction site, which have to comply with the health, safety, and environment standards of the country, requiring authorization, guarantees, and liability insurances in the host country. Sometimes also the government want to help their engineering and construction sectors to grow, thus they provide national treatment preferences through research and development or other means to their nationals (Hiraki, 1996)

Table 2: MA and NT limitation for energy-related and core energy services

Mode of Supply	Energy-related services (construction and related engineering)	Core energy services (generation and transportation [transmission and distribution]).
Cross-border supply	Need to have a local professional certify the legal, engineering or consultancy work provided from abroad.	Limited access to the transmission grid, limited transit rights, unfair or non-transparent transmission fees, cross-border trading of energy subject to commercial presence, and limitations on the cross-border transfer of capital to finance energy-related transactions.
Commercial presence	Entry restrictions (joint ventures); foreign equity limits; nationality requirements for top officials and/or for the majority of the directors, limited possibilities for foreigners to use the courts in the event of disputes with local partners, limitations on foreign ownership of facilities or land, preference for local firms, and public procurement rules. Opaque, discriminatory and arbitrary technical regulations and other requirements	Difficulties in gaining uncontrolled access, at a competitive price, to transmission and distribution networks and other essential infrastructure due to pre-existing exclusive rights and monopolies or integrated incumbents. Opaque, discriminatory and arbitrary rules on authorization and tendering procedures for the construction and operation of generation and transport capacity.
Movement of natural persons	Difficulties in obtaining visas and work permits, non-recognition of professional qualifications obtained abroad, time limitations on the presence of foreign experts, and economic needs tests.	

Source: OECD, 2003; Hiraki, 1996

Irrespective of the activity (core or energy-related), the conditions that govern the temporary movement of persons are usually scheduled horizontally, which means they apply across all services sectors for which specific commitments have been made, and they are often relate to issues on obtaining visas and work permits, recognition of professional qualifications obtained abroad, time limitations on the presence of foreign experts, and economic needs tests to determine the local availability of the required skills (OECD, 2003). Some examples of specific NT and MA limitations in engineering and construction services are show in Annex II on the basis of examples from Canada and China (who have undertaken specific GATS commitments on these services).

As a section conclusion, for the electric energy sector, there are core and energy-related services. Often opportunities for trade

in the core services depend on the stage of unbundling that the country is at. In Kenya's case, they currently operate under the single buyer model. There are IPPs that provide competition to the utility generator but different GoK companies control the rest of the core services. At the same time, there are many energy-related services that are undertaken in Kenya with regard to the development of the power generation plants and transmission and distribution lines. The IPPs often bring their own investments, and as part of the rules governing development partner-funded project related to energy transmission and distribution services, foreign service providers are often able to participate in the sector. The ownership and operation of transmission and distribution lines remains within the national companies however, as the GoK is of the view that there is inadequate regulation in place as of yet to be able to introduce competition within these services sectors

What are the informational needs of trade and energy officials?

Energy services have several dimensions: a social dimension (issues on access to energy, employment, local development, urban migration and national security); an economic dimension (issues on the use of energy, energy intensity, energy production and consumption, taxes and subsidies, and energy security); and an environmental dimension, which deals with hazardous waste, climate change, etc (OECD, 2003).

In Kenya, the Government in the Draft National Energy and Petroleum Policy (2015) outlines that the overall objective of the energy policy is to ensure affordable, competitive, sustainable and reliable supply of energy to meet national and county development needs at least cost while also taking into account the impact on the environment. The policy objectives and concerns of the energy officials or the government would become enshrined in regulation and have to do *inter alia* with consumer protection, health and safety standards, job creation, integrating into the labour market disadvantaged people, reduction of environmental impact, macro-economic stability, avoidance of anti-competitive conduct, or provision of universal services (WTO, 2012). Some of these concerns have implications on trade.

The information that trade officials require in energy services has to do with access of foreign services and suppliers to the transmission and distribution grid and other essential infrastructure due to pre-existing

exclusive rights and monopolies or integrated incumbents; the rules on the transit rights and transmission fees; the limitations on cross-border transfer of capital to finance energy-related transactions; the access to competitive prices; the local content requirement; the rules on authorization and tendering procedures for the construction and operation of generation and transport; and, other domestic regulatory barriers that limit the participation of foreign firms, such as licensing and movement of foreign labour (OECD, 2003).

This section considers some of the trade concepts that are found across the GATS which are particularly relevant for electric energy services and organizes them into issue areas of “ownership and rules relating to commercial presence,” “regulatory measures,” “measures on licensing,” “movement of natural persons,” and “universal services obligations.” The section takes a selection of GATS-related questions that have been developed by the OECD specifically for energy services. The full list of the questions can be found in OECD 2003. The section does not attempt to address all trade-related aspects of electrical energy services under GATS but rather touches on some of the major categories. The section is organized in a question and answer (Q&A) format and where needed some of the national energy context or GATS trade concepts have been further explained. The section is aimed at helping to raise awareness of the policy issues related to the

liberalization of trade in energy services on the one hand and give insights to energy regulators as to what are some of the trade aspects that they may wish to keep in mind when making regulations on energy services, on the other hand.

As Kenya has unbundled generation from transmission and distribution and it allows certain energy-related services, such as engineering services to be provided by foreigners, the Q&A below will focus mostly on core energy services, but also where relevant, touch on certain trade aspects related to engineering services in Kenya (notably when these aspects differ or are more specific vis-à-vis foreign participation).

3. Ownership and commercial presence

3.1. Is investment in the energy sector subject to a separate statutory regime?

Core services

An investment regime in electric energy sector would mean independent investment principles, rules and institution for energy services. In Kenya there is energy-law (concerned with allocating rights and duties between energy sector players) but no specific investment law just for energy sector. Some of the rules governing electric energy are part of general laws of Kenya (Acts on standards, management, local governments, companies, public procurement, anti-corruption, land registration, etc) but there are others, such as the Sessional Paper No.4 of 2004, the Energy Act No.12 of 2006, the Geothermal Resources Act No. 12, of 1982, and the Energy Bill of 2015 (current status is 'forwarded to the Attorney General for publication), which govern electric energy sector specifically (Kenya MoEP, 2015). In the future, if there should be a conflict

between the Energy Bill (Energy Act) and other Acts, the Energy Act of 2015 prevails (Republic of Kenya, 2015). These Acts govern all activities related to transmission as well as services related to electricity engineering or construction work, though there are sometimes some more specific licensing, standards, and labour rules for the energy-related services.

Engineering

Investment in engineering is governed by the Engineers Act, No 43 of 2011. No. 3 of 2012.

3.2. How is the statutory regime regulated at the central and local levels?

Core services

The questions is important for trade officials because it addresses the issue of who regulates the sector, meaning who has the authority to issue licenses, set electric power tariffs, and settle and investigate disputes, which are fundamental in order that energy services can function. Since Kenya Vision 2030 was released in 2008 and the new Constitution of Kenya was enacted on August 27, 2010 (substantially changing the governance structure in Kenya with some National Government powers given to the County Governments), there was a necessity to review Kenya energy policy, which is documented in the National Energy Policy of 2015 and National Energy Bill of 2015 (Republic of Kenya, 2015).

According to the Energy Bill, the Energy Regulatory Authority (goes by the name of ERC, Commission, or Energy Regulatory Commission) shall regulate the whole energy sector (Energy Bill section III:11[a]). It confined in the ERC the "power to issue, renew, modify, suspend or revoke licenses and permits for all undertakings and activities in the energy sector" (Energy Bill

section III:12[a]), prescribe the form and manner in which any application for a license or amendment thereof or objection thereto shall be made and the fees payable in respect of any such application (Energy Bill section III:12[g]); “set, review and adjust electric power tariffs and tariff structures, and investigate tariff charges, whether or not a specific application has been made for a tariff adjustment” (Energy Bill section III:12[i]); “approve electric power purchase and network service contracts for all persons engaging in electric power undertakings” (Energy Bill section III:12[j]); “investigate and determine complaints or disputes between parties over any matter relating to licenses and license conditions under this Act” (Energy Bill part III:12[k]) (Republic of Kenya, 2015).

The ERC can make recommendations for policy and regulation to the Cabinet Secretary. The County Governments are responsible for ensuring efficient use of energy and its conservation. The County Governments may make rules for carrying out the provisions of the Energy Bill and not inconsistent with the rules and regulations, if any, made by the National Government (Republic of Kenya, 2015).

Engineering

The Engineers Board of Kenya has the power to “assess, approve or reject engineering qualifications of foreign persons intending to offer professional engineering services or works (Engineers Act Section 7:1[h]). They also monitor installation and construction sites to make sure that only professional engineering services and registered persons under this Act undertake works (Engineers Act Section 7:1[g]:i). The Board equally “evaluates for recognition other engineering programmes both local and foreign” (Engineers Act Section 7:1[j]). Furthermore, they set the “standards for engineers in management, marketing, professional ethics, environmental issues, safety, legal matters or

any other relevant field” (Engineers Act Section 7:1[m]) (Republic of Kenya, 2011c).

3.3. Market Entry

Is private participation allowed and foreign participation possible in power generation; wholesale marketing; system operator (SO); transmission; distribution; and/or electricity supply?

It is important to know at the outset, which parts of the supply chain have a monopoly. This issue was in more detail dealt with under section I, which helped to set the electricity energy stage and here only a small recap is provided. Out of the core energy services in Kenya, private and foreign participation is currently allowed only in generation. In 1996/7, after the Electric Power Act, the Government of Kenya liberalized power generation, making all bids for energy generation open to both public and private firms and national generators would not have a preference over international generators (Eberhard, 2005).

The transmission network is owned and operated by KETRACO (Institute of Economic Affairs, 2015, p20). KETRACO is also exclusively responsible for facilitating regional trade in power through its transmission networks (Kenya MoEP, 2015). Services of the SO, provision of distribution and transmission (old transmission), and public electricity supply (retail of electricity to the consumers) are currently reserved for the KPLC (ERC, 2008). KPLC is the only wholesale buyer (signing Power Purchase Agreements with generators) and retail seller to all industry (small, medium, large) and domestic consumers including those connected under the Rural Electrification Programme (Institute of Economic Affairs, 2015).

3.4. Are certain electricity services reserved to state-owned companies?

As mentioned above, the Government of Kenya (GoK) is still the major shareholder in KenGen, KPLC, and KETRACO. KenGen is a State Corporation with 70 per cent shareholding by GoK and private shareholding 30 per cent. KenGen is listed on Nairobi Stock Exchange (NSE). KPLC is a state corporation with GoK holding 50.1 per cent and private shareholding rest of the shares. The GoK owns 100 per cent of KETRACO (Kenya MoEP, 2015). Thus, the ownership in the core energy functions is with the state-owned companies.

However, the GoK is preparing for deeper reform. Over time, it is in the plans to privatize the generation company KenGen, as it is listed on the Nairobi Stock Exchange. Kenya's Vision 2030 as well as the Sessional Paper No.4 of 2004 foresees the separation of generation from distribution, where power generating companies would be allowed to access bulk electricity consumers through the power transmission network (wholesale power market) (Institute of Economic Affairs, 2015). This would create a domestic power pool with a provision for wholesale and retail markets. Within these reforms, it is proposed to unbundle KPLC into two companies. It would be divided into a (100%) state-owned transmission company and a private-owned distribution company (Institute of Economic Affairs, 2015). However, as indicated by the intended 100 per cent ownership of the eventual transmission entity, Kenya does not appear interested in introducing competition within the transmission segment. SO services always remain a natural monopoly.¹⁷

¹⁷ Currently, KPLC as the SO also provides the load forecasting service, which means that they provide different forecasts of the total generation capacity (forecast load as generated) and a forecast for the supply required (forecast load sent out).¹⁷ In order that the SO can dispatch electricity, the generating companies inform the SO of their generating capacity on a daily basis, according to many different criteria (ERC, 2008).

Distribution lines are often seen as natural monopoly, since doubling these lines for households would not make economically sense (sometimes factories have more than one physical distribution network connection to prevent disruption inconveniences) (OECD/IEA, 2001). Currently Kenya has been divided into four distribution regions (Nairobi, Coast, West Kenya, and Mt. Kenya) (Institute of Economic Affairs, 2015). In short to long-term, the strategy is to install cooperative frameworks with the County Governments in planning and developing distribution networks to assign them the duty of distributor(s). They would become the sole distributor in a given area (Kenya MoEP, 2015). Therefore, as of right now GoK is not planning on unbundling this part of the electricity energy services chain.¹⁸

The regulatory and capacity challenges that remain currently in transmission, distribution, wholesale and end-user supply are many. In transmission, drafting of a range of documents complementary to the Grid Code determining procedures for such matters as scheduling and dispatch, price determination and administration of the wholesale power market is required (ERC, 2008). In order to facilitate open access to the transmission network, they need to develop the legal, regulatory and institutional framework to support integration and a competitive regional electricity market and a framework to designate one SO (Kenya MoEP, 2015). For distribution, there is lack of a framework and synergies in adoption of parallel system in off-take of power (parallel systems being single and multiple off-taker). There is also lack of legal and regulatory framework for opening up retail for competition (Kenya MoEP, 2015).

¹⁸ Distribution lines and supply of services to the final customer can be separate from each other creating also a retail market. This supply or merchant function is a separate commercial activity in the most open electricity markets, where generators, distributors and consumers have access to the network. The energy merchant buys bulk power from the generator, buys transmission and distribution services and collect payments from the consumer.

Engineering and other energy services

At the same time, some of the energy-related services that are supplied when IPPs build power plants can be supplied by the private sector, including foreign suppliers. The IPPs sometimes build the power plants with their own resources (as opposed to government loans) as they have the opportunity to earn back their investment. In Kenya, to build Westmont power plant, Malaysia spent USD65 million, and in case of Iberafrika power plant, USD35 million was invested (1st 56 MW out of 108.3MW), of which the 80 per cent Spanish equity owner financed more than half (ICA, 2011). Similarly, though the ownership of transmission and distribution lines will remain with KPLC and KETRACO, the services to design, construct, provide architectural services, testing, etc can be provided by the private sector, including foreign firms.

In summary, out of the core services generation is currently the only non-state-owned service, but it is projected that wholesale and retail power market services could become competitively supplied once some of the regulatory and governance issues facing these subsectors are resolved. Transmission and distribution are expected to remain state-owned services and SO is a natural monopoly. Energy-related services are already open for the domestic and foreign private sector as well as governments service suppliers.

3.5. Establishment

Are energy firms required to establish locally through a particular legal form of establishment? Is local control (e.g. 51% or more of the equity/contribution) required over the (equity/contractual) joint venture? When laws restrict foreign shareholdings in locally incorporated energy companies, what is the maximum foreign equity permitted or the minimum local shareholding?

Issues related to foreign ownership of entities specifically relate to the MA provisions within GATS and they would apply equally to engineering or construction services, as they would to electricity transmission services. The market access provision covers six types of restrictions that if maintained must be listed as a limitation in the WTO Member's schedule of specific commitments.¹⁹ Two of them are addressed in the above question and have to do with measures that restrict or require specific types of legal entity or joint venture through which a service supplier may supply a service; and, limitations on the use of foreign capital (foreign shareholding, total value of foreign investment, etc). The restrictions that countries schedule usually represent desires of a country to develop domestic skills and keep the investment benefits within the country. However, these restrictions also effectively limit the ability of foreign companies to effectively or efficiently supply their energy services, as commercial presence is restricted by requirements of joint ventures, which might be less competitive. Also mergers or acquisitions could be

¹⁹ The six types of restrictions are limits 1) on the number of service suppliers' permits; 2) the value of transactions or assets; 3) the number of total service output; 4) number of natural person supplying a services; 5) measures that restrict or require specific types of legal entity or joint venture through which a service supplier may supply a service; 6) and, limitations on the use of foreign capital (foreign shareholding, total value of foreign investment, etc.). A country is allowed to maintain such measures as long as they are listed as a limitation in their schedule of commitments (WTO, 1994).

impossible, if there is only minor foreign ownership allowed.

In Kenya, according to the Energy Local Content Regulation, a “licensee, contractor or its sub-contractor, or any other entity, before carrying out any work in the energy activities, shall establish a local office, where procurement, project management and implementation decision making are to take place, to the satisfaction of the Commission” (ERC) (Energy Local Content Regulation section II:5) (Kenya MoEP, 2014).

A non-indigenous Kenyan company which intends to provide works or services to a licensee, contractor or its sub-contractor, or any other entity within the country “shall incorporate a joint venture company or any other business arrangement with an indigenous Kenyan company and afford that indigenous Kenyan company a participation of at least ten per cent of equity or contract value” (Energy Local Content Regulation section II:6(3)). Within that joint venture company, Kenyan citizens “shall hold at least eighty per cent of executive and senior management positions and one hundred per cent of non-managerial and other positions” (Local Content Regulation section I:2) (Kenya MoEP, 2014).

The minimum local shareholding is fifty-one per cent by an indigenous Kenyan company. An “indigenous Kenyan company” means a company incorporated under the Companies Act, Cap 486 (a) that has at least fifty-one per cent of its equity owned by a citizen of Kenya (Energy Bill section I:2) (Republic of Kenya, 2015).

At the same time, the energy services projects in Kenya that are financed in whole or part by a loan of IBRD or credit or grant from the IDA says that the eligibility bidders may be private or government-owned entities but shall have nationality of an eligible country. Section V states that “to foster competition, the Bank permits firms and individuals from all countries to offer goods, works, and services for Bank-financed

projects.” “In connection with any contract to be financed in whole or in part from a Bank loan, the Bank does not permit a borrower (Kenya) to deny pre-or post-qualification to a firm for reasons unrelated to its capability and resources to successfully perform the contract; nor does it permit a borrower to disqualify any bidder for such reasons” (Procurement under IBRD Loans and IDA Credits, October 2006, section V on eligible countries) (IBRD, Rev. 2010).

Furthermore, the IBRD rules “do not accept mandatory conditions of bidding which require mandatory joint ventures or other forms of mandatory association between firms.” Firms are allowed to enter the bidding processes in a joint venture, independently, and in liability combinations with domestic or foreign firms (Procurement under IBRD Loans and IDA Credits, October 2006, section V on eligible countries paragraph 1.10 on joint venture) (IBRD, Rev. 2010).

Engineering

The same rules apply with regard to engineering services in Kenya, however they are not specified with as much precision. According to the Engineers Act 2011, to provide engineering consulting services, at least fifty one per cent of the shares in the firm have to be held by Kenyan citizens (Republic of Kenya, 2011c).

3.6. Statutory Restrictions

Are there statutory restrictions of foreign ownership in privatized energy utilities?

This question is also related to market access commitments and the restrictions that could apply on foreign ownership and investment opportunities. An Act approved in June 2007 reduced the maximum share of foreign ownership for corporations registered on the Nairobi Stock Exchange (NSE) from 75 per cent to 60 per cent. Though not valid retroactively, the regulation still forces

business with more than 60 per cent foreign ownership to reduce foreign shares before they can apply to the NSE (U.S. Department of State, 2012). This effectively decreases the options of the companies to sell their excess shares to non-Kenyans. Such rules apply equally to all companies on the NSE, irrespective of the sector (in trade-speak they are a 'horizontal' restriction).

KenGen has 30 per cent of its shareholding held privately and it is listed on Nairobi Stock Exchange (NSE) and it is in the plans to privatize KenGen over time. The implications of the June 2007 Act will not be significant, provided that there are enough Kenyans that are willing and able to invest in KenGen. If that is not the case however, this restriction may complicate the planned privatization process.

3.7. Performance Requirements

Are foreign established companies subject to specific performance requirements, including (i) licensing requirements and technology transfer rules; (ii) remittance and foreign exchange restrictions limiting external financial transfers; (iii) local content requirements?

Under Kenya's Energy Bill 2015, local firms are given a preference with regard to the initial possibility to provide services. "A licensee, contractor or its sub-contractors, or any other entity shall establish and implement a bidding process for the acquisition of goods, works and services to give preference to indigenous Kenyan companies and shall not award a contract based solely on the principle of the lowest bidder" (Energy Bill section II:12-13[1]). Furthermore, "where the total value of the bid of a qualified indigenous Kenyan company does not exceed the lowest bid by more than ten per cent, the contract shall be

awarded to that indigenous Kenyan company" (Energy Bill section II:13[3]). The importance of local content is so important, such that if a Kenyan service provider's service is only 10 per cent more expensive than that of a foreign competitor, the licensee is obligated to contract the more expensive local service (Republic of Kenya, 2015).

For the foreign services providers that have established a joint venture, the "Kenyan citizens shall be given the first consideration for employment and training in any operations executed by a licensee, the contractor or its sub-contractor, or any other entity in energy activities" (Local Content Regulation section II:6[1]). The Local Content Plan submitted to the Commission shall ensure that qualified Kenyans are given first consideration with respect to employment and adequate provision is made for the training of Kenyans on the job (Local Content Regulation section II:10[1b-c]). The Local Content Plan shall also provide (a) an Employment, Training and Succession Plan; (b) a Research and Development Plan; (c) a Technology Transfer Plan; (d) a Legal Services Plan; and (e) Financial and Insurance Services Plan (Local Content Regulation section II:10[2a-e]). "A non-indigenous Kenyan company shall before the commencement of energy activities submit a plan to the Commission specifying the strategy for the transfer of technology and know-how to the indigenous Kenyan company" (Local Content Regulation section II:6[4c]). "The compliance with the local content requirements will be monitored" (Local Content Regulation section II:7) (Kenya MoEP, 2014).

"The licensee is to carry out a programme in accordance with the National Plan on technology transfer and priorities for the promotion of technology transfer to Kenya in relation to the energy sector"²⁰ (Local Content Regulation section II:21-22). "To

²⁰ "The Commission shall in consultation with the relevant Ministries, Departments and Agencies, develop and publish the National Plan on technology transfer with respect to the energy sector."

facilitate technology transfer, formation of joint ventures, partnering of licensing agreements between indigenous Kenyan companies or citizens and foreign contractors and service companies or supply companies is suggested. The Cabinet Secretary shall consult with relevant Government agencies to propose fiscal incentives to assist non-indigenous Kenyan companies, which aim to develop technological capacity and skills of citizens” (Local Content Regulation section II:24[1-2a]) (Kenya MoEP, 2014).

“The non-indigenous supplier only is required to submit each quarter to the Commission a list of contracts or purchase orders estimated to exceed the Kenya Shilling equivalent of one hundred thousand United States dollars and intended to be tendered for or executed in the next quarter” (Local Content Regulation section II:14[1b]) (Kenya MoEP, 2014).

appeals from decisions of the ERC. The chairperson and vice chairperson of the Tribunal are appointed by the President of the Republic of Kenya, and the members are selected through competitive recruitment. They all shall be chosen or appointed at different times to ensure independence from the State. “The Tribunal shall have jurisdiction to hear and determine all matters referred to it, relating to the energy and petroleum sector arising under the Energy Bill or any other Act” (The Energy Bill, paragraph 37[1]). “The Tribunal shall have original civil jurisdiction on any dispute between a licensee and a third party or between licensees” (The Energy Bill, paragraph 37[3]). “The Tribunal shall have appellate jurisdiction over the decisions of the Authority and any licensing authority and in exercise of its functions may refer any matter back to the Authority or any licensing authority for re-consideration” (The Energy Bill, paragraph 37[4]) (Republic of Kenya, 2015).

The procedure for investment proposals is well articulated. Among other specifications, the ERC “shall, where it refuses to grant a license, give the applicant a statement of its reasons for the refusal within seven days of the refusal. An aggrieved party shall have right of appeal to the Tribunal within thirty days of the decision of the ERC (Energy Bill, 2015, section VII:180[3,4]). This provision applies to national and foreign services providers. “Any person aggrieved by a decision of the Tribunal may, within thirty days from the date of the decision or order, appeal to the High Court” (Energy Bill, 2015, section III:38[3]) (Republic of Kenya, 2015).

4. Regulatory measures

4.1. Judicial Review

Are investors and foreign persons offered rights of judicial review against unfavourable decisions by the screening authorities?

This question falls within the context of GATS Article VI:2(a), which requires WTO Members that have made specific commitments in a particular sector (for example energy services) to put in place judicial, arbitral or administrative tribunals or procedures for cases when administrative decisions affect trade in services and the service supplier. It requires WTO Members to provide for an objective and impartial review. Furthermore, Article VI:3, Members are obliged to ensure that service suppliers that require authorization can receive an answer on their application within a reasonable period of time.

The Kenyan Energy Act of 2006 establishes the Energy Tribunal whose purpose is to hear

4.2. Regulatory Authority

Who carries out regulation of the power sectors? Is the same regulatory authority responsible for issuing licenses for each regulated entity and for drafting rules on pricing?

The Energy Regulatory Authority (ERC)

carries out the regulation of power sector. It regulates the generation, importation, exportation, transmission, distribution, supply and use of electrical energy with the exception of licensing of nuclear facilities; and production, conversion, distribution, supply, marketing and use of renewable energy (Energy Bill section III:11[i][iii]). The Authority is also responsible for issuing licenses and drafting rules on pricing (Energy Bill section III:12[a,i]) (Republic of Kenya, 2015).

4.3. Price Regulation

Are regulated retail prices for power set (i) by an independent regulatory body without concurrence of the Government; (ii) by the regulatory authority in concurrence with the Government; (iii) by the Government?

In the energy sector, the role of an independent regulator is a bit more nuanced and required than in some other services sectors. For energy prices, it is the regulator that normally determines the prices rather than competition and it is for the regulator to ensure a supply of safe, adequate, and reliable electricity services (RAP, 2011). The ERC has the “power to set, review and adjust electric power tariffs and tariff structures, and investigate tariff charges, whether or not a specific application has been made for a tariff adjustment” (The Energy Bill section III:12[i]). The Cabinet Secretary may “upon recommendation of the ERC prescribing the form and manner in which any application for review or adjustment of tariffs is to be made and the procedure for the review or adjustments of tariffs” (The Energy Bill section VII:226[1a]) (Republic of Kenya, 2015).

The Schedule of Tariffs for Supply of Electrical Energy by the KPLC (17th January, 2014) outlines the prices to be charged for all (Republic of Kenya, 2014). Electricity pricing is based on the principles of Long Run Marginal Cost of supply. The end-user-tariff incorporates all prudent costs in the

value chain and a fair return to the investors. The retail tariffs are regulated by ERC and may be subject to review at least every three years (Kenya MoEP, 2015). Thus, in principle, the prices should be set by the ERC, which is supposed to be independent from the GoK, however, previously there have been issues with setting the tariffs, which have increased the end-user prices. The situation is described under next question.

Are tariffs for access to the power grid regulated? By whom are tariffs for access set? Are private sector operators involved in setting prices and tariffs in the power sectors?

Though regulation is considered by many an imperfect way to achieve efficiency compared to introducing competition, certain issues, such as transmission revenue and thus access to the grid, require substantive involvement of the regulator. Importantly, within the GATS framework, there is no general provision guiding the issue of third-party access (TPA) to transmission and distribution networks. However, within a competitive market, access to the power grid is one of the most basic protections needed within the electric energy sector²¹ (Evans, 2002)(WTO, 2012). After the separation of generation from transmission and distribution, there are competing generators who need to have access to the transmission lines. If transmission lines are tied to the main generator, the transmission owner can discriminate against other generators by deciding higher access prices to the transmission lines, and allocating transmission capacity to its own generating companies, withholding technical information on changes in capacity of the grid, insisting on harsh but unnecessary technical requirements, or even undertaking contracts, which block transmission capacity (OECD/IEA, 2001). Similar reasoning applies with unbundling of generation from

²¹ There are further issues on cost, timing, and fairness to ensure competitive access.

distribution, and distribution and end-user supply.²²

Normally the network service providers (distribution and transmission) charge a fee for the use of their lines. In case of Kenya where only generation is unbundled from transmission and distribution, the access to transportation grid and to bulk (wholesale) market is guaranteed for the IPPs (non-utility generators) through long-term Power Purchasing Agreement (PPA) contracts with the utility off-taker, KPLC (Republic of Kenya, 2015), which alone makes up the bulk market. As access can be made mandatory or negotiated (Evans, 2002)(WTO, 2012), in Kenya each electric generator negotiates in good faith with the relevant network service provider and the System Operator (in Kenya currently the KPLC) (ERC, 2008). Within the PPA, KPLC guarantees access for the generators to the transmission grid and purchases electricity from the generator for the set time of the PPA (current practice in Kenya is 15-20 years) at a specified price upon delivery of energy by the generator. The IPPs, in order to ensure that changing tariff conditions in the country would not endanger their business, demand and are granted generation tariff guarantees and letter of credit for capital and energy charges (Institute of Economic Affairs, 2015).

22 If generation and distribution are tied together, the owners of distribution assets can favour their own generators and discriminate against others by for example demanding higher prices for the use of distribution grid. If distribution and end-user supply remain bundled, the owner of the distribution grid can discriminate on the basis of prices charged to use distribution grid, cross subsidisation, abusive technical requirements with regard to metering or delays on implementation and procedures. End-user supply does not require to be bundled with distribution, and can thus be competitive. Suppliers of energy to end-users are brokers that engage in purchasing and selling energy while hoping to make an income from taking upon themselves the risks associated with energy price volatility and tweaking the prices according to utilization patterns. Suppliers can also be responsible for the procurement of generated energy and purchasing transportation services as well as the metering and billing. It is much more effective than any regulation could be when the end-user may pick its own supplier, as it creates pressure along the whole supply chain to be effective (OECD/IEA, 2001, p21, 76-78).

The generators themselves are involved in setting the tariffs. In 2001, Iberafrica (IPP in Kenya) wanted to negotiate the second term on its PPA and expressed this interest to the ERC and the KPLC. First KPLC and Iberafrica reached an agreement on tariffs, however the ERC refused these tariffs. Then Iberafrica negotiated with the ERC and reached tariffs, which were unacceptable to KPLC. As a consequence, Iberafrica voluntarily reduced the tariffs it wanted to charge by 37 per cent, and by 2003 it reduced the capacity charges by 59 per cent of the first round PPA. Conclusively, by 2004, a new PPA for 15 years was signed with KPLC with the capacity charges reduced to 50 per cent to what they were in the first round PPA²³ (Eberhard and Gratwick, 2007).

Though it is KPLC that negotiates PPAs with the IPPs, “all contracts for the sale of electrical energy as well as provision of transmission and distribution network services, between and among licensees, and between licensees and retailers and eligible consumers shall be submitted to the ERC for approval before execution” (the Energy Bill section VII:223[1]). In connection to that, the ERC “shall ensure that the rates or tariffs established in the contract are just and reasonable (the Energy Bill section VII:223[3]). A just and reasonable tariff shall mean a rate that enables a licensee to, *inter alia*: maintain its financial integrity; attract capital; operate efficiently; and compensate investors for the risks assumed (the Energy Bill section VII:223[4a-d]) (Republic of Kenya, 2015). ERC claims that for the

23 Historically, when comparing energy tariffs that KPLC has paid for KenGen (utility generator) and the IPPs, the capacity charges (tariffs) according to which the IPPs sold their energy to KPLC were higher than that which was agreed between KenGen and KPLC. The higher prices charged by the IPPs in the 2000s however raised issues of possible corruption (some of the costs were also inflated for the first set of PPAs because they were signed for seven-year period only and the tariffs that IPPs asked for needed to cover the costs of design, construction, maintenance, etc). In 2003, a report by the ERC charged personnel in KPLC and IPPs (Iberafrica and Westmont) with commissioning unsound PPAs. This example shows a need for a regulator in energy, which was not there yet in 1997 when the PPA with the first IPPs were concluded. The second wave of PPAs were negotiated already on better terms for the consumers (Eberhard and Gratwick, 2007).

electric supply industry there is a transparent regulatory framework with non-discriminatory access to the transmission and distribution grid²⁴ (Kenya MoEP, 2014). The pricing of the transmission and distribution services is decided by the ERC and takes into account the needs of the SO (KPLC), the transmission or the distribution network owners (KETRACO, KPLC), and the transmission and distribution network users (KPLC). The prices need to prevent monopoly rent extraction by the transmission network owners and/or transmission network service providers²⁵ (ERC, 2008).

Related to the TPA and tariffs is GATS Article on monopoly powers, which under the GATS are dealt with under general obligations, some of which apply to all WTO Members regardless of specific commitments.²⁶ Under GATS, a general unconditional commitment is that a monopoly supplier has to have been approved by the state²⁷ and is required to comply with the MFN obligation (GATS Article VIII:1). Article VIII:2, adds a general conditional commitment, that Members are required to prevent such suppliers (if they are also active in sectors that are beyond the scope of their monopoly rights) from abusing

their position and from acting inconsistently with these specific commitments (WTO, 1994). For example, this would be a case of a vertically integrated electricity utility supplier, holding natural monopoly in power transmission and at the same time acting abusively in generation and distribution markets where it has also remained active (importantly, Article VIII:2 apply only if there are commitments in generation and distribution in that case). In Kenya as KPLC is the exclusive service provider on the access to the transmission and distribution network, it is important that KPLC allocates within all the PPAs the treatment as favourable as it provides in its best contract. However, in line of the future development in the sector, as Kenya will not make commitments nowhere (transmission, distribution, generation, etc), there is not much that Kenya could be in violation within GATS Article VIII obligations.

4.4. Independence

Is the regulatory authority independent from the government? How is its accountability ensured?

GATS rules do not demand an independent regulatory agency (WTO, 2012), though according to Peter Evans, under the telecom negotiations within Article XVIII of GATS, independent regulators were made a requirement, which could happen in other areas of services negotiations (Evans, 2002). An independent regulator may have positive, negative or no impact on outcomes. If the regime that the regulatory provides is transparent, fair and accountable, and if regulatory decisions are trustworthy and foreseeable, encouraging outcomes can be expected for investors as well as the local consumers (Eberhard et al, 2011).

In the energy sector, which is very technical, the independence of the regulatory authority is required from policy-making bodies of the

24 The Kenya Grid Code says that users of the network services should not be discriminated on the basis of differentiated fees being charged.

25 To deal with monopolistic pricing, competition should be introduced in transmission, as and when possible (which currently there is none for distribution or transmission). When the pro-competitive and structural reforms for transmission are not practicable or enough, different economic regulation will apply (revenue capping or rate of return). For distribution incentives and reasonable opportunities would be used to increase efficiency of service providers in line of efficient operating and maintenance practices and equitable services for network users) (ERC, 2008).

26 General obligations apply either conditionally, that is to say subject to the existence of specific commitments, or unconditionally to all sectors. These general obligations include the most-favoured nation (MFN) treatment (GATS Article II); few basic transparency provisions (GATS Article III); compliance of monopolies and exclusive service providers with the MFN obligation (GATS Article VIII:1); consultations on business practices (GATS Article IX); and consultations on subsidies that affect trade (GATS Article XV:2) (WTO, 1994).

27 Article XXVIII(h) adds that a "monopoly supplier" is an entity that has been established by the Member concerned, formally or in effect, as the sole supplier of a service (WTO, 1994).

government in order to be able to regulate the market, particularly if the government is also one of the providers of the service, as is the case in Kenya. There are several criteria, which help to determine if the regulatory authority is independent.²⁸ According to the Energy Act, No 12 of 2006, the Energy Regulatory Commission (ERC) is an independent sector regulatory agency established with that Act (Kenya MoEP, 2015). According to the Act section III:10(3), “the Authority (ERC) shall be independent in the performance of its functions, exercise of its powers and shall not be subject to the direction or control of any person or authority.” What makes them independent are the nuances that they are sole issuers of licences, independently led, and their funds are based on levies on every customer’s electricity bill. Section III:22(1a-b), the funds of the Authority shall consist of inter alia (a) levies not exceeding one half of a per cent on the sales of electricity and petroleum products; (b) licence fees, etc.

However, due to some of the operators and services providers significant market share (e.g. KPLC), at times ERC’s independence has been challenged, as they have not been able to enforce regulatory sanctions against the big government owned companies. However, the levies and licencing fees should provide the Regulatory Authority a financial independence as the demand for energy is expected to increase (ERC, 2012), which should also increase their authority to regulate.

They also collect and maintain energy data, which they supply to the Ministry of Energy and Petroleum (MoEP) as required. However, there seem to be some grievances

in terms of data capture and retention mechanisms (ERC, 2012).

5. Measures on licensing

Licences in the energy sector have an indispensable importance. The general transparency provisions that are set out in Article III of GATS are mostly procedural and not very helpful for ensuring that similar standards apply for different energy licenses (Evans, 2002).

Licencing issues can be dealt with under GATS (Article VI), which have to do with eliminating other possible barriers to trade (disguised restrictions), which can easily be created by domestic regulatory frameworks or in the absence of regulation (regulatory requirements, such as licensing, qualification requirements, and technical standards) (WTO, 2013). However these requirements only apply in those sectors where Members have undertaken specific commitments. WTO delegates recognise that even if WTO Members do not breach their market access obligations in services sectors and do not use unfair licensing requirements and procedures, qualification requirements and procedures, and technical standards may nonetheless constitute barriers to services trade.²⁹ For example, if the licencing requirements are cumbersome to ensure consumer and environment protection (environmental impact assessments, construction permits, fulfilment of technical standards, labelling, etc); if there is poor regulatory transparency as there is often lack of regulatory frameworks (arbitrary business and licencing practices, unpredictable policy change, taxations, visa rules are non-transparent, discriminatory examinations to determine specialization, etc).

28 Having 1) an independent leader, 2) exclusive authority to provide licences, 3) independent findings, 4) private sector participation, 5) minimal staff crossover between industry and regulator, 6) consumer offices, 7) universal system offices, 8) public notifications and opportunity to comment during decision-making, 9) rules on conflict of interest. In order that regulators can regulate sufficiently, they also need expertise. Independent regulator may collect some of its resources from the services providers but this should be adequately checked (Molinuevo and Saez, 2014).

29 As mandated by Article VI:4, on domestic regulatory negotiations, the WTO Members are to continue to talk on how to eliminate the possible behind the border regulatory barriers (WTO, n.d).

What laws and regulations discipline licensing of energy activities?

For core energy services: The Energy Bill (2015); The Energy (Electricity Licensing) Regulation, 2012; Electric Power (Electrical Installation Work) Rules, 2006. For engineering, the Engineering Act No. 43 of 2011.

What types of licenses are envisaged for (i) power generating; (ii) power transmission and distribution?

Generation of electricity not exceeding 1,000 kW for own use, there is no authorization needed. Generation and supply of electricity energy not exceeding 3,000 kW requires a permit. Generation, exportation, importation, transmission, distribution and retail supply of electricity exceeding 3,000 kW requires a license. A person who wishes to carry out the generation, exportation, importation, transmission, distribution and retail supply of electricity must apply for a license to the ERC in accordance with the provisions of the Energy Bill (The Energy Bill section VII:176). The same applies for application for amendment, transfer or renewal of licenses (The Energy Bill section VII:178).

The application for licences, permits and registration for electrical power generation, transmission, distribution, and supply can be submitted online. All the specifics regarding licensing and permits are outlined in the Energy (Electricity Licensing) Regulation of 2012. It specifies the timeframes for the application, additional information, communication of a rejected or accepted application, and time of coming into force of the licence or permit, if granted. The fee amount for the licences and permits and the needed information for qualification criteria are specified in detail (i.e. the proposed tariffs, the impact on the society and environment, proposed metering arrangements, the arrangements made for distribution, etc), requesting information on

required technical details (Kenya MoEP, 2014). However, the method of assessment has not been provided, which leave room for discretion and opaque decision-making.

In light of the GATS Article VI domestic regulation issues, when we look at the trend of increasing number of IPPs in Kenya, one could conclude that the licensing requirements and procedures, qualification requirements and procedures must not be more restrictive vis-à-vis foreigners, as the IPPs seem to be able to secure licences and permits and are willing to come and invest in Kenya.

What licensing procedures (e.g. application or bidding procedure) are applied? Under what circumstances are different procedures used? According to what technical and economic criteria (e.g. tariff for the service offered as the main criterion in the economic evaluation) are licenses allocated?

For the transmission and distribution grid development, the IBRD loan projects, bidding processes are used. “The Borrower [Kenya] shall award the contract, within the period of the validity of bids, to the bidder who meets the appropriate standards of capability and resources and whose bid has been determined (i) to be substantially responsive to the bidding documents and (ii) to offer the lowest evaluated cost” (Section 2.59). The bidding award is allocated to the bidder that Kenya evaluates to have the “lowest evaluated cost, but not necessarily the lowest submitted price” (Section 2.49). The procedures to evaluate the costs are well specified. The Bank is also interest in encouraging the development of domestic contracting industries in the borrowing country and thus, if Kenya request so, after agreeing with the Bank, they can “grant a margin of preference of 7.5 per cent to domestic contractors” (Appendix 2:7) (IBRD, Rev. 2010).

Are licenses issued to the energy companies transferable?

“A licensee shall not transfer or otherwise divest any rights, powers or obligations conferred or imposed upon him by the license without the consent of ERC” (The Energy Bill section VII:183[1]). However, ERC can transfer a license in case of death of the licensee, bankruptcy, corporation in liquidation, and other similar conditions (The Energy Bill section VII:183[2a-e]) (Republic of Kenya, 2015)

What provisions apply to modification, termination and revocation of licenses?

The ERC “may, at any time, revoke the license of a licensee who fails to meet his obligations under the Energy Bill. In the case of failure to meet the obligations, the Cabinet Secretary may appoint a statutory manager to operate the undertaking for and on account of the licensee and at the risk and expense of the licensee. The statutory manager shall only restore possession of the undertaking at such time when the Cabinet Secretary in consultation with the Authority, is satisfied that the circumstances on account of which the entry was made no longer exists or will no longer hinder the proper functioning of the undertaking and that the licensee has satisfied its obligations under the Energy Bill and the conditions of the license” (The Energy Bill section VII:184[1-4]) (Republic of Kenya, 2015).

The license may also be revoked “if the undertaking or the execution of the works related thereto has not commenced at the expiry of twenty-four months from the date on which the license was granted; the licensee is either wilfully or negligently not operating in accordance with the terms and conditions of the license; the licensee is bankrupt; or the licensee, at any time after commencement of the license, makes representation to the Authority that the undertaking cannot be carried on with profit, and ought to be abandoned, and, upon inquiry the Authority is satisfied that the

representation is true” (The Energy Bill section VII:185[1a-d]) (Republic of Kenya, 2015)

Thus, the ERC can revoke permits and licences, however there are procedures for appeal referred to in the Energy (Electricity Licencing) Regulation of 2012 (Kenya MoEP, 2014).

Engineering

For engineering services, all firms that provide consulting engineering services have to register with the Engineering Board of Kenya. Pursuant to sections 6, 7, 20 and 21 of the Engineers Act, 2011 all engineering consulting firms shall be registered, licensed and regulated by the Engineering Board of Kenya. Persons that are not valid licensees in Kenya are not allowed to practice engineering services (Republic of Kenya, 2011c).

A firm that applies for a license is required to submit a certificate of “continuing professional development issued by the Engineering Board, a statutory declaration confirming that no professional complaint has been made against him and pay a prescribed fee” (Engineers Act, Section 32:2). Licenses are valid from January 1st to December 31st of a particular year. Licenses may be renewed and the Board may deny renewal with sufficient cause. The Board may suspend a license if there is an offence, proven misconduct, etc. License can be cancelled, if the licensee does not pay the Engineers Training Levy (paid by every registered engineer whose name appears on the Board’s register), the firm is convicted of an offence or ceases to be qualified (Republic of Kenya, 2011c).

6. Measures on the movement of natural persons

Movement of natural persons has to do with the fourth mode of services trade, but it has also implications to other modes. Rules on it are enshrined within the specific MA and NT limitations.³⁰ Besides listing measures limiting the movement of natural persons of foreign nationality horizontally in a Members' schedule of commitments, sometimes additional specific limitations are schedules within a specific sector. The reason for limiting movement of foreign natural person is to protect the local work force in certain sector, or to intentionally encourage foreign workers in essential sectors. In Kenya, there do not seem to be any other specific limitations for the energy sector besides what has been written under the Energy Local Content Regulation, which requires all energy licensees to employ in the junior level positions only Kenyan nationals and at least 80 per cent of the management jobs have to be held by Kenyans (see above under question 5). However, there are other laws, described below that have implications on labour movement. Some of these laws leave subjective decision-making room to Kenyan authorities.

How are entry and work permits obtained?

According to the Kenya Citizenship and Immigration Act, No 12 of 2011, "an application for a permit shall be made to the Director (in charge of citizenship and

immigration matters) while following a prescribed manner. "The Director shall issue a permit of the required class to a person who is not a prohibited immigrant or inadmissible person" and has applied in the prescribed manner and has "satisfied the Committee that he has met the requirements relating to the particular class of permit" (Kenya Citizenship and Immigration Act section 40[3a-b]). "Director shall issue or revoke a permit on recommendations of the Committee" (Permit Determination Committee established under section 7) (Republic of Kenya, 2011a). "Where the Director is of the opinion that the issue of permits to an applicant is not in the interest of the country or for any other sufficient reason, the Director may upon giving reasons, in writing, to both the applicant and the Committee" and after that the committee can further consider the issues or decline issuing the permit. "Any person who is aggrieved by a decision made under this section may appeal to the High Court" (Section 40) (Republic of Kenya, 2011b).

The Citizenship and Immigration Act were revised in 2012, which outline the rules on the work and residence permits. Class A visa covers "specific employment by a specific employer" in Kenya (whose engagement in that employment will be of benefit to Kenya), covering expats on intra-company transfers, foreign assignees, and employees from abroad (Republic of Kenya, 2012a). Class H permit is issued to those looking to invest in a specific trade or set up a business or consultancy in Kenya. The fee for Class H is KSh 50,000.00 per/year and for Class A KSh 100,000.00 per/year (Republic of Kenya, 2012b).

³⁰ The national treatment provision (Article XVII) says that foreign service providers (business visitors, traders and investors, intra-corporate transferees and professionals) will not be treated less favorably at the local market than the local providers. However, limitations may be listed in Member's schedule of commitments to cover measures that the Member wishes to maintain inconsistency within Article XVII (residency requirements, discriminatory subsidies, tax benefits, etc). Article XVI prohibits the use of numerical quotas and economic needs tests, unless specified in Member's schedule of commitments (WTO, 1994).

Is the entry of foreign experts subject to economic needs tests? Are there time limitations on the presence of foreign experts? Are there residency or nationality requirements with respect to certain categories of personnel employed by locally established energy firms?

Economic needs tests are treated also in one of the market access limitations, which WTO Members shall not maintain, unless specifically scheduled. Economic needs tests is not defined under GATS but has to do with conditioning the market access to fulfilment of certain economic “needs” criteria in the domestic market.

In Kenya, “it shall be the duty of every employer to apply for and obtain a work permit or a pass conferring upon a foreign national the right to engage in employment before granting him employment (Section 45:2) (Republic of Kenya, 2011b). “Work permits are required for all foreign nationals wishing to work in the country, and the Kenyan government requires foreign employees to be key senior managers or have special skills not available locally.” Still, any enterprise, whether local or foreign, may recruit expatriates for any category of skilled labour if Kenyans are not available. Currently, “foreign investors seeking to hire expatriates must demonstrate that the specific skills needed are not available locally through an exhaustive search, although the Ministry of Labour plans to replace this requirement with an official inventory of skills that are not available in Kenya (U.S. Department of State, 2012). Work permits are only granted to foreigners if the company in Kenya can prove a Kenyan citizen can’t adequately fill the position (Section 45:2) (Republic of Kenya, 2011b). For example for building transmission lines, Kenya is lacking local technical skills, particularly in high voltage direct current (HVDC) systems, where probably hiring of foreigners is encouraged (Kenya MoEP, 2015). Firms must also sign an agreement with the government describing training

arrangements for phasing out expatriates” (U.S. Department of State, 2012).

Measures specifically for engineering and their qualification

A foreign person or firm to be registered as a professional engineer or consulting engineer or engineering consulting firm shall in the case of natural persons, “possesses the necessary qualifications recognized for the practice of engineering as a professional engineer in the country where he normally practices and that immediately before entering Kenya he was practicing as a professional engineer and holds a valid license; and he is a resident of Kenya with a valid working permit” (Section 22:a-b). Thus a valid license in the country of origin and Kenyan residency permit are prerequisites. Temporary registration of engineers is also possible if the person is not ordinarily resident in Kenya; in Kenya seeks to provide services as a professional engineer for specific work; and is licensed and practicing engineer in country of origin (Republic of Kenya, 2011c).

7. Universal services obligations

Universal service obligations are usually only on the public authorities. When there is competition and liberalization in energy services, universal services obligations need to be organized differently than in the monopoly framework. In Kenya, the Rural Electrification Authority was established in 2007 and implements the Rural Electrification Programme (REP). It was first introduced in 1973 to provide electricity supply to parts of the country considered economically not profitable by the

distribution company.³¹ The REP was executed by KPLC until 2007 (Republic of Kenya, 2015). The Rural Electrification Programme facilitates the achievement of the Government's development goals on universal access to electricity. The Cabinet Secretary may impose a levy of up to five per cent on all electricity consumed in the country, the proceeds of which shall go into the Rural Electrification Programme Fund (The Energy Bill section VII:204). The five per cent levy is currently applied (Republic of Kenya, 2014).

To sum up a few points on section II above, despite the fact that Kenya does not have any specific energy or energy-related commitments under GATS, already within much of its legislation, important trade aspects, which affect energy services, have been addressed in different laws. Kenya is already dealing with the questions of which of its core electric energy and energy-related services are traded, how they will be traded in the future, and to what extent and under what terms foreign suppliers can participate in the sector. They have already defined what are their regulations on how different services providers can provide their services i.e. what are the ownership preconditions for accessing the market.

They also have an independent regulatory authority in place, which helps to control the licencing procedures and set the prices for different services that need to be regulated. They also have a tribunal to settle any disputes against the ERC or licensees. The laws with regard to labour movement are not very specific on electric energy services and definitely leave some room for arbitrary procedures and decisions.

This Q&A exercise is useful for both trade officials as well as energy regulators and policy-makers, as they can come to appreciate what are the nuances that they are dealing with or should be dealing with, if certain energy services are to be opened for foreign participation.

³¹ Foreign governments are also helping to finance the rural electrification example. Currently, the Government of France is financing a rural electrification project to power about 110 schools and other public facilities.

Conclusion

The electric energy sector is composed of core and energy-related services. The competitiveness of the core services of transmission, distribution, and end-user supply is dependent on the level of unbundling that has been undertaken and on the existence of appropriate regulatory framework. At the same time energy-related services, such as construction, engineering, installation, management and consulting services are easier to open for foreign participation as they are separate from the legacy of natural monopolies. The case study provided on Kenya shows that they have advanced in some areas of their power sector reform agenda, having unbundled generation from transmission and distribution; created an independent energy regulatory authority for developing the regulatory framework; and planning for future energy access expansion services through IPPs and transmission and distribution network construction within the context and rules of IBRD loans. Through the IPPs they allow foreign investment and trade in energy-related services and through the IBRD loans, they finance services that are essential but which allow them to still develop their domestic skills, technology base and retain ownership of transmission and distribution lines, which are important until they have appropriate regulations to institute competition in transmission and distribution.

Exploring electric energy services trade through the WTO GATS framework and the method of Q&A is useful for better understanding the informational needs of trade and energy officials because of some of the fundamental trade in services concepts and ideas enshrined in GATS and the related questions.

These trade concepts are fundamental because they would emerge in any trade in services framework, as they have to do with finding a balance between needs to develop domestic services sector but at the same time allowing foreign participation in the market. The trade officials would need to know from the energy officials at which stage in the energy services is foreign service provision possible and what are the rules that constrain international services trade (rules on access, licencing requirements, ownership limitations, labour movement, independent review for investors, and other laws and institutions in place in the sector). At the same time, the energy officials need to know and consider the very same trade rules and concepts that could apply or have an impact on the sector when they design the regulatory framework for the different stages of energy sector unbundling and the energy-related services. In Kenya, the ERC believes that within the current energy services setting, it has fashioned a strong regulatory environment, which encourages foreign and national private sector investment, and will enable achieving the Vision 2030 energy and development objectives of becoming a newly industrialized middle-income country by 2030 (ERC, 2012).

References

- DESA, (2002). Statistical Papers Series M No. 77, Provisional Central Product Classification, Department of International Economic and Social Affairs, Statistical Office of the United Nations, New York, 1991.
- Eberhard, A., et al. (2011). *Africa's Power Infrastructure: Investment, Integration, Efficiency*. World Bank. Washington D.C.
- Eberhard A. and Gratwick K. N. (2007). *Take 4: the Contribution and Evolution of Independent Power Projects in Kenya*. MIR working paper of University of Cape Town Graduate School of Business, Cape Town, South Africa
- Eberhard, A., et al. (2005). *The Kenyan IPP Experience*, Working Paper nr 49 of Program on Energy and Sustainable Development, November 2005, Stanford University, CA. Retrieved from: http://fsi.stanford.edu/sites/default/files/Kenya_IPP_Experience_.pdf
- Eleff. B. (2012). *Federal Regulation of Electric Transmission: From Monopolistic Barrier to Competitive Force*. Information Brief. Research Department Minnesota House of Representatives. St. Paul, Minnesota, USA.
- ERC. (2012). Energy Regulatory Commission Strategic Plan 2012/13 - 2016/17. Kenya Energy Regulatory Commission.
- ERC. (2008). Kenya Electricity Grid Code. Energy Regulatory Commission. Nairobi, Kenya. March 2008 Edition.
- ERC. (n.d.). Electricity Supply Industry in Kenya: Electric Power Market Structure. Retrieved June 19, 2015, from http://www.erc.go.ke/index.php?option=com_content&view=article&id=107&Itemid=625
- Eurostat. (May 2015). *Energy Price Statistics*. Eurostat Statistics Explained. Retrieved from: http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_price_statistics
- Evans, P. (2002). *Liberalizing global trade in energy services*. Washington, D.C.: AEI Press.
- Hiraki, S. (1996). *Impediments in Construction and Engineering Services*. Niigata University. Niigata, Japan.
- Hirschhausen, C.von, and Opitz, P. (2001). *Power Utility Re-Regulation in East European and CIS Transformation Countries (1990-1999): An Institutional Interpretation*. http://www.ksg.harvard.edu/hepg/Papers/discussion_paper_tu.pdf
- IBRD. (Rev. 2010). Guidelines Procurement under IBRD Loans and IDA Credits. International Bank of Reconstruction and Development. <http://siteresources.worldbank.org/INTPROCUREMENT/Resources/ProcGuid-10-06-RevMay10-ev2.pdf>
- ICA.(2011). *When the Power Comes: An Analysis of IPPs in Africa*. The Infrastructure Consortium for Africa. African Development Bank. Belvedere, Tunisia. http://www.icafrica.org/fileadmin/documents/Knowledge/Energy/ICA_WHEN%20THE%20POWER%20COMES_report.pdf
- Institute of Economic Affairs. (2015). *Situational Analysis of Energy Industry, Policy and Strategy for Kenya*. Nairobi, Kenya
- Kenya MoEP. (2015). Draft National Energy and Petroleum Policy. January 20, 2015. Kenya Ministry of Energy and Petroleum. Retrieved ERC website: http://www.erc.go.ke/images/docs/National_Energy_and_Petroleum_Policy-19_Jan_2015.pdf

- Kenya MoEP. (2014). Kenyan Energy (Electricity Licensing) Regulation (2012). Kenya Ministry of Energy and Petroleum. Retrieved ERC website: <http://www.erc.go.ke/images/docs/Energy-ElectricityLicensing-Regulations2012.pdf>
- KETRACO (n.d). The Electricity Sub-sector. Kenya Electricity Transmission Co. Ltd. <http://www.ketraco.co.ke/learn/electricity-sub-sector.html>
- KPLC. (2015). Kenya Electricity Expansion Project (KEEP) documents. <http://www.kplc.co.ke/content/item/52/Kenya-Electricity-Expansion-Project-KEEP>
- Lloyd, P. (2012). Restructuring South Africa's Electricity Supply Industry. Cape Peninsula University of Technology.
- Molinuevo, M., and Saez, S. (2014) *Regulatory Assessment Toolkit: A Practical Methodology for Assessing Regulation on Trade and Investment in Services*. World Bank. Washington, DC.
- Monkelbaan, J. (2013). *Trade in Sustainable Energy Services*. ICTSD. <http://www.ictsd.org/downloads/2013/10/trade-in-sustainable-energy-services.pdf>
- Ngugi, P. K. (2012). Financing Kenya's geothermal vision. Presented at "Short Course on Geothermal Development and Geothermal Wells," organized by UNU-GTP and LaGeo. Santa Tecla, El Salvador. March 11-17, 2012. <http://www.os.is/gogn/unu-gtp-sc/UNU-GTP-SC-14-14.pdf>
- Ni.C.C. (2005). *Analysis of Applicable Liberalization Models in China's Electric Power Market*. International Public Economy Studies Vol. 16, 2005. <http://eneken.iej.or.jp/en/data/pdf/309.pdf>
- OECD. (2003). *Managing the Request-Offer Negotiations Under the GATS: The case of Energy Services*. Working Party of the Trade Committee. November 5, 2003. OECD. Paris. TD/TC/WP(2003)24/FINAL
- OECD/IEA. (2001). *Competition in Electricity Markets*. OECD and IEA. Paris.
- Onyango, C, et al., (2009). *Regulatory and Competition-related Reforms in Kenya's Power and Petroleum Sector*. CUTS CCIER, Kenya, Nairobi.
- Pollitt, M., & McKenna, M. (2014, October 1). Power Pools: How Cross-Border Trade in Electricity Can Help Meet Development Goals. Retrieved June 19, 2015, from <http://blogs.worldbank.org/trade/power-pools-how-cross-border-trade-electricity-can-help-meet-development-goals>
- RAP. (2011). Electricity Regulation In the US: A Guide. Regulatory Assistance Project. Montpelier, Vermont, USA.
- Republic of Kenya. (2015). The Energy Bill. Retrieved from ERC website: http://www.erc.go.ke/images/docs/Energy_Bill_2015_210115.pdf
- Republic of Kenya. (2014). Schedule of Tariffs for Supply of Electrical Energy by the KPLC Limited. The Kenya Gazette. January, 17, 2014. <http://erc.go.ke/images/docs/GazettedRetailElectricityTariffs.pdf>
- Republic of Kenya. (2012a). Application for or Renewal of an Entry Permit. Form 3. Under the Immigration Act, 1967.
- Republic of Kenya. (2012b). Fees for Entry/Work Permit. http://www.kenyarep-jp.com/visa/form/Entry_Permits_fees.pdf
- Republic of Kenya. (2011a). Kenya Citizens and Foreign Nationals Management Service Act No. 31 of 2011.
- Republic of Kenya. (2011b). The Citizenship and Immigration Regulations Act No. 12 of 2011.
- Republic of Kenya. (2011c). The Engineers Act, No 43 of 2011. No. 3 of 2012
- Republic of Tanzania. (2014). Electricity Supply Industry Reform Strategy and Roadmap 2014-2025. Ministry of Energy and Minerals. June 30, 2014.
- UNSTATS. (2008). CPC Ver.2. Detailed structure and correspondences of CPC Ver.2 subclasses to ISIC Rev.4 and HS 2007. http://unstats.un.org/unsd/cr/registry/docs/CPCv2_structure.pdf

U.S. Department of State. (2012). Investment Climate Statement - Kenya. (2012, June 1). Retrieved June 19, 2015, from <http://www.state.gov/e/eb/rls/othr/ics/2012/191175.htm>

WTO. (2015). Services trade statistics. I-TIP.
<http://i-tip.wto.org/services/%28S%284erq15awqhtivwtwOotrja3b%29%29/ChartResults.aspx>

WTO. (2013). Trade in Services Division, The General Agreement on Trade in Services: An Introduction. 31 January 2013.

WTO. (2012). Secretariat note by the Working Party on Domestic Regulation, Regulatory Issues in Sectors and Modes of Supply. June 13, 2012. S/WPDR/W/48.

WTO. (2010). Council for Trade in Services background Note by the Secretariat, Energy Services, 12 January 2010, 10-0109.

WTO. (2001). Trade in Services, Guidelines for the Scheduling of Specific Commitments under the GATS. March 28, 2001, S/L/92.

WTO. (1998). Council for Trade in Services background note by the Secretariat, Energy Services, September 9, 1998. S/C/W/52.

WTO. (1994). General Agreement on Trade in Services. Annex 1B. World Trade Organization.

WTO. (1991). Services Sectoral Classification List. World Trade Organization. MTN.GNS/W/120. July 10, 1991.

WTO. (n.d). WTO negotiations on domestic regulation disciplines. Retrieved:
http://www.wto.org/english/tratop_e/serv_e/dom_reg_negs_e.htm

Annex I: Classification of energy services (CPC v.2 / 2008)

Sector/ sub-sector	CPC ver 2 (2008)	Relevant Activities
Maintenance, repair and installation (except construction) services	87156	Maintenance and repair services of commercial and industrial machinery
	8732	Installation services of industrial, manufacturing and service industry machinery and equipment
Support services to electricity, gas and water distribution	8631	Support services to electricity transmission and distribution
	86311	Electricity transmission services (on a fee or contract basis)
	86312	Electricity distribution services (on a fee or contract basis)
Scientific and other technical services	83443	Testing and analysis services of integrated mechanical and electrical systems
Engineering services	83310	Engineering advisory services (e.g. preparatory technical feasibility studies and projects impact studies for the construction of a power line, study of the environmental impact of a project)
	8332	Engineering services for specific projects
	83321	Engineering services for building projects (e.g. engineering design services for the construction of foundations and building structures)
	83322	Engineering services for industrial and manufacturing projects
	83324	Engineering services for power projects
	83330	Project management services for construction projects
Management consulting services	8311	Management consulting and management services (e.g. project management services for preparing, running and completing a project)
	83115	Operations management consulting services (e.g. advisory, guidance and operational assistance services concerning management of the transmission of non-conventional energy)
	83116	Supply chain and other management consulting services (e.g. services concerning methods for improving productivity, reducing production costs and improving the quality of production)
	8312	Business consulting services
	83129	Other business consulting services
Architectural services	8321	Architectural services and advisory services
	83223	Project site master planning services
Research and development services	8112	Research and experimental development services in engineering and technology
	81129	Research and experimental development services in other engineering and technology
Leasing or rental services concerning machinery and equipment without operator	73122	Leasing or rental services concerning construction machinery and equipment without operator (<i>note: rental of equipment with operator is classified under construction services, CPC 518</i>).
Electricity, gas and water distribution (on	6911	Electricity transmission and distribution (on own account)
	69111	Transmission of electricity (on own account)

own account)	69112	Distribution of electricity (on own account)
Retail trade services on a fee or contract basis	625997	Retail trade services of electricity on a fee or contract basis
Wholesale trade services on a fee or contract basis	612997	Wholesale trade services of energy on a fee or contract basis
Rental services of transport vehicles with operators	660	Leasing or rental services concerning construction or demolition equipment with operator and operational services provided by the operator
Building completion and finishing services	547	Building completion and finishing services
Installation services	546	Installation services
Special trade construction services	5451-5459	Special trade construction services, such as foundation services, construction framing services, concrete services, structural steel erection services, scaffolding services, etc.
Assembly and erection of prefabricated constructions	5440	Assembly and erection of prefabricated constructions
Site preparation services	5431-5433	Site preparation including demolition services, site formation and clearance services, excavating and earthmoving services
General construction services of civil engineering works	54262	General construction services of power plants
	54252	General construction services of local cables and related works
	54242	General construction services of long-distance communication and power lines (cables)
General construction services of buildings	54121	General construction services of industrial buildings
Civil engineering works, including construction	53262	Power plants
	53252	Local cables and related works
	53242	Long-distance communication and power lines (cables)

Source: CPC 2008. http://unstats.un.org/unsd/cr/registry/docs/CPCv2_structure.pdf

Annex II: Market access and national treatment limitations: Selected business services (W/ 120)

Business services (sub-categories to it are “professional” and “other business services”) limitations for Mode 1 for Canada

W/120 code	Sub-sector	Limitations
Market Access		
1.A.d*	Architectural services	Citizenship requirement for accreditation (architects)
1.A.e/ 1.A.f	Engineering/ integrated engineering services	Requirement of a commercial presence for accreditation (Engineers): [Requirement of a commercial presence for accreditation (consulting engineers)] Requirement of permanent residency for accreditation (engineers); ([Citizenship requirement for accreditation (engineers)])
1.F.c	Management and consulting services	Permanent residency requirement for accreditation (Agrologists): [Citizenship requirement for accreditation (Professional administrators and certified management consultants or Professional corporation of administrators); Citizenship requirement for use of title (Industrial Relations Counsellors)]
1.F.m	Related scientific and technical consulting services	Requirement of permanent residency and citizenship (Free miner); Requirement for a commercial presence, Permanent residency and citizenship for accreditation (Canadian corporation or a partnership of the foregoing Land surveyors); Citizenship requirement for accreditation (Subsurface surveying services, Professional technologist, Chemists)
National Treatment		
1.A.d	Architectural services	Residency requirement for accreditation (Architects; Landscape architects)
1.A.e/ 1.A.f	Engineering/ integrated engineering services	Engineers: Residency requirement for accreditation (Engineers)
1.F.m	Related scientific and technical consulting services	Differential tax measures (Federal and sub- national treatment for expenditures of services performed in Canada related to the exploration and development of a mineral resource, petroleum or natural gas (Mineral and Petroleum Exploration and Development); Residency requirement for accreditation (Applied Science Technologist/ Technical); Residency requirement for accreditation (Cadastral surveying); Residency requirement for accreditation (Geoscientists, Land Surveyors; Requirement of training for accreditation (Land Surveyors))
<p>* 1. Business services</p> <ul style="list-style-type: none"> A. Professional services is the sub-category of business services d. Architectural services is sub-category of professional services e. Engineering services is sub-category of professional services f. Integrated engineering services is sub-category of professional services, etc. F. Other business services is the sub-category of business services c. Services related to management consulting is sub-category of other professional services m. Related scientific and technical consulting services is sub-category of other professional services 		

Business services (sub-categories to it are “professional” and “other business services”) limitations for Mode 3 for Canada and construction services for China

	Sub-sector	Limitations
Market Access		
1.A.d	Architectural services	Commercial presence of architects must take the form of a sole proprietorship or partnership
1.F.m	Related scientific and technical consulting services	Permanent residency and citizenship requirement for a commercial presence for accreditation of subsurface surveying services, professional technologist, chemists
3*	General construction and related engineering services	Restrictions on the types of construction projects by foreign-owned enterprises (1. Construction projects wholly financed by foreign investment and/ or grants. 2. Construction projects financed by loans of international financial institutions and awarded through international tendering according to the terms of loans. 3. Chinese-foreign jointly constructed projects with foreign investment equal to or more than 50 per cent; and Chinese-foreign jointly constructed projects with investment less than 50 per cent but technically difficult to be implemented by Chinese construction enterprises alone. 4. Chinese invested construction projects which are difficult to be implemented by Chinese construction enterprises alone can be jointly undertaken by Chinese and foreign construction enterprises with the approval of provincial government)
National Treatment		
1.A.d	Architectural services	Non-resident firms are required to maintain a higher percentage of practitioners in a partnership
1.F.m	Related scientific and technical consulting services	Residency and training requirement for accreditation of cadastral surveying, geoscientists, land surveyors
3		Differential treatment of registered capital requirements for joint venture construction enterprises: Joint venture construction enterprises have the obligation to undertake foreign-invested construction projects
*3. Construction and related engineering services A-E. B. General construction work for civil engineering; C. Installation and assembly work		

Business services (sub-categories to it are “professional” and “other business services”) limitations for Mode 4 for Canada

Sub-sector	Limitations
Market access	
	Permanent residency and citizenship are required for accreditation of certain types of services suppliers.
National Treatment	
Related scientific and technical consulting services	Residency is required for accreditation of landscape architects and other relevant service providers ‘related to scientific and technical consulting services

Source: Monkelbaan, Joachim. (2013). *Trade in Sustainable Energy Services*. <http://www.ictsd.org/downloads/2013/10/trade-in-sustainable-energy-services.pdf>

Support to Enhance Development of Trade in Services Negotiations

With support from the UK Trade Advocacy Fund, ILEAP, CUTS International Geneva and the University of Sussex's CARIS are undertaking a series of interventions that seek to contribute to the increased and more effective participation of LDCs, LICs, LMICs and RECs in multilateral, regional and bilateral services trade negotiations.

Through the studies, toolkits and training to be delivered, the envisaged results aim to assist these stakeholders in increasing their participation in services trade.

www.tradeinservices.net



TRADEINSERVICES

AN INFORMATION HUB ON TRADE IN SERVICES
POLICYMAKING AND NEGOTIATIONS