



AFRICAN UNION



ENERGY

AFRICAN ENERGY COMMISSION
COMMISSION AFRICAINE DE L'ENERGIE

AFRICA ENERGY BALANCE

EDITION
2019





**An Integrated, Prosperous
and Peaceful Africa**

2019

Africa Energy Balances

To order copies of this report, please contact:

African Energy Commission (AFREC)
02 Rue Chenoua, BP791, Hydra, 16035
Algiers, Algeria

Tel: +213 23 45 91 98

Fax: +213 23 45 92 00

Web: www.afrec-energy.org

E-mail: afrec@africa-union.org



African Union AFREC

@AUAFREC

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FOREWORD

The African Energy Commission (AFREC) is driving the effort to 'Create Energy Solutions for Africa'. For social justice to prevail, energy is not only a commodity, but an important resource for the continent. It fosters development and sustainable living, as it remains one of the important resources which the African citizens depend on.

Growth potential for Africa is rising rapidly. Africa's need to deliver sustainable infrastructures which are affordable, safe and fit for all purposes to realise its full potential. The need for clean energy (renewable) also remains fully untapped.

Therefore, this publication is presented to give you a comprehensive energy balance for all African countries. It is the first publication of AFREC on the continent, and brings authentic data from all African Member States. It also brings excitements about emerging insightful, raw and processed statistics on energy supply, transformation and consumption on the continent. A summary of the energy balance and indicators for all fuels are presented herein.

I am confident that the data and analysis presented demonstrates the need to meet growing energy demand as one of the core development challenges for the continent. It will also be used as a fundamental step in developing, planning and establishing strategies which will inform decisions and shape potentials on the role of what the energy sector can achieve today and for the future. The data will also determine how the continent can establish and strengthen the market with the right investments in cognisant of all environmental challenges.

As I always say, the **"Africa We Want"** is what we have and everything in it. We just have to 'identify our problems and give power and energy to solutions.' Collectively, this analysis shall transform energy policies & decisions in your country, your region and our continent, to position Africa in becoming an effective, sustainable and reputable dominant energy player in the global arena. Our aspiration is to inclusively deliver the African Union (AU) **'Agenda 2063** and United Nations (UN) **Sustainable Development Goals (SDGs)** for greater development and benefits of our citizens. I therefore thank the entire team of AFREC and Member States for availing and collating this data series.



RASHID Ali Abdallah

Executive Director, African Energy Commission

TABLE OF CONTENTS

Section 1

Forward	i
Abbreviations and Acronyms	vi
Unit Abbreviations	vii
The African Energy Commission	viii

Section 2

Introduction

Overview	3
Energy Production	3
Energy Supply	3
Transformation	3
Final Consumption	4
Consumption by Fuel	4
Total Final Consumption of Oil Products	5
Electricity Consumption	5
Final Consumption by sector	5
Consumption by Household	6

Section 3

Indicators and Energy Balances of Africa and its Regions

Africa	9
Central Africa	11
East Africa	13
Northern Africa	15
Southern Africa	17
Western Africa	19

Section 4

Indicators and Energy Balances of African Countries

Algeria	23
Angola	25
Benin	27
Botswana	29
Burundi	31
Burkina Faso	33
Cameroon	35
Cape Verde	37
Central African Republic	39
Chad	41
Comoros	43
Congo Republic	45
Cote d'Ivoire	47
Democratic Republic of Congo	49
Djibouti	51
Egypt	53
Equatorial Guinea	55
Eritrea	57
Eswatini	59
Ethiopia	61
Gabon	63
Gambia	65
Ghana	67
Guinea	69
Guinea Bissau	71
Kenya	73

Lesotho	75
Liberia	77
Libya	79
Madagascar	81
Malawi	83
Mali	85
Mauritania	87
Mauritius	89
Morocco	91
Mozambique	93
Namibia	95
Niger	97
Nigeria	99
Rwanda	101
Sao Tome and Principe	103
Senegal	105
Seychelles	107
Sierra Leone	109
Somalia	111
South Africa	113
South Sudan	115
Sudan	117
Tanzania	119
Togo	121
Tunisia	123
Uganda	125
Western Sahara	127
Zambia	129
Zimbabwe	131

Section 5

Time Series

Selected Indicators	135
TPES / Capita	135
TPES / GDP	137
TPES / GDP PPP.	139
Electricity Generation by Source	141
Hydropower	141
Geothermal	143
Solar, Wind	145
Biofuels and Waste	147
Fossil Thermal	149
Total Final Consumption	151
Coal	151
Oil	153
Natural Gas	155
Electricity	157
Biofuels and Waste	159

Section 6

Appendices

Glossary	163
Conversion Factors	167
For Energy	167
For Mass	167
For Volume	167
Notes	168
Publications	171

ABBREVIATIONS AND ACRONYMS

-	Not Applicable
AEIS	Africa Energy Information System
AfDB	African Development Bank
AFREC	African Energy Commission
AU	African Union
AUC	African Union Commission
BKB	Brown Coal Briquettes
CHP	Combined Heat and Power
CTL	Coal-to-Liquid
DDP	Deep Decarbonization Pathways
FAO	Food and Agriculture Organization of the United Nations
GCV	Gross Calorific Value
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GTL	Gas-to-Liquid
HHV	High Heating Value
IDDR	Institut du Développement Durable et des Relations Internationales
IEA	International Energy Agency
ISIC	International Standard Industrial Classification
LPG	Liquefied Petroleum Gas
LHV	Low Heating Value
NGL	Natural Gas Liquids
NCV	Net Calorific Value
OAU	Organisation of African Unity
PPP	Purchasing Power Parity
SIEC	Standard International Energy Product Classification
STC	Specialized Technical Committee
TTIIET	Transcontinental and Interregional Infrastructure, Energy and Tourism.
TFC	Total Final Consumption
TPES	Total Primary Energy Supply
UN	United Nations

UNIT ABBREVIATIONS

bcm	Billion cubic metres
Gcal	Gigacalorie
GCV	Gross calorific value
GW	Gigawatt
GWh	Gigawatt hour
kb/cd	Thousand barrels per calendar day
kcal	Kilocalorie
kg	Kilogram
kJ	Kilojoule
kWh	Kilowatt hour
MBtu	Million British thermal units
Mt	Million tons
Mtoe	Million tons of oil equivalent
t	Metric ton=tonne=1000kg
kt	Kilotonnes
TJ	Tera joule
toe	Ton of oil equivalent= 10^7 kcal
TWh	terawatt hour

THE AFRICAN ENERGY COMMISSION — AFREC

The African Energy Commission (AFREC) is a specialized agency of the African Union (AU), under the Department of Infrastructure and Energy of the African Union Commission (AUC), that is in charge of coordinating, harmonizing, protecting, conserving, developing, rational exploitation, commercializing and integrating energy resources on the African continent. The AFREC was created by a Decision of the 37th Summit of the Organisation of African Unity (OAU) African Heads of States and Governments which was held in Lusaka, Zambia, on 11 July 2001 and was launched by the AU Ministers in charge of energy in 2008 in Algiers, Algeria.

Some of the AFREC's mandates include; developing policies, strategies, research and plans based on Member States (MS), sub-regional, regional and continental development priorities and recommend their implementation. It is also responsible for designing, creating and updating an energy continental database and facilitates rapid dissemination of information among MS, sub-regional, regional and continental institutions. The agency also provides technical support, mobilize financial, provides capacity building to the MS, regional and continental institutions and address other energy related issues on the African continent as stated on the AFREC

Convention.

AFREC PILLARS 2019

In order to fulfil the mandate of designing, creating and updating a continental database, AFREC successfully created the first ever Africa Energy Information System (AEIS). This made it possible for AFREC to develop, publish and disseminate the *African Energy Database* book that has been produced annually since 2012. Other publications that have also been produced include the *Africa Energy Efficiency for the Residential Sector* and the *Key Africa Energy Statistics* booklet. This year the AEIS has also helped to produce the new *Africa Energy Balance* book that will be produced annually. Other planned contents to be included in future publications include *The Africa Energy Efficiency for Industrial Sector*, *The Carbon (IV) Oxide (CO₂) emissions* and *Energy Prices and Taxes*.

The AFREC has also developed 5 main pillars that have been approved by the Specialized Technical Committee (STC) on Transport, Transcontinental and Inter-regional Infrastructure, Energy and Tourism (STC-TTIET). These pillars include; the bioenergy program, the African Energy Information System program, energy

efficiency program, energy transition program and energy transition program. The bioenergy program provides sustainability indicators for bioenergy and related Food and Agriculture Organization (FAO) best practices by providing technical support capacity building of relevant institutions of the beneficiary countries to measure/collect, analyze and monitor bioenergy data.

This will enable them to track the environmental, social and economic impacts of their bioenergy production and consumption, particularly the actual contribution to GHG emission reductions by replacing fossil fuel and traditional biomass use while harnessing socio-economic co-benefits. African energy efficiency program was developed with the aim of significantly reducing the final energy demand and pollution emissions across the continent and to provide increased electricity access, competitiveness, energy security and economic development by supporting the unlocking of some \$175 Billion in available savings by 2030.

The oil and gas program focuses on creating an African domestic crude oil and petroleum products market in collaboration with main African stakeholders mainly crude oil producers, net oil products consumers, current owners of unused and underused refineries and regional and national authorities. The African Energy Sector Transition program was an analytical and engagement dimension that was inspired by the international “Deep Decarbonization Pathways (DDP)” initiative. This initiative, coordinated was by the Paris based Institut du Développement Durable et des Relations Internationales (IDDRI) since 2014 and is active today in around 40 countries where it supports the deployment of in-country capacities to elaborate context-driven strategies articulating development, sustainability and climate objectives.

2019 AFREC PILLARS

- ⇒ AFRICAN ENERGY INFORMATION SYSTEM PROGRAMME
- ⇒ BIOENERGY PROGRAMME
- ⇒ ENERGY EFFICIENCY PROGRAMME
- ⇒ OIL AND GAS PROGRAMME
- ⇒ ENERGY TRANSITION PROGRAMME

INTRODUCTION

OVERVIEW

This section provides a comprehensive look at energy developments based on energy supply and demand in 2017 for the 55 countries in Africa.

In 2017, Africa's Total Primary Energy Supply (TPES) amounts to 1,148.475 million tons of oil equivalent (Mtoe). The TPES in Africa was dominated by biomass and crude oil, which represent 37.93% and 32.79% respectively. These were closely followed by natural gas and mineral coal with 15.30% and 12.27% respectively.

1. Energy Production

In 2017, the primary electricity production (hydroelectricity, nuclear, wind, solar and geothermal), represented the lowest percentages of about 1.71%. The primary energy production is illustrated in Figure 1.1.

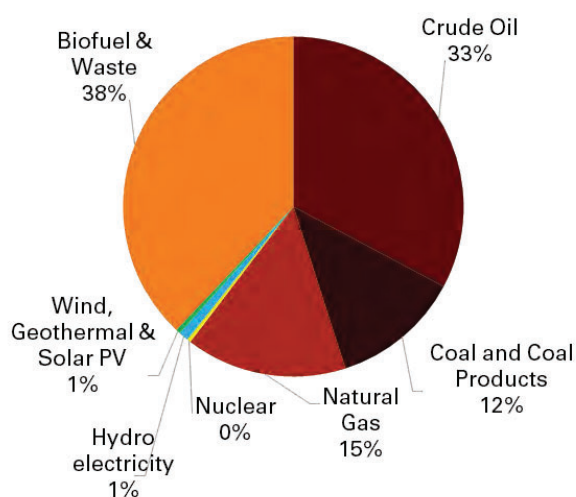


Figure 1.1. - Primary energy production

Electricity remains low at 2.10%. According to the energy flow accounting methodology, secondary electricity is not considered in this analysis, only secondary electricity exchanges are included here.

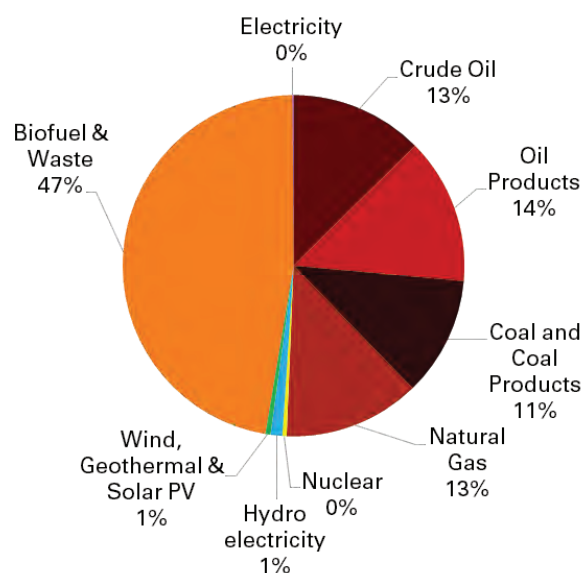


Figure 1.2. - Total energy supply

2. Energy Supply

Africa's total energy supply in 2017 amounts to 928.051 million tons of oil equivalent (Mtoe). This represents an energy independence of up to 123.75%. Biomass remains the dominant fuel with 47.20% of supplies. Crude oil petroleum products, mineral coal and natural gas share almost equally the remaining supplies with shares varying from 11.3% to 12.90%.

3. Transformation

The conversion yield from crude oil into petroleum products in refineries is 91.96%. However, the average return of fuels transformation into electricity in thermal power plants is 44.27%.

Out of 1,058.74 TWh of electricity produced in 2017, the thermal share dominates largely with 78.50%.

Mineral coal and natural gas are the main fuels used to produce electricity from thermal sources.

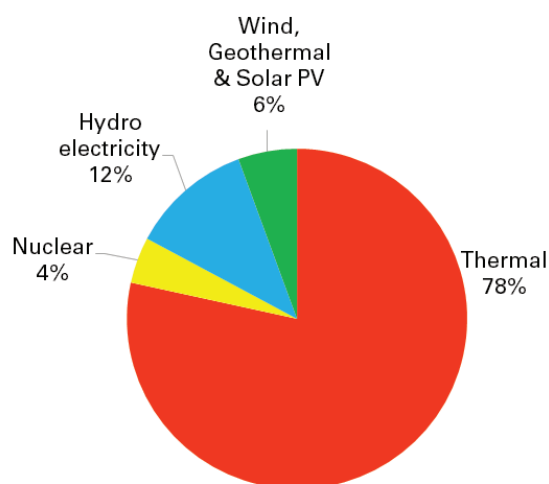


Figure 1.3. - Electricity generation

Other sectors such as agriculture, transport and various other unspecified sectors together account for 5.8% of Africa's final electricity consumption.

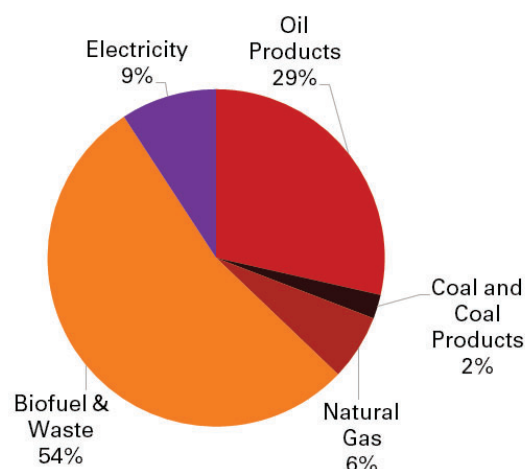


Figure 1.4. - Final consumption by fuel

In primary electricity production, hydropower is dominant and represents 11.6% of the total production followed by wind, geothermal and solar energy with 5.6%. Nuclear power ranks last with 4.4%.

4. Final Consumption

4.1. Consumption by fuel

In 2017, Africa consumed 616.271 million tons of oil equivalent (Mtoe). Biomass was the dominant fuel with 53.6% of total consumption to satisfy mainly household needs. It is followed distantly by petroleum products with 28.5%, consumed primarily for transport activities. Electricity ranked third with 9.2% followed by natural gas (6.3%) and mineral coal (2.3%).

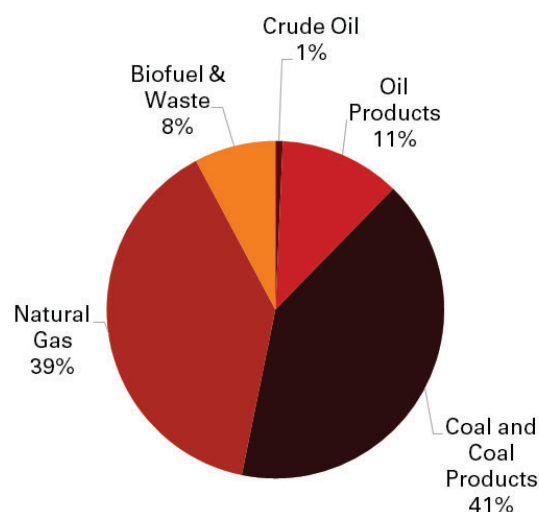


Figure 1.5. - Input fuel for thermal electricity generation

4.2. Total Final Consumption of Oil Products

The consumption of petroleum products is dominated by the transport sector with a share of 70.1% followed by the industry and households with 8.9% and 8.5% respectively. Finally, other sectors such as agriculture, commercial and public services come last with shares below 5%.

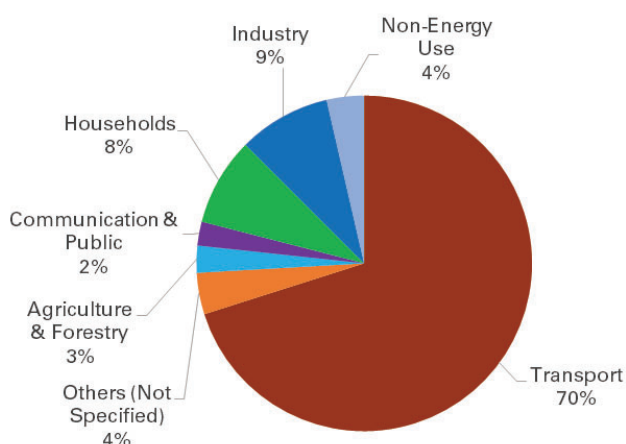


Figure 1.6. - Consumption of petroleum products by sector

4.3. Electricity Consumption

Electricity consumption is mainly distributed in three main sectors: industry (40.2%), households (35.4%) and services (18.6%).

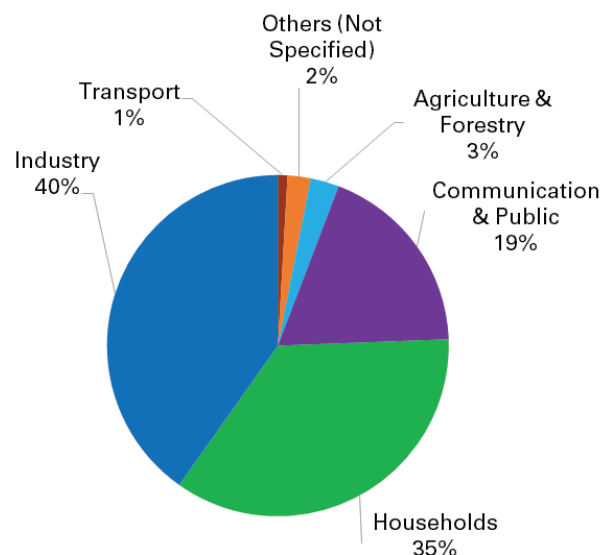


Figure 1.7. - Electricity consumption by sector

4.4. Final Consumption by sector

The sectorial analysis of Africa's energy consumption in 2017 gives a predominant share to the household sector with 53.6%

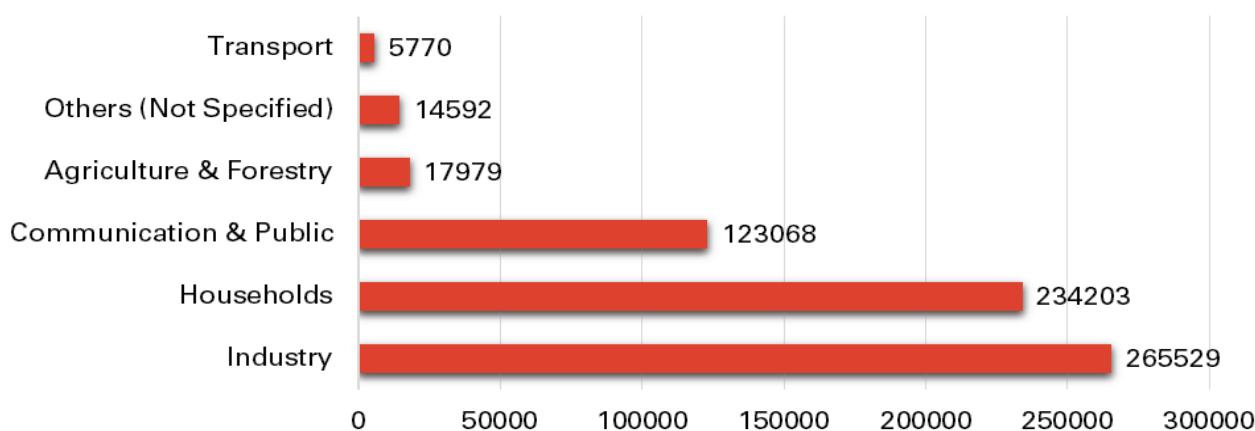


Figure 1.8. - Electricity consumption by sector by value

of total final consumption. Households are followed by the transport sector with 20.2%, then industry with 13% and Services with 7.3%.

Other less significant sectors such as agriculture, various other unspecified sectors and non-energy uses together account for 5.8% of Africa's final electricity consumption.

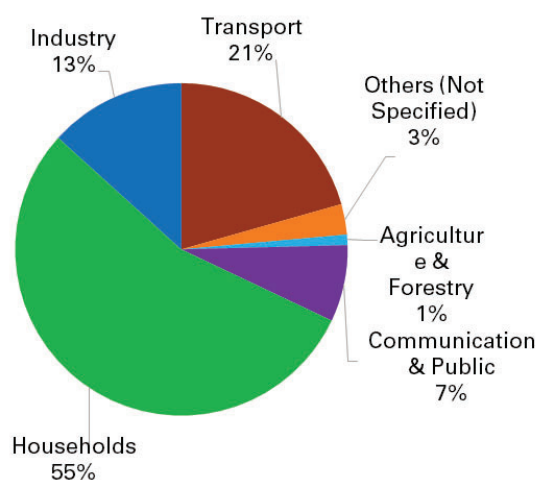


Figure 1.9. - Final consumption by sector

4.5. Consumption by Household

Most of household consumption is made up of biomass at 85.8%. Clean energies with limited access represent 6.1% for electricity, 4.5% for petroleum products and 2.8% for natural gas. Mineral coal is also used in households with a share of 0.8%.

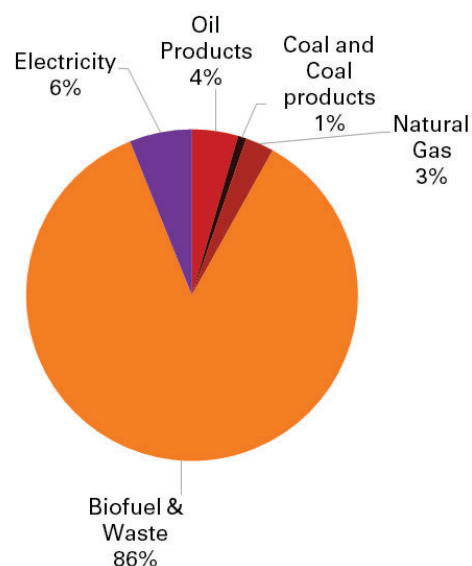


Figure 1.10. - Final consumption of households by fuel

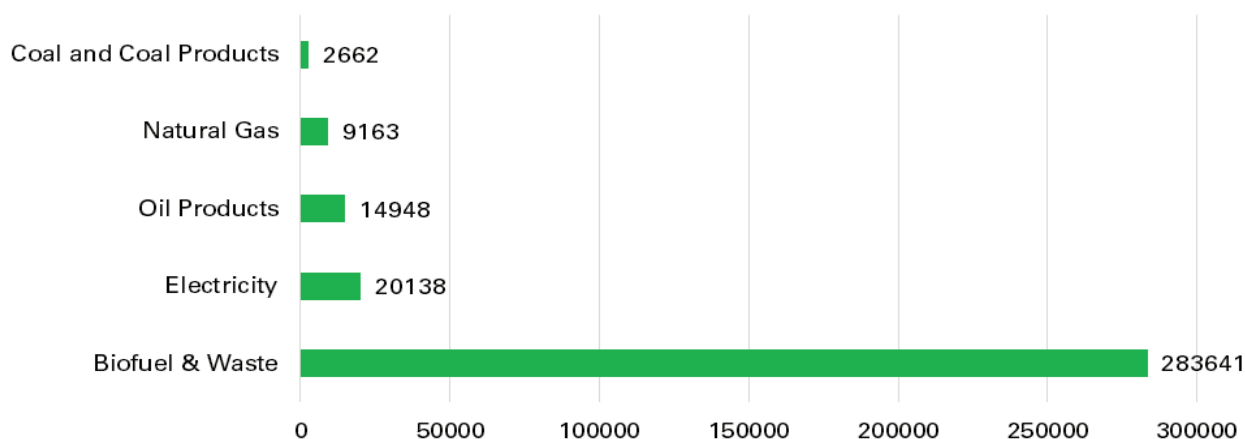


Figure 1.11. - Final consumption of households by fuel by value

INDICATORS AND ENERGY BALANCES OF AFRICA AND ITS REGIONS

Africa Indicators

Figure 2.1. - Total Primary Energy Supply (ktoe)

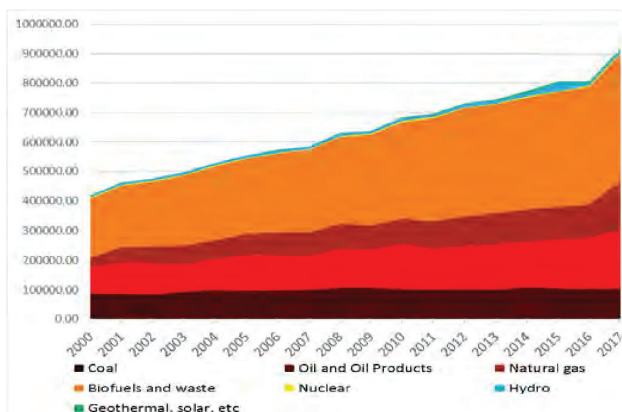


Figure 2.2. - Total Final Consumption (ktoe)

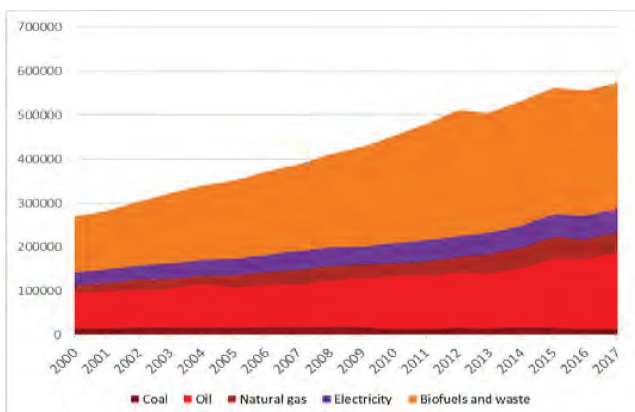


Figure 2.3. - Electricity Generation By Source (GWh)

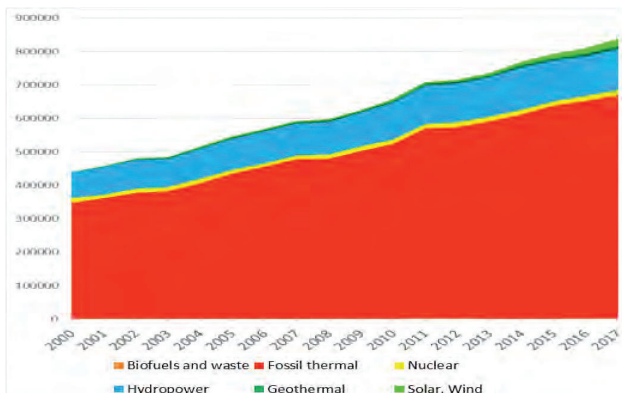


Figure 2.4. - Electricity Production and Consumption (GWh)

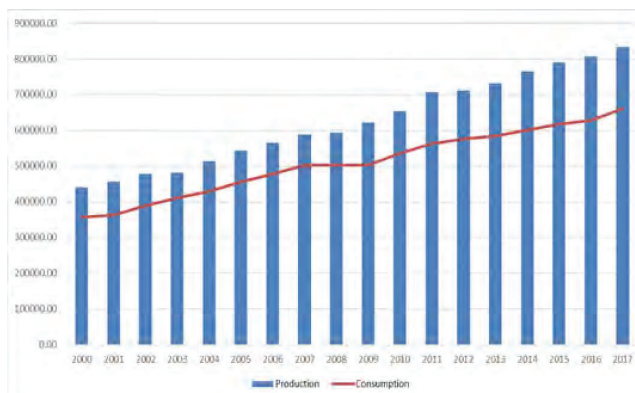


Figure 2.5. - Selected Indicators

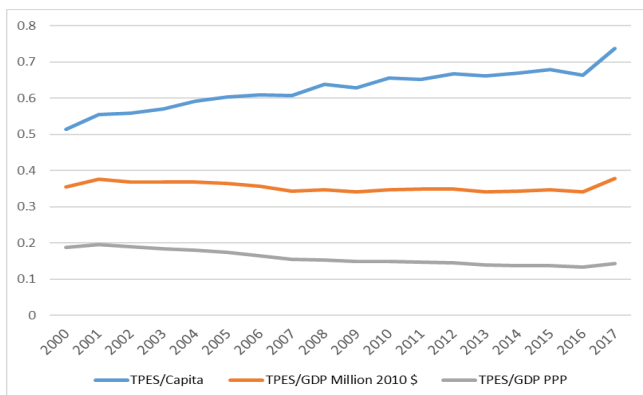
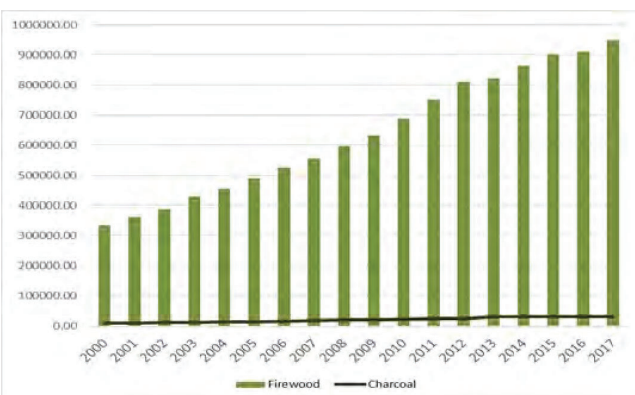


Figure 2.6. - Firewood and Charcoal Production (1000 tonnes)



*In these graphs, peat and oil shale are aggregated with coal where applicable.

Africa

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
		Crude Oil ¹	Oil Prod- ucts	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017											
PRIMARY SUPPLY	Production	376626.86	-	140917.09	175664.64	3964.87	10587.70	5061.75	435651.63	-	1148474.54
	Imports	29461.07	123414.06	6027.72	20586.35	-	-	-	2340.69	2937.58	184767.47
	Exports (-)	-292402.68	-27051.75	-42929.49	-76268.95	-	-	-	-4.35	-1724.77	-440381.99
	Int. Marine Bunkers (-)	-	35433.06	-	-	-	-	-	-	-	35433.06
	Int. Aviation Bunkers (-)	-	-4197.76	-	-	-	-	-	-	-	-4197.76
	ΔStock (+ draw, - build)	2914.60	508.34	595.38	-62.31	0.00	-	-	-	-	3956.01
	TPES ³	116599.85	128105.95	104610.7	119919.73	3964.87	10587.7	5061.75	437987.97	1212.81	928051.33
TRANSFORMATION	Transfers	-10735.55	-6923.01	-	-	-	-	-	-	-	-17658.56
	Statistical Difference	-3524.91	-18525.67	-1401491.55	-7314.53	0.00	0.00	0.00	28665.53	-2017.41	1398774.56
	Transformation	-101003.23	73462.47	-78444.73	-63187.68	-3964.87	-10587.7	-5061.75	-136214.57	71420.91	-253581.15
	Electricity Producers	-1191.52	-18792.89	-65946.92	-62866.88	-3964.87	-10587.7	-5061.75	-12527.94	71420.91	-109519.56
	Petroleum Refineries	-100321.05	92255.36	-	-	-	-	-	-	-	-8065.69
	Charcoal Plants	-	-	-	-	-	-	-	-123418.00	-	-123418.00
	Gas-to-Liquids	509.34	-	-	-320.80	-	-	-	-	-	188.54
	Coal-to-Liquids	0.00	-	-1711.59	-	-	-	-	-	-	-1711.59
	Blast Furnaces	-	-	-1361.71	-	-	-	-	-	-	-1361.71
	Other Transformation	0.00	0.00	-9424.51	0.00	-	-	-	-268.63	-	-9693.14
	Own Use ⁴	-500.76	-215.48	-11291.12	-9437.00	-	-	-	0.00	-4388.81	-25833.17
	Losses	-835.4	-82.45	-1401889.08	-1027.07	-	-	-	-6216.72	-9379.53	-1419430.25
	FINAL CONSUMPTION	TFC ⁵	0.00	175821.81	14477.32	38953.45	-	-	-	330170.3	56847.97
Industry		0.00	15566.22	9164.74	15174.19	-	-	-	17678.79	22831.36	80415.30
Transport		-	123270.97	2.55	544.18	-	-	-	3.68	496.17	124317.55
Households		-	14948.30	2662.25	9163.18	-	-	-	283640.52	20137.86	330552.11
Com. & Public		0.00	4056.62	1291.36	1069.52	-	-	-	28170.48	10581.91	45169.89
Agriculture/Forestry		0.00	4620.27	144.07	67.22	-	-	-	0.00	1545.95	6377.51
Others (Non Specified)		0.00	6987.50	4.09	9097.01	-	-	-	676.83	1254.72	18020.15
Non-Energy Use		0.00	6371.93	1208.26	3838.15	-	-	-	-	-	11418.34

1. Includes crude oil, NGL, refinery feedstock, additives and other hydrocarbons
2. Includes steam coal, coking coal, lignite and recovered coal
3. Total Primary Energy Supply
4. Energy industry own use
5. Total Final Consumption

Central Africa

Indicators

Figure 2.1. - Total Primary Energy Supply (ktoe)

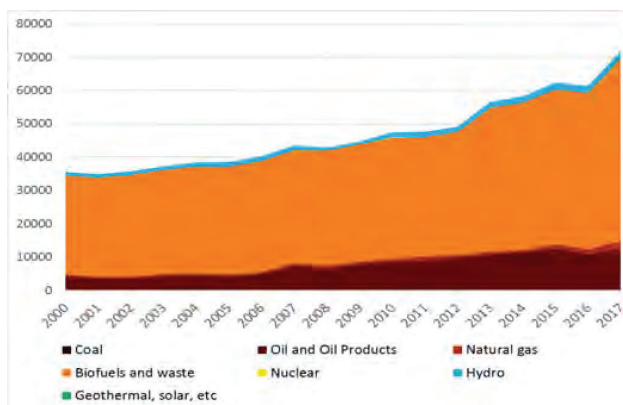


Figure 2.2. - Total Final Consumption (ktoe)

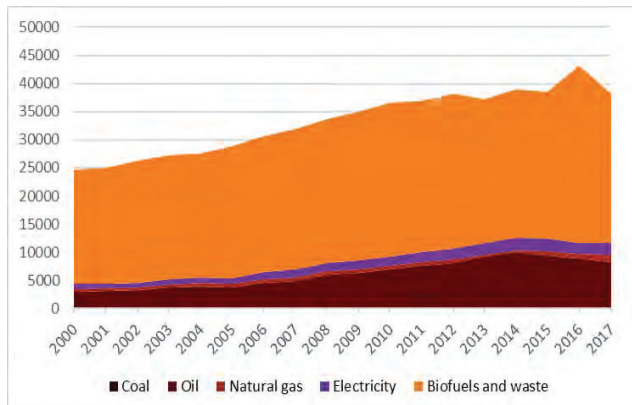


Figure 2.3. - Electricity Generation By Source (GWh)

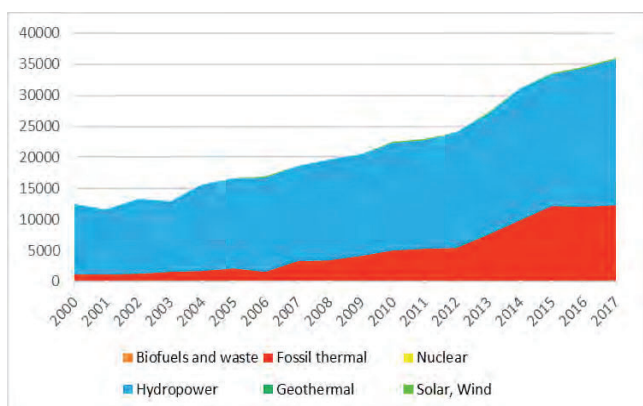


Figure 2.4. - Electricity Production and Consumption (GWh)

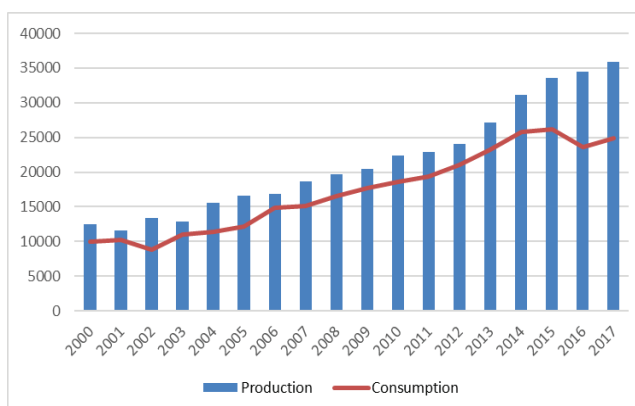


Figure 2.5. - Selected Indicators

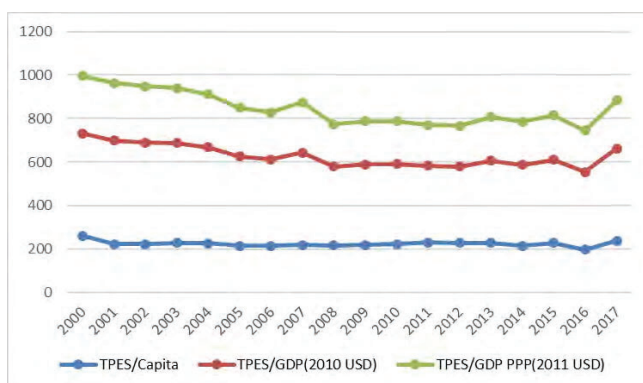
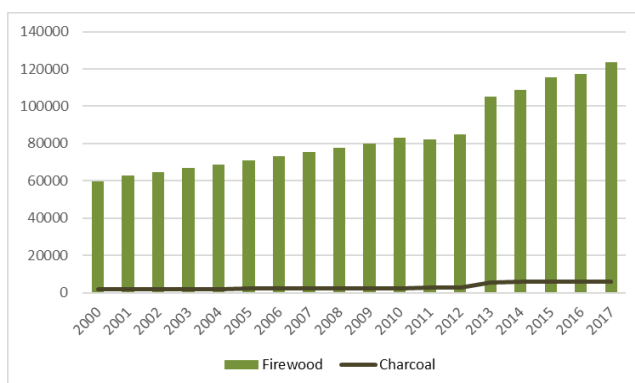


Figure 2.6. - Firewood and Charcoal Production (1000 tonnes)



Central Africa

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	119909.77	0.00	0.00	4088.93	0.00	2018.53	7.81	57823.28	0.00	183848.32
	Imports	1240.47	6194.37	0.00	0.00	0.00	0.00	0.00	0.00	115.07	7549.91
	Exports (-)	-111640.12	-2522.30	0.00	-1538.00	0.00	0.00	0.00	0.00	-7.21	-115707.63
	Int. Marine Bunkers (-)	0.00	-450.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-450.40
	Int. Aviation Bunkers (-)	0.00	-157.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-157.47
	ΔStock (+ draw, - build)	77.51	38.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.69
	TPES ³	9587.63	3102.38	0.00	2550.93	0.00	2018.53	7.81	57823.28	107.86	75198.42
TRANSFORMATION	Transfers	-756.12	797.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.48
	Statistical Difference	-2146.82	1094.26	0.00	-107.77	0.00	0.00	0.00	9941.38	-388.25	8391.66
	Transformation	-6683.56	4310.46	0.00	-1255.80	0.00	2018.53	-7.81	-31541.04	3153.81	-34042.47
	Electricity Producers	0.00	-1959.63	0.00	-1255.80	0.00	2018.53	-7.81	-9553.57	3153.81	-11641.53
	Petroleum Refineries	-6683.56	6270.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-413.47
	Charcoal Plants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-21987.47	0.00	-21987.47
	Gas-to-Liquids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FINAL CONSUMPTION	Coal-to-Liquids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Blast Furnaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other Transformation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Own Use	0.00	-132.61	0.00	-117.04	0.00	0.00	0.00	0.00	-65.72	-315.37
	Losses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-609.83	-609.83
	TFC	0.00	9172.08	0.00	1070.32	0.00	0.00	0.00	36223.62	2197.87	48663.89
	Industry	0.00	1035.88	0.00	1070.32	0.00	0.00	0.00	1973.21	1075.47	5154.88
Transport	0.00	5981.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5981.48	
Households	0.00	834.96	0.00	0.00	0.00	0.00	0.00	27966.17	800.85	29601.98	
Com. & Public	0.00	1045.75	0.00	0.00	0.00	0.00	0.00	6284.24	225.41	7555.40	
Agriculture/Forestry	0.00	11.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.53	
Others (Non Specified)	0.00	33.80	0.00	0.00	0.00	0.00	0.00	0.00	96.14	129.94	
Non-Energy Use	0.00	228.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	228.68	

Eastern Africa

Indicators

Figure 2.1. - Total Primary Energy Supply (ktoe)

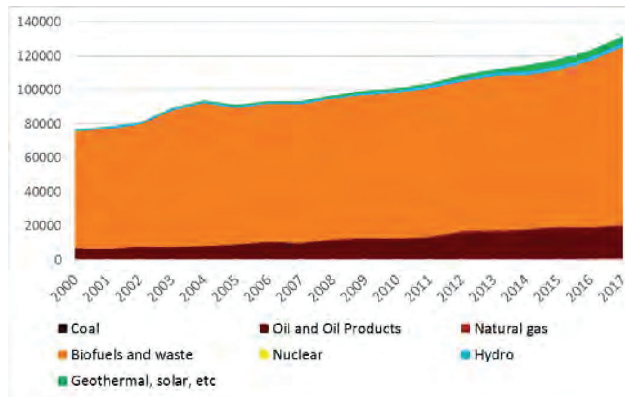


Figure 2.2. - Total Final Consumption (ktoe)

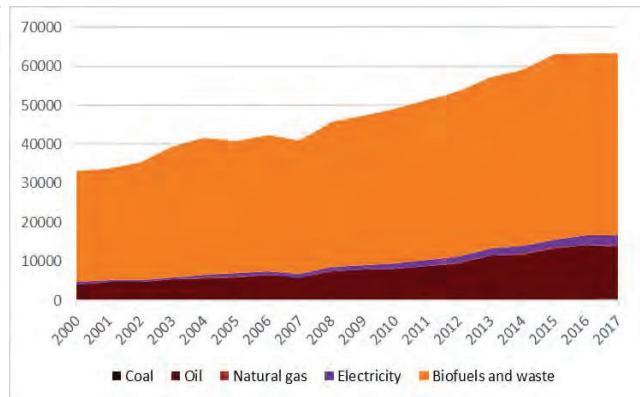


Figure 2.3. - Electricity Generation By Source (GWh)

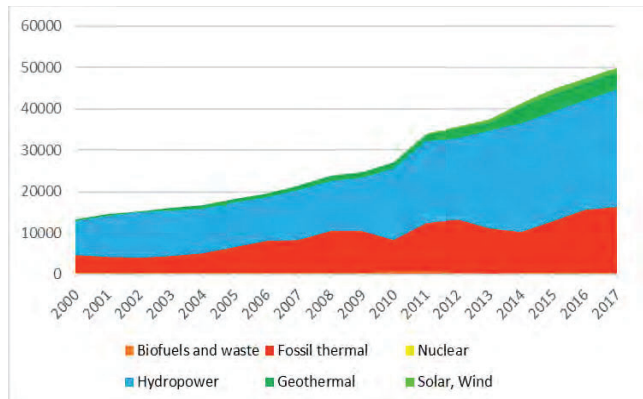


Figure 2.4. - Electricity Production and Consumption (GWh)

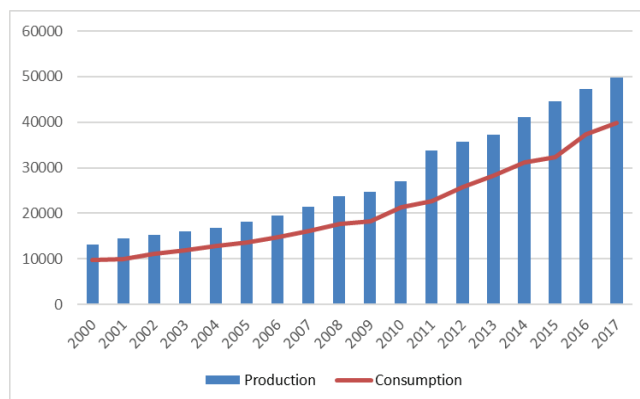


Figure 2.5. - Selected Indicators

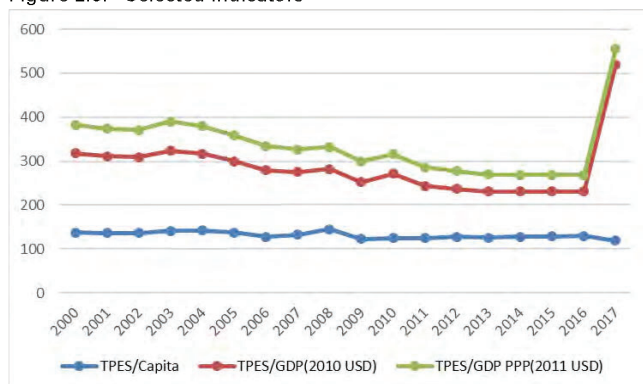
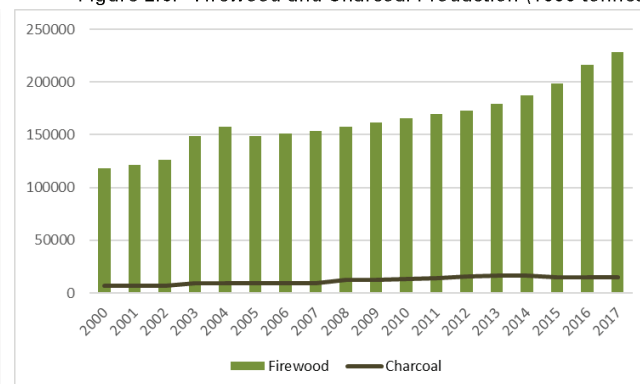


Figure 2.6. - Firewood and Charcoal Production (1000 tonnes)



Eastern Africa

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil	Oil Products	Coal	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	11316.59	0.00	291.16	695.23	0.00	2447.32	3763.29	102740.36	0.00	121253.95
	Imports	409.78	15113.93	539.10	0.00	0.00	0.00	0.00	2340.69	70.42	18473.92
	Exports (-)	-5957.92	-53.62	0.00	0.00	0.00	0.00	0.00	0.00	-42.37	-6053.91
	Int. Marine Bunkers (-)	0.00	-91.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-91.87
	Int. Aviation Bunkers (-)	0.00	-1097.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1225.03
	ΔStock (+ draw, - build)	326.86	10.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	337.09
	TPES ³	6095.31	13753.64	830.26	695.23	0.00	2447.32	3763.29	105081.05	28.05	132694.15
TRANSFORMATION	Transfers	0.00	-51.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-51.06
	Statistical Difference	54.73	1307.77	5.68	-543.25	0.00	0.00	0.00	21558.79	-107.64	22270.39
	Transformation	-6084.02	3164.95	0.00	0.00	0.00	2447.32	-3758.73	-45428.30	4287.91	-50270.07
	Electricity Producers	-1031.01	-1879.78	0.00	0.00	0.00	2447.32	-3763.29	-1540.08	4287.91	-6373.57
	Petroleum Refineries	-5053.01	5044.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-8.29
	Charcoal Plants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-43888.22	0.00	-43588.22
	Gas-to-Liquids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FINAL CONSUMPTION	Coal-to-Liquids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Blast Furnaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other Transformation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Own Use	-65.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-57.17	-122.82
	Losses	-0.37	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	-729.12	-721.13
	TFC	0.00	18175.19	830.26	151.98	0.00	0.00	0.00	81211.54	3422.02	103790.99
	Industry	0.00	1790.75	830.26	151.98	0.00	0.00	0.00	6085.99	1158.23	10017.21
Transport	0.00	14180.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14180.23	
Households	0.00	1096.47	0.00	0.00	0.00	0.00	0.00	65567.71	1492.82	68157.00	
Com. & Public	0.00	189.62	0.00	0.00	0.00	0.00	0.00	8955.95	653.89	9799.46	
Agriculture/Forestry	0.00	221.09	0.00	0.00	0.00	0.00	0.00	0.00	99.57	320.66	
Others (Non Specified)	0.00	240.14	0.00	0.00	0.00	0.00	0.00	601.89	17.51	859.54	
Non-Energy Use	0.00	456.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	456.89	

Northern Africa

Indicators

Figure 2.1. - Total Primary Energy Supply (ktoe)

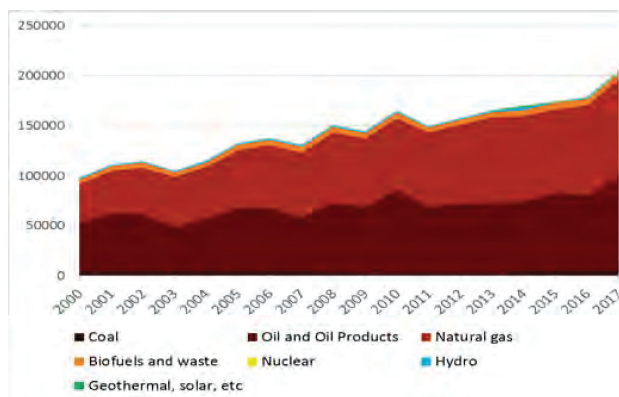


Figure 2.2. - Total Final Consumption (ktoe)

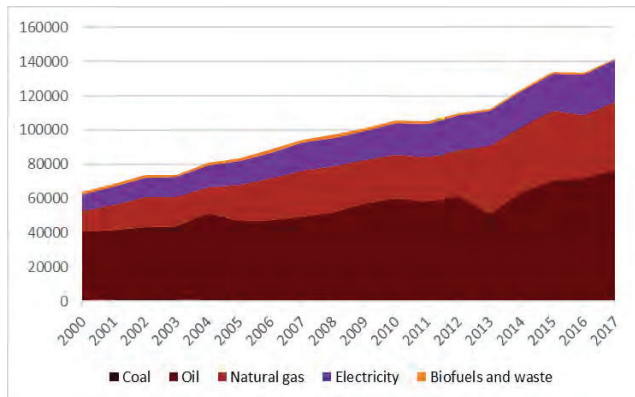


Figure 2.3. - Electricity Generation By Source (GWh)

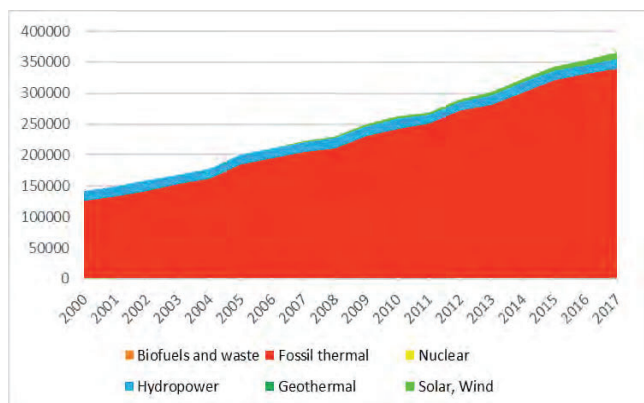


Figure 2.4. - Electricity Production and Consumption (GWh)

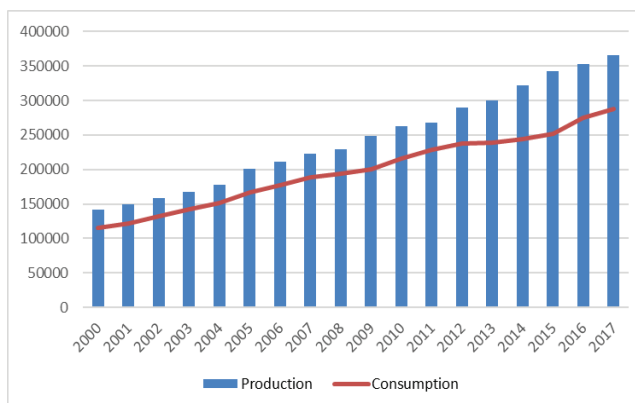


Figure 2.5. - Selected Indicators

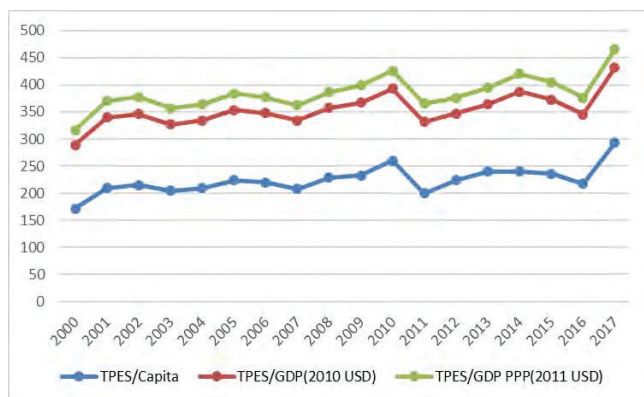
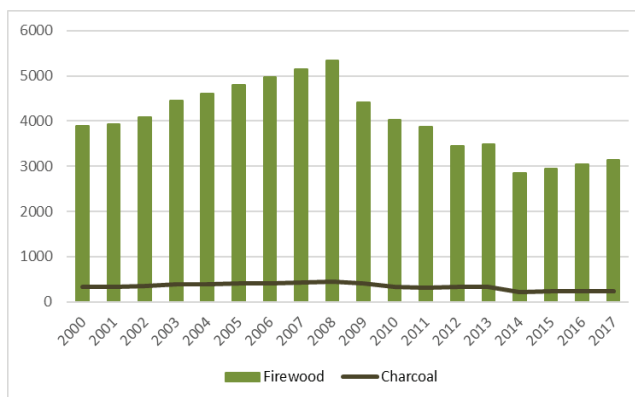


Figure 2.6. - Firewood and Charcoal Production (1000 tonnes)



Northern Africa

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil	Oil Products	Coal	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	134773.67	0.00	0.00	127567.94	0.00	1284.01	590.73	2305.00	0.00	266521.35
	Imports	830.56	47812.20	3922.43	16693.85	0.00	0.00	0.00	0.00	638.03	69897.07
	Exports (-)	-68711.40	-16972.02	0.00	-49074.92	0.00	0.00	0.00	0.00	-186.20	-134944.54
	Int. Marine Bunkers (-)	0.00	-485.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-485.99
	Int. Aviation Bunkers (-)	0.00	-989.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-989.75
	ΔStock (+ draw, - build)	2085.88	399.35	-20.23	-62.31	0.00	0.00	0.00	0.00	0.00	2402.69
	TPES ³	68978.71	29763.79	3902.20	95124.56	0.00	1284.01	590.73	2305.00	451.83	202400.83
TRANSFORMATION	Transfers	-9979.44	9875.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-104.25
	Statistical Difference	-1216.02	-455.89	-736704.33	-6442.23	0.00	0.00	0.00	367.82	-1397.38	-745848.05
	Transformation	-56835.61	37983.01	2134729.64	-9414.56	0.00	1284.01	-590.73	-607.57	31250.98	2093754.91
	Electricity Producers	0.00	-11906.24	-3432.50	-34969.36	0.00	1284.01	-590.73	0.00	31250.98	-36532.50
	Petroleum Refineries	-57344.95	49889.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-7455.70
	Charcoal Plants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-607.57	0.00	-607.57
	Gas-to-Liquids	509.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	188.54
	Coal-to-Liquids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Blast Furnaces	0.00	0.00	-123.64	0.00	0.00	0.00	0.00	0.00	0.00	-123.64
	Other Transformation	0.00	0.00	2138285.78	0.00	0.00	0.00	0.00	0.00	0.00	2138285.78
FINAL CONSUMPTION	Own Use	411.16	-44.66	0.00	-189.74	0.00	0.00	0.00	0.00	-1191.07	-5919.34
	Losses	-516.44	-75.00	1401885.93	-54.55	0.00	0.00	0.00	0.00	-4356.14	-1407148.37
	TFC	0.00	77046.44	41.58	17665.84	0.00	0.00	0.00	2065.25	24758.21	136423.53
	Industry	0.00	6157.34	27.59	5847.21	0.00	0.00	0.00	64.58	6911.73	22995.85
	Transport	0.00	50023.02	0.00	533.15	0.00	0.00	0.00	0.00	182.50	50747.09
	Households	0.00	9633.30	0.00	1850.67	0.00	0.00	0.00	1372.90	10504.43	30673.26
	Com. & Public	0.00	881.08	0.00	165.96	0.00	0.00	0.00	627.77	5474.46	8051.06
	Agriculture/Forestry	0.00	2140.57	0.00	22.59	0.00	0.00	0.00	0.00	657.95	2865.74
	Others (Non Specified)	0.00	5374.74	0.00	9097.01	0.00	0.00	0.00	0.00	1027.14	15498.89
Non-Energy Use	0.00	2836.39	0.00	76.00	0.00	0.00	0.00	0.00	0.00	5591.64	

Southern Africa

Indicators

Figure 2.1. - Total Primary Energy Supply (ktoe)

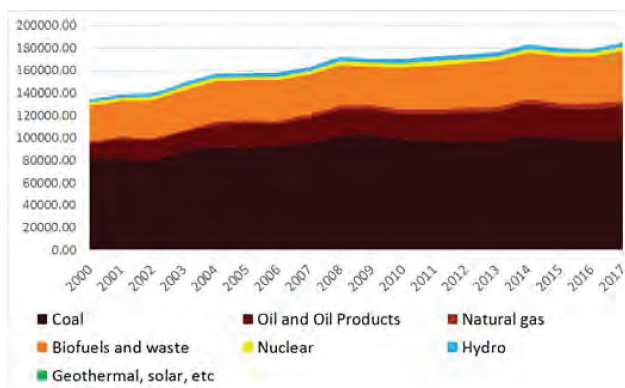


Figure 2.2. - Total Final Consumption (ktoe)

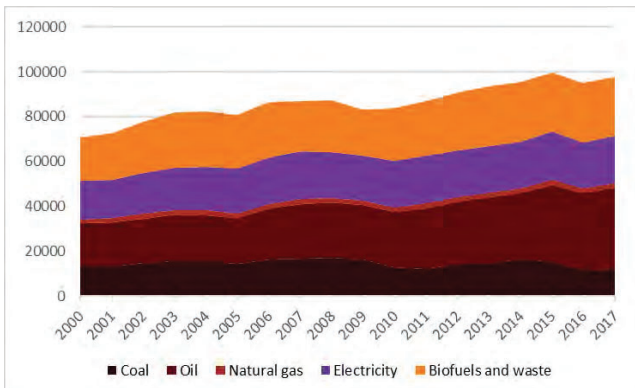


Figure 2.3. - Electricity Generation By Source (GWh)

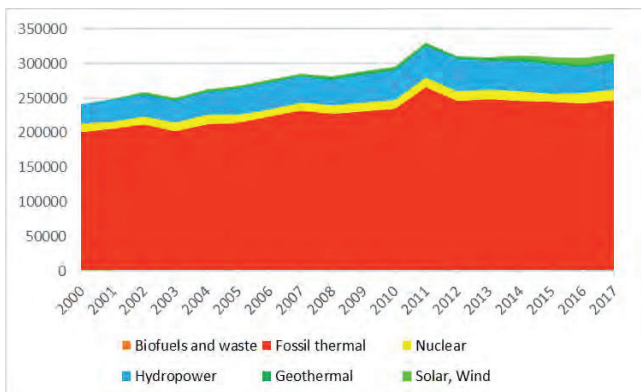


Figure 2.4. - Electricity Production and Consumption (GWh)

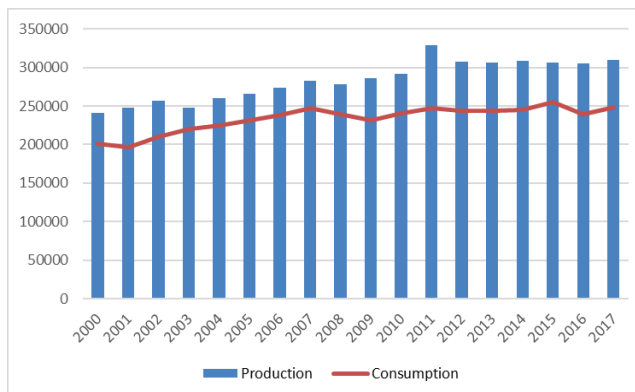


Figure 2.5. - Selected Indicators

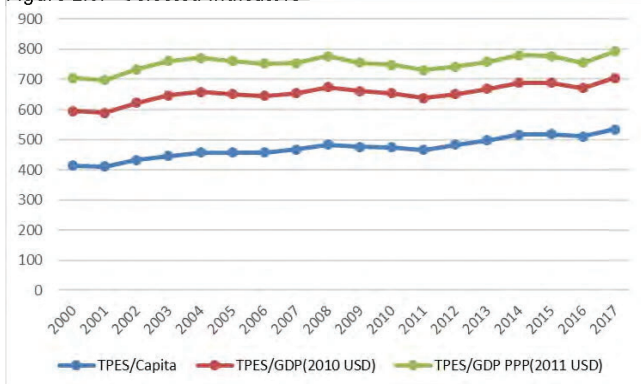
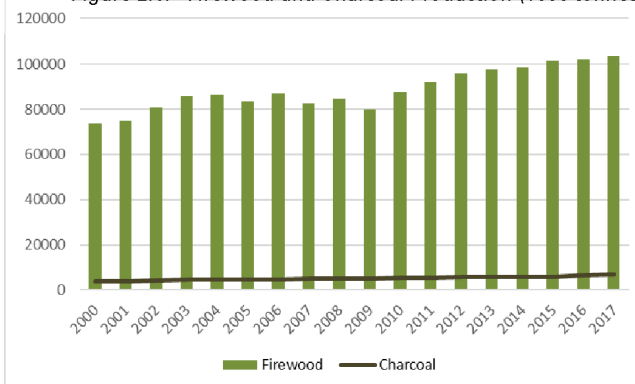


Figure 2.6. - Firewood and Charcoal Production (1000 tonnes)



Southern Africa

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil	Oil Products	Coal	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	210.71	0.00	140483.40	5055.71	3964.87	3404.62	612.69	43928.89	0.00	197660.89
	Imports	22619.57	16278.72	1253.01	3626.82	0.00	0.00	0.00	0.00	1662.25	45440.37
	Exports (-)	0.00	-4278.98	-42929.48	-3416.18	0.00	0.00	0.00	-4.35	-1358.82	-51987.81
	Int. Marine Bunkers (-)	0.00	-5042.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-5042.76
	Int. Aviation Bunkers (-)	0.00	-448.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-448.29
	ΔStock (+ draw, - build)	93.83	-140.69	615.73	0.00	0.00	0.00	0.00	0.00	0.00	568.87
	TPES ³	22924.11	6368.00	99422.66	5266.35	3964.87	3404.62	612.69	43923.87	303.43	186191.27
TRANSFORMATION	Transfers	0.00	5841.26	0.00	0.00	0.00	0.00	0.00	0.67	0.00	5841.26
	Statistical Difference	-343.58	2936.38	-397.44	-11.72	0.00	0.00	0.00	8957.77	107.29	11251.65
	Transformation	-22001.52	21046.94	-74056.36	-3208.87	-3964.87	2331.17	-612.43	-16575.74	25499.49	-75189.53
	Electricity Producers	-579.01	-301.75	-62400.98	-3208.87	-3964.87	3404.62	-1821.57	-4349.90	26634.97	-52190.72
	Petroleum Refineries	-22001.52	21622.03	-317.26	0.00	0.00	1073.45	-0.26	0.00	1132.48	-637.98
	Charcoal Plants	-579.01	549.86	0.00	0.00	0.00	0.00	0.00	-15218.12	0.00	-15685.99
	Gas-to-Liquids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-3431.00	0.00	-4929.49
	Coal-to-Liquids	0.00	0.00	-1711.59	0.00	0.00	0.00	0.00	0.00	0.00	-1357.68
	Blast Furnaces	0.00	0.00	-1144.58	0.00	0.00	0.00	0.00	0.00	0.00	-9116.47
	Other Transformation	0.00	0.00	-9116.47	0.00	0.00	0.00	0.00	0.00	0.00	-43.92
FINAL CONSUMPTION	Own Use	0.00	-16.55	-11291.12	0.00	0.00	0.00	0.00	0.00	-2913.32	-14177.07
	Losses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-2555.45	-2555.45
	TFC	0.00	35281.34	13073.72	2045.76	0.00	0.00	0.00	26765.25	20203.28	97369.35
	Industry	0.00	4634.28	8186.63	1931.49	0.00	0.00	0.00	9593.97	12888.68	37235.05
	Transport	0.00	25257.31	154.20	2.61	0.00	0.00	0.00	686.89	894.93	26995.94
	Households	0.00	1356.80	2662.25	0.55	0.00	0.00	0.00	18786.77	4495.19	27301.56
	Com. & Public	0.00	267.93	1291.35	1.77	0.00	0.00	0.00	10608.31	3197.88	13751.67
	Agriculture/Forestry	0.00	2472.48	7.16	0.00	0.00	0.00	0.00	851.02	791.78	4122.44
	Others (Non Specified)	0.00	1128.36	141.01	0.00	0.00	0.00	0.00	74.50	81.47	1425.34
	Non-Energy Use	0.00	2776.76	1208.26	109.34	0.00	0.00	0.00	0.00	0.00	4094.36

Western Africa

Indicators

Figure 2.1. - Total Primary Energy Supply (ktoe)

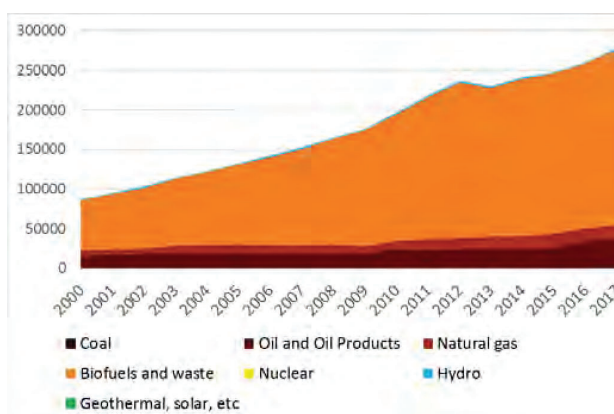


Figure 2.2. - Total Final Consumption (ktoe)

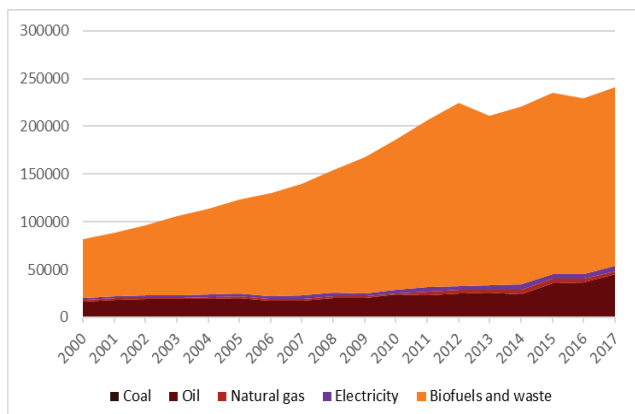


Figure 2.3. - Electricity Generation By Source (GWh)

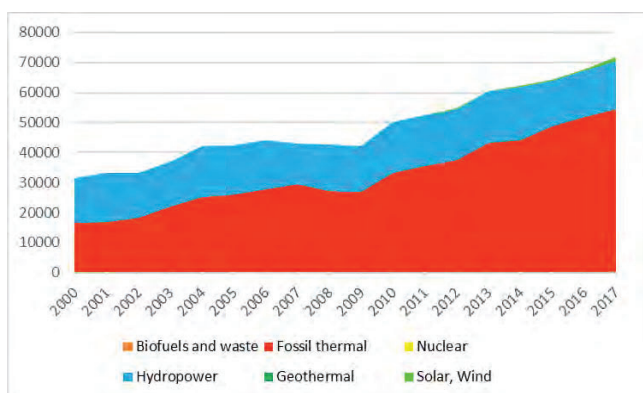


Figure 2.4. - Electricity Production and Consumption (GWh)

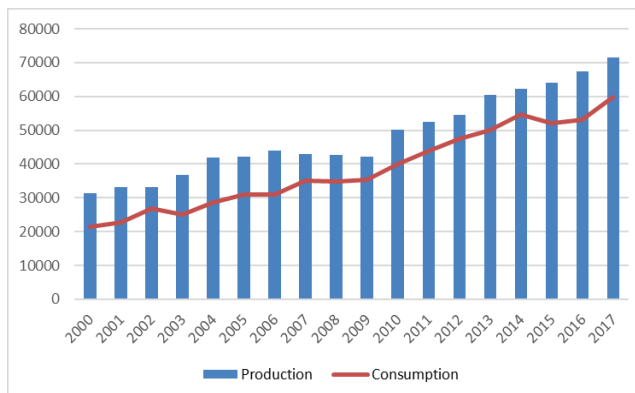


Figure 2.5. - Selected Indicators

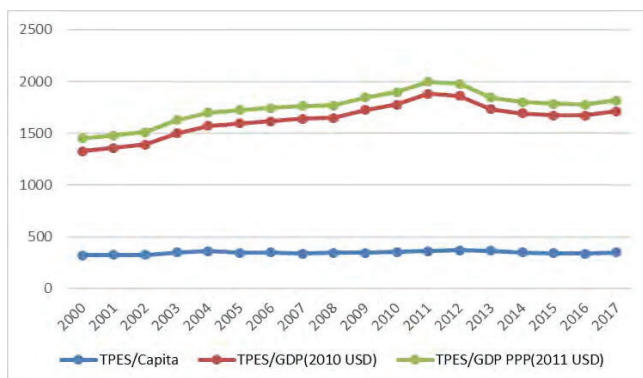
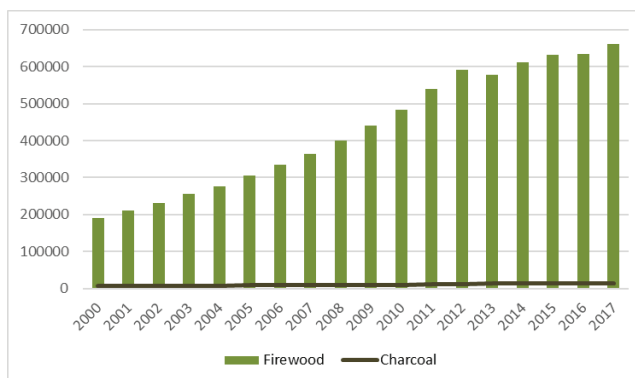


Figure 2.6. - Firewood and Charcoal Production (1000 tonnes)



Western Africa

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil	Oil Products	Coal	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	474308.25	0.00	140772.00	212460.76	3964.87	10615.02	5143.47	770232.78	0.00	1617497.15
	Imports	33185.36	163880.61	6340.90	20650.03	0.00	0.00	0.00	2340.69	3358.74	229756.33
	Exports (-)	-390585.64	-29596.69	-42929.49	-98508.79	0.00	0.00	0.00	-4.35	-1831.94	-456456.90
	Int. Marine Bunkers (-)	0.00	36290.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36290.25
	Int. Aviation Bunkers (-)	0.00	-4718.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-4718.93
	ΔStock (+ draw, - build)	2621.36	712.61	595.25	-62.31	0.00	0.00	0.00	0.00	0.00	3866.91
	TPES ³	119529.33	166567.85	104778.66	134539.69	3964.87	10615.02	5143.47	772569.12	1526.80	1319234.81
	Transfers	-10735.55	-30309.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-41044.57
TRANSFORMATION	Statistical Difference	-2883.99	-1935.39	-737099.56	-6979.46	0.00	0.00	0.00	8952.43	-2136.97	-742082.95
	Transformation	-104255.04	77115.29	2059937.12	-70148.11	-3964.87	10615.02	-5143.47	-186262.59	74412.58	1831075.89
	Electricity Producers	-160.51	-19961.85	-66060.35	-69824.31	-3964.87	10615.02	-5143.47	-39294.67	74412.58	-140615.47
	Petroleum Refineries	-104603.87	97077.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-7526.73
	Charcoal Plants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-146430.66	0.00	-146430.66
	Gas-to-Liquids	509.34	0.00	0.00	-320.80	0.00	0.00	0.00	0.00	0.00	188.54
	Coal-to-Liquids	0.00	0.00	-1711.59	0.00	0.00	0.00	0.00	0.00	0.00	-1711.59
	Blast Furnaces	0.00	0.00	-1455.20	0.00	0.00	0.00	0.00	0.00	0.00	-1455.20
FINAL CONSUMPTION	Other Transformation	0.00	0.00	2129164.26	0.00	0.00	0.00	0.00	-537.26	-7.91	2128627.00
	Own Use	-500.76	-237.15	-11291.12	-14436.16	0.00	0.00	0.00	0.00	-4521.41	-30972.78
	Losses	-1153.99	-89.79	-1401892.24	-1027.07	0.00	0.00	0.00	-6246.94	-9920.83	-1420330.86
FINAL CONSUMPTION	TFC	0.00	211111.78	14432.87	41948.89	0.00	0.00	0.00	594721.71	59373.98	921589.23
	Industry	0.00	18077.61	9120.29	17196.07	0.00	0.00	0.00	19248.26	23447.76	87089.99
	Transport	0.00	153368.67	2.55	544.18	0.00	0.00	0.00	3.68	496.17	154415.25
	Households	0.00	16839.60	2662.25	9163.18	0.00	0.00	0.00	541547.40	21304.39	591516.82
	Com. & Public	0.00	5144.70	1291.36	1069.52	0.00	0.00	0.00	33245.54	11617.38	52088.93
	Agriculture/Forestry	0.00	4634.93	144.07	67.22	0.00	0.00	0.00	0.00	1486.20	6332.42
	Others (Non Specified)	0.00	6860.69	4.09	9097.01	0.00	0.00	0.00	676.83	1301.65	17940.27
	Non-Energy Use	0.00	6185.22	1208.26	4811.71	0.00	0.00	0.00	0.00	0.00	12205.19

INDICATORS AND ENERGY BALANCES OF AFRICAN COUNTRIES

Algeria

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

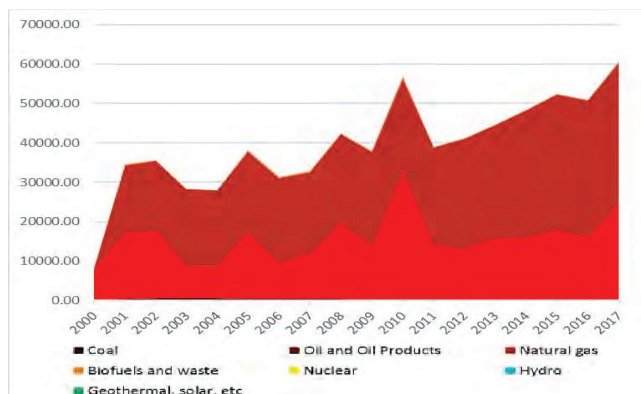


Figure 3.2. - Total Final Consumption (ktoe)

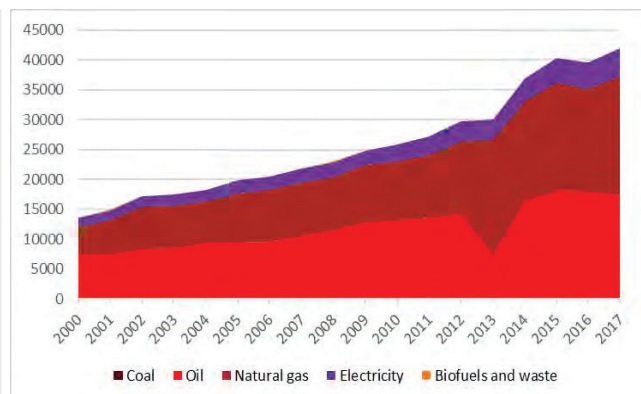


Figure 3.3. - Electricity Generation By Source (GWh)

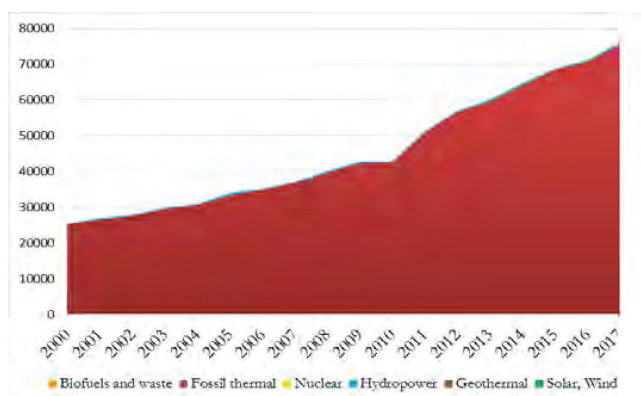


Figure 3.4. - Electricity Production and Consumption (GWh)

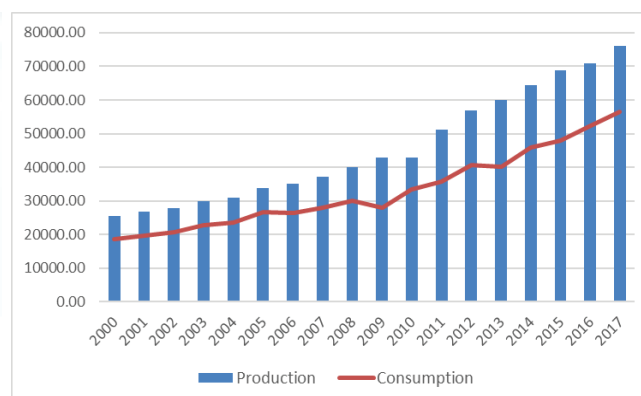


Figure 3.5. - Selected Indicators

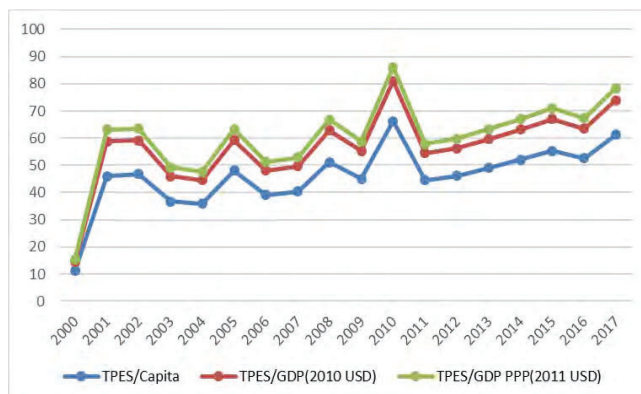
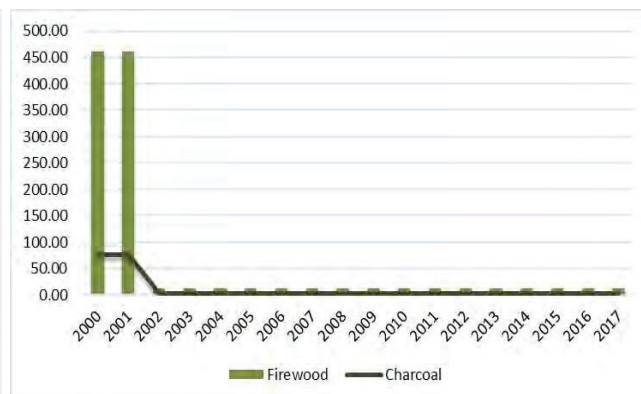


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Algeria

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017		Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
PRIMARY SUPPLY	Production	63353.51	-	0.00	81336.69	0.00	4.84	49.79	7.02	-	144751.85
	Imports	237.54	3303.03	138.45	0.00	-	-	-	-	46.16	3725.18
	Exports (-)	-26967.87	-15130.14	0.00	-45471.55	-	-	-	-	-75.63	-87645.19
	Int. Marine Bunkers (-)	-	-231.72	-	-	-	-	-	-	-	-231.72
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	-322.62	163.49	11.75	-62.31	-	-	-	-	-	-209.69
	TPES ³	36300.56	-11895.34	150.20	35802.83	0.00	4.84	49.79	7.02	-29.47	60390.43
TRANSFORMATION	Transfers	-9130.15	9015.33	-	-	-	-	-	-	-	-114.82
	Statistical Difference	152.48	838.06	-736704.33	-	0.00	0.00	0.00	2.94	0.03	-735710.82
	Transformation	-26385.27	19968.80	2138467.65	-	0.00	-4.84	-49.79	-5.48	6536.32	2122605.95
	Electricity Producers	0.00	-234.76	0.00	-	0.00	-4.84	-49.79	0.00	6536.32	-9353.71
	Petroleum Refineries	-26894.61	20203.56	-	-	-	-	-	-	-	-6691.05
	Charcoal Plants	-	-	-	-	-	-	-	-5.48	-	-5.48
	Gas-to-Liquids	509.34	-	-	-	-	-	-	-	-	188.54
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	-123.64	-	-	-	-	-	-	-123.64
	Other Transformation	0.00	0.00	2138591.29	-	-	-	-	0.00	-	2138591.29
FINAL CONSUMPTION	Own Use ⁴	421.18	-14.69	0.00	-	-	-	-	0.00	-724.84	-5223.38
	Losses	-516.44	-75.00	-1401885.93	-	-	-	-	0.00	-934.57	-1404384.45
	TFC ⁵	0.00	17837.16	27.59	-	-	-	-	4.48	4847.47	37562.91
Industry	0.00	730.51	27.59	-	-	-	-	0.00	1735.27	6393.53	
Transport	-	14495.56	0.00	-	-	-	-	0.00	91.93	14595.91	
Households	-	1597.45	0.00	-	-	-	-	3.08	1872.40	10784.89	
Com. & Public	0.00	537.72	0.00	-	-	-	-	1.40	1017.08	2457.99	
Agriculture/Forestry	0.00	31.33	0.00	-	-	-	-	0.00	130.79	206.75	
Others (Non Specified)	0.00	0.00	0.00	-	-	-	-	0.00	0.00	0.00	
Non-Energy Use	0.00	444.59	0.00	-	-	-	-	-	-	3123.84	

Angola

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

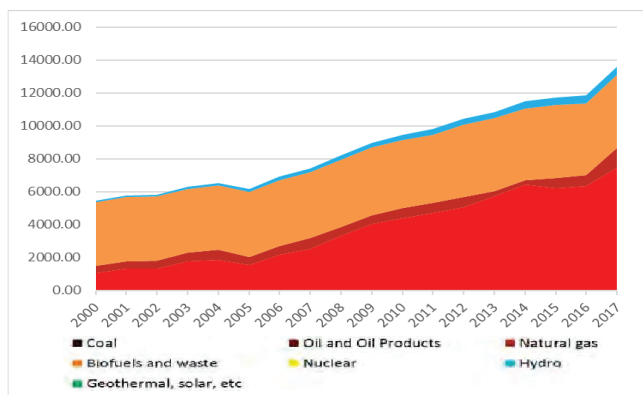


Figure 3.2. - Total Final Consumption (ktoe)

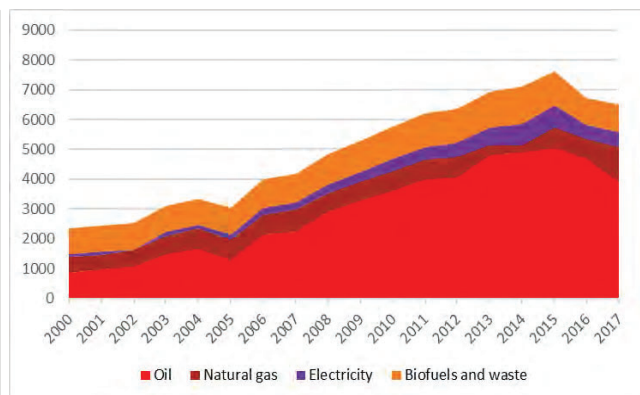


Figure 3.3. - Electricity Generation By Source (GWh)

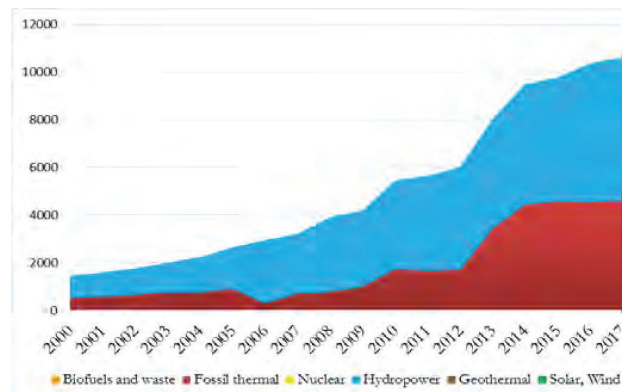


Figure 3.4. - Electricity Production and Consumption (GWh)

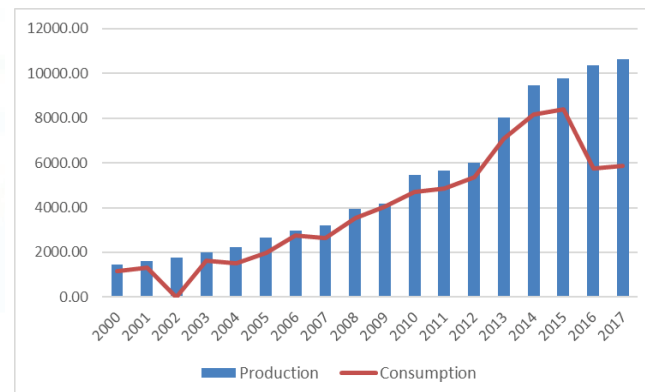


Figure 3.5. - Selected Indicators

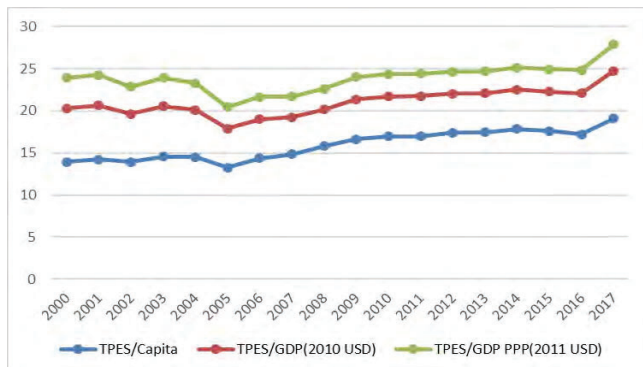
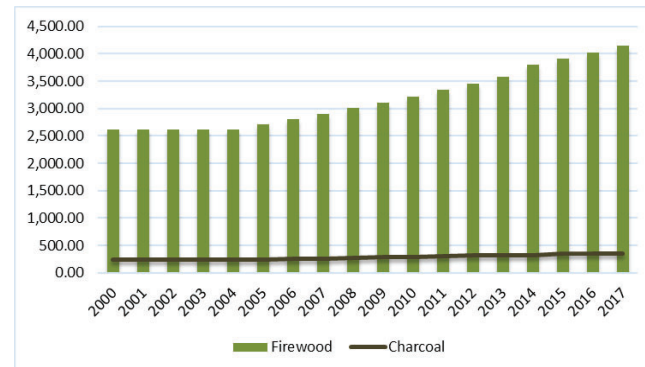


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Angola

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil	Oil Products	Coal	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	76747.61	-	0.00	2532.24	0.00	515.19	0.00	4446.27	-	84241.31
	Imports	0.00	3847.72	0.00	0.00	-	-	-	0.00	0.00	3847.72
	Exports (-)	-71213.43	-1488.82	0.00	-1347.56	-	-	-	0.00	0.00	-74049.81
	Int. Marine Bunkers (-)	-	-286.91	-	-	-	-	-	-	-	-286.91
	Int. Aviation Bunkers (-)	-	-156.54	-	-	-	-	-	-	-	-156.54
	ΔStock (+ draw, - build)	0.00	14.97	0.00	0.00	-	-	-	-	-	14.97
	TPES ³	5534.18	1930.42	0.00	1184.68	0.00	515.19	0.00	4446.27	0.00	13610.74
TRANSFORMATION	Transfers	-756.12	797.60	-	-	-	-	-	-	-	41.48
	Statistical Difference	-1776.13	835.7	0.00	-0.00	0.00	0.00	0.00	514.71	-286.47	-712.20
	Transformation	-3001.93	1581.01	0.00	0.00	0.00	-515.19	0.00	-2128.39	912.76	-3151.74
	Electricity Producers	0.00	-1023.91	0.00	0.00	0.00	-515.19	0.00	-1146.46	912.76	-1772.80
	Petroleum Refineries	-3001.93	2604.92	-	-	-	-	-	-	-	-397.01
	Charcoal Plants	-	-	-	-	-	-	-	-981.93	-	-981.93
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	-117.04	-	-	-	0.00	-22.82	-139.86
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-100.30	-100.30
	TFC	0.00	5144.73	0.00	1067.63	-	-	-	2832.59	503.17	9548.12
	Industry	0.00	587.83	0.00	1067.63	-	-	-	1910.77	262.50	3828.73
	Transport	-	2785.07	0.00	0.00	-	-	-	0.00	0.00	2785.07
	Households	-	562.63	0.00	0.00	-	-	-	746.96	240.67	1550.26
	Com. & Public	0.00	983.95	0.00	0.00	-	-	-	174.86	0.00	1158.81
	Agriculture/Forestry	0.00	10.68	0.00	0.00	-	-	-	0.00	0.00	10.68
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	214.57	0.00	0.00	-	-	-	-	-	214.57	

Benin

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

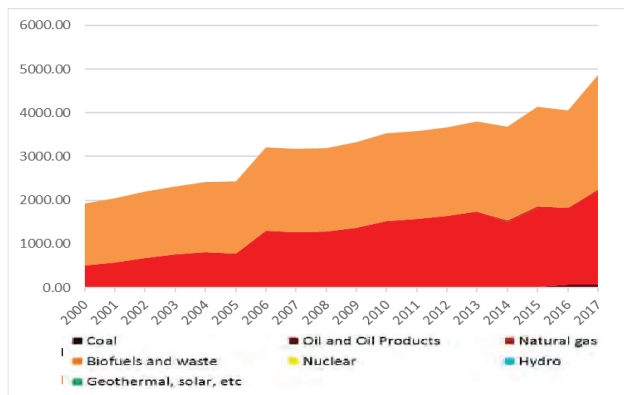


Figure 3.2. - Total Final Consumption (ktoe)

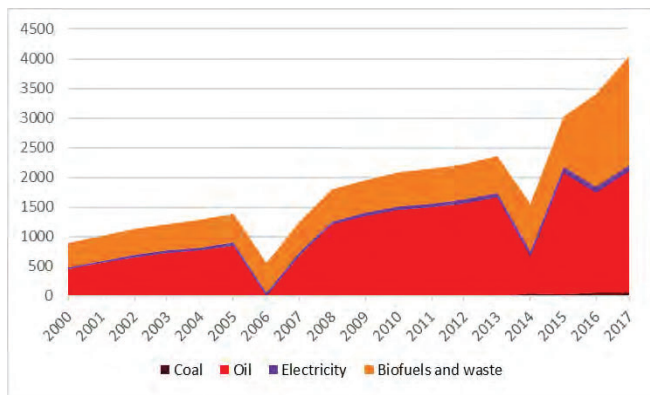


Figure 3.3. - Electricity Generation By Source (GWh)

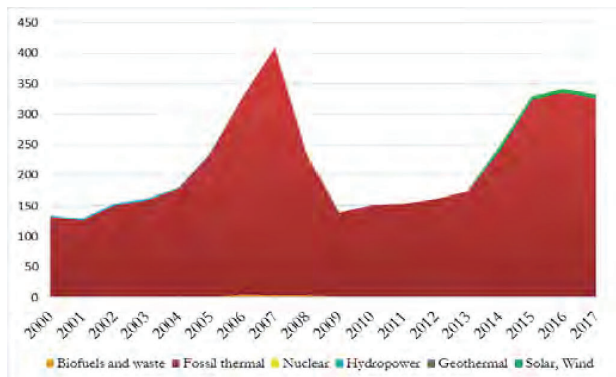


Figure 3.4. - Electricity Production and Consumption (GWh)

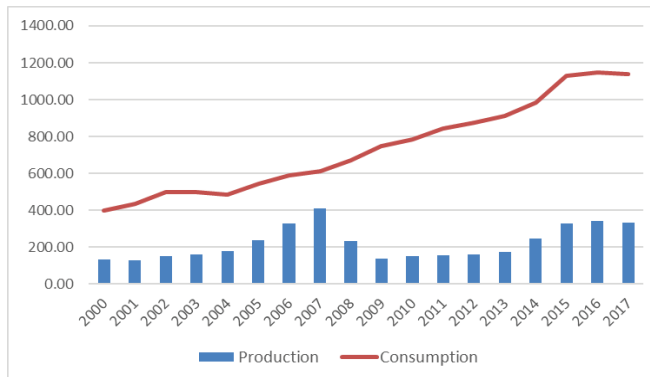


Figure 3.5. - Selected Indicators

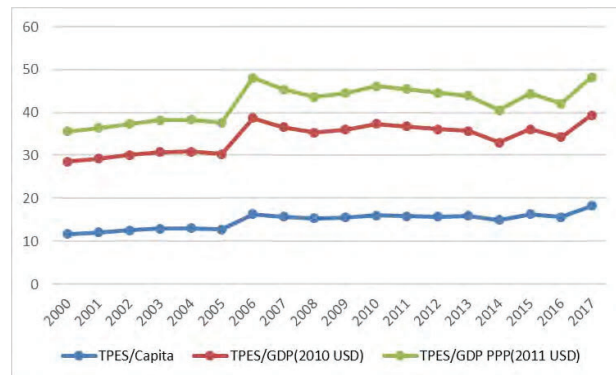
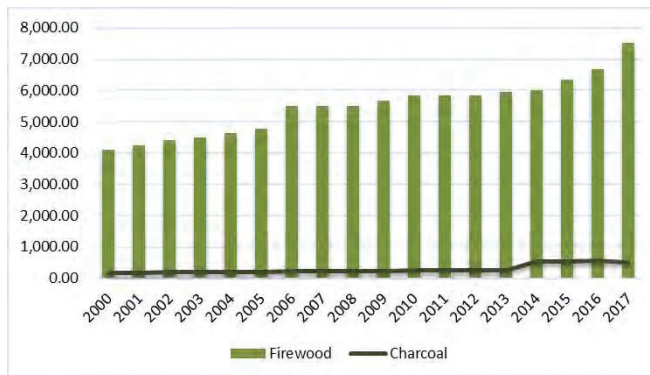


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Benin

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil	Oil Products	Coal	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	49.75	0.00	0.10	0.46	2617.66	-	2667.97
Imports	0.00	2139.96	0.00	0.00	-	-	-	0.00	95.56	2235.52
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	-1.34	-	-	-	-	-	-	-	-1.34
Int. Aviation Bunkers (-)	-	-31.16	-	-	-	-	-	-	-	-31.16
ΔStock (+ draw, - build)	0.00	36.41	0.00	0.00	-	-	-	-	-	36.41
TPES³	0.00	2143.87	0.00	49.75	0.00	0.10	0.46	2617.66	95.56	4907.40
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	-29.42	0.00	0.00	0.00	0.00	0.00	745.18	-0.48	715.27
TRANSFORMATION	0.00	-39.99	0.00	-49.75	0.00	-0.10	-0.46	-1501.2	28.47	-1563.03
Electricity Producers	0.00	-39.99	0.00	-46.75	0.00	-0.10	-0.46	0.00	28.47	-61.83
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-1501.20	-	-1501.2
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	-0.82	0.00	0.00	-	-	-	0.00	-25.58	-26.4
FINAL CONSUMPTION	0.00	2073.64	0.00	0.00	-	-	-	1861.64	97.96	4033.24
Industry	0.00	11.3	0.00	0.00	-	-	-	12.6	21.98	45.88
Transport	-	2014.29	0.00	0.00	-	-	-	0.00	0.00	2014.29
Households	-	32.86	0.00	0.00	-	-	-	1540.87	32.35	1606.08
Com. & Public	0.00	2.27	0.00	0.00	-	-	-	308.17	42.59	353.03
Agriculture/Forestry	0.00	12.92	0.00	0.00	-	-	-	-	1.04	13.96
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Botswana

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

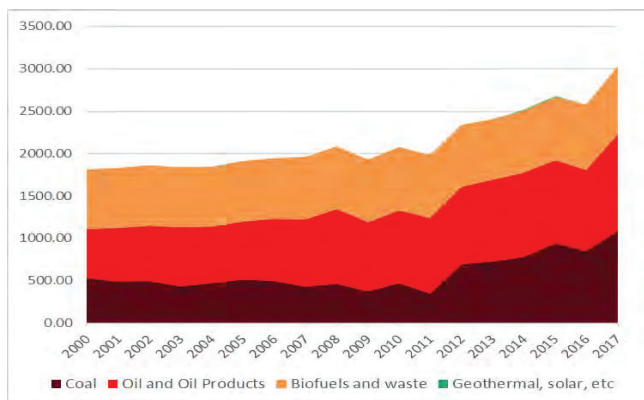


Figure 3.2. - Total Final Consumption (ktoe)

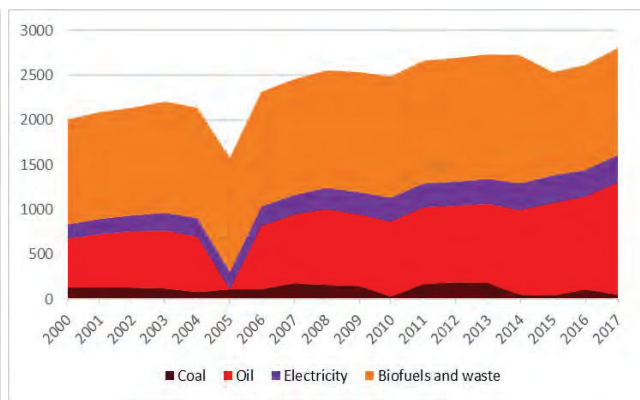


Figure 3.3. - Electricity Generation By Source (GWh)

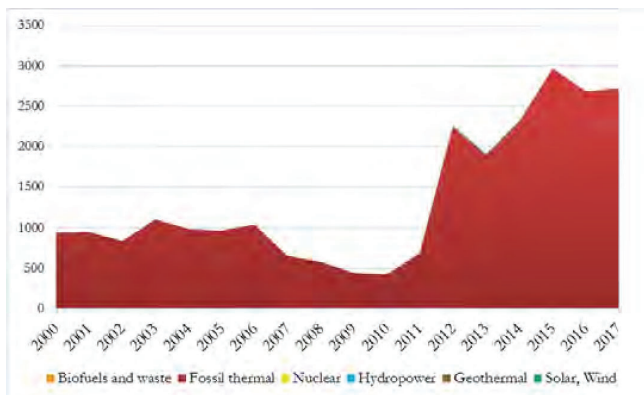


Figure 3.4. - Electricity Production and Consumption (GWh)

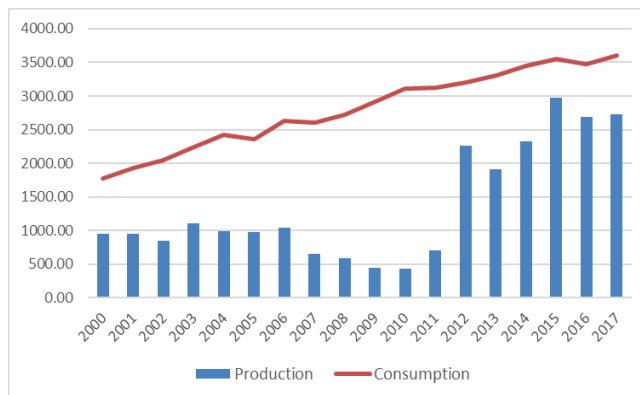


Figure 3.5. - Selected Indicators

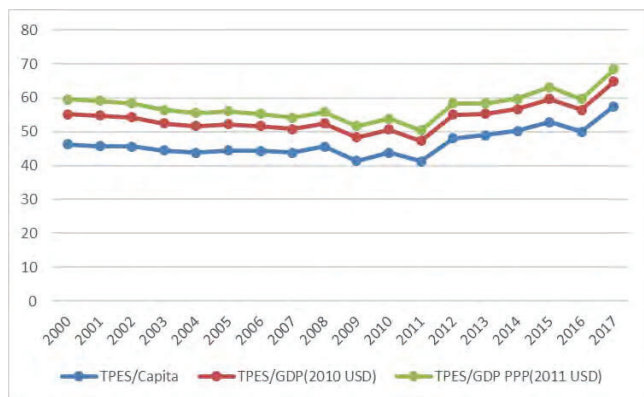
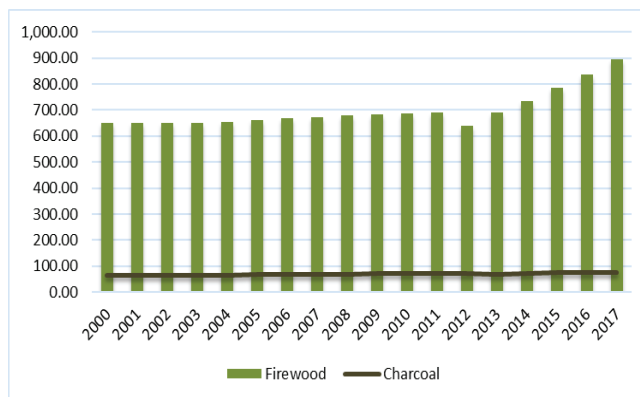


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Botswana

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil	Oil Products	Coal	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	1135.21	0.00	0.00	0.00	0.18	800.52	-	1935.91
Imports	0.00	1153.68	0.00	0.00	-	-	-	0.00	146.75	1300.43
Exports (-)	0.00	0.00	-48.53	0.00	-	-	-	0.00	0.00	-48.53
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	-14.09	-	-	-	-	-	-	-	-14.09
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	0.00	1139.59	1086.68	0.00	0.00	0.00	0.18	800.52	146.75	3173.72
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	144.92	-100.16	0.00	0.00	0.00	0.00	-368.93	4.88	-319.29
TRANSFORMATION	0.00	-2.49	-937.87	0.00	0.00	0.00	-0.18	-219.36	234.09	-925.81
Electricity Producers	0.00	-2.49	-937.87	0.00	0.00	0.00	-0.18	0.00	234.09	-706.45
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	219.36	-	-219.36
Gas-to-Liquids	0.00	-	-	-	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	0.00	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0	0	0				0	-26.14	-26.14
Losses	0.00	0	0	0				0	-49.7	-49.7
FINAL CONSUMPTION	0.00	1282.02	48.65	0				212.23	309.88	1852.78
Industry	0.00	220.46	43.54	0.00	-	-	-	10.61	120.38	394.99
Transport	-	994.54	0.00	0.00	-	-	-	0	0	994.54
Households	-	15.8	0.00	0.00	-	-	-	162.85	86.84	265.49
Com. & Public	0.00	23.85	1.53	0.00	-	-	-	38.77	74.26	138.41
Agriculture/Forestry	0.00	1.36	3.58	0.00	-	-	-	0	28.4	33.34
Others (Non Specified)	0.00	1.27	0.00	0.00	-	-	-	0	0	1.27
Non-Energy Use	0.00	24.74	0.00	0.00	-	-	-			24.74

Burkina Faso

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

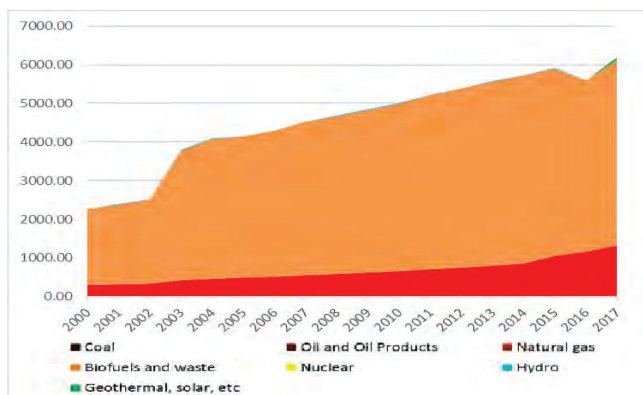


Figure 3.2. - Total Final Consumption (ktoe)

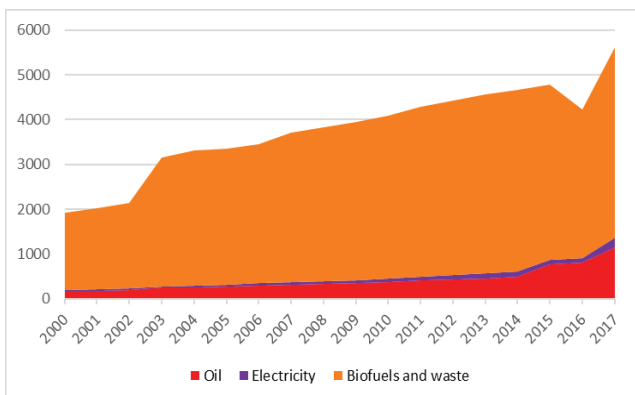


Figure 3.3. - Electricity Generation By Source (GWh)

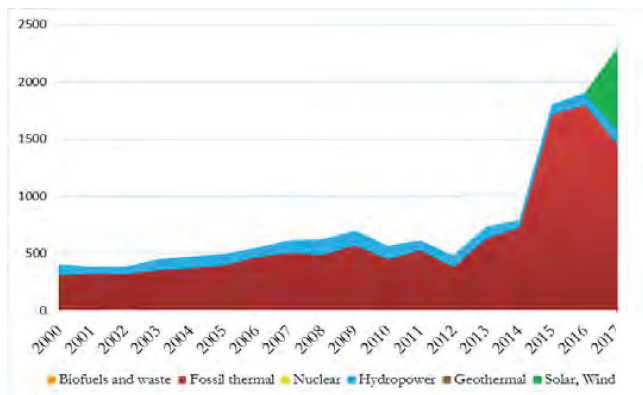


Figure 3.4. - Electricity Production and Consumption (GWh)

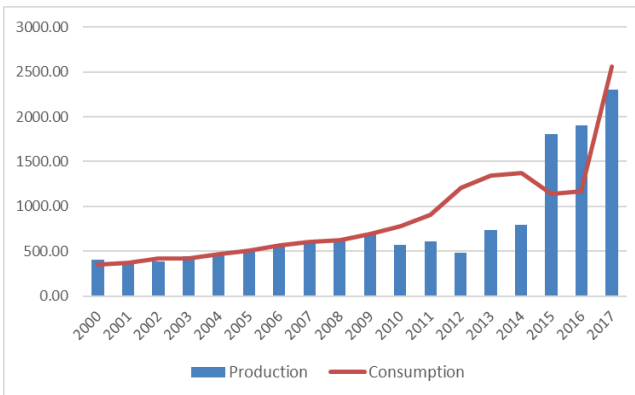


Figure 3.5. - Selected Indicators

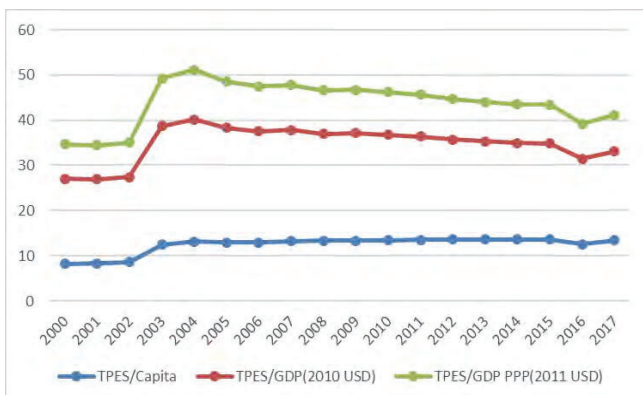
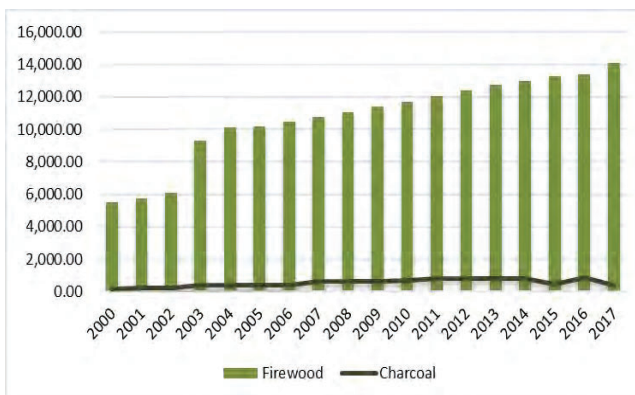


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Burkina Faso

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	10.67	62.38	4783.15	-	4856.20
	Imports	0.00	1297.41	0.00	0.00	-	-	-	0.00	55.50	1352.91
	Exports (-)	0.00	-0.29	0.00	0.00	-	-	-	0.00	0.00	-0.29
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	30.38	0.00	0.00	-	-	-	-	-	30.38
	TPES ³	0.00	1327.50	0.00	0.00	0.00	10.67	62.38	4783.15	55.50	6239.20
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	18.23	0.00	0.00	0.00	0.00	0.00	634.98	-5.79	674.42
	Transformation	0.00	-287.46	0	0	0	-10.67	-62.38	-1106.98	197.54	-1269.95
	Electricity Producers	0.00	-287.46	0.00	0.00	0.00	-10.67	-62.38	-13.52	197.54	-176.49
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-1093.46	-	-1093.46
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	-1.92	0.00	0.00	-	-	-	0.00	-3.63	-5.55
	Losses	0.00	-6.11	0.00	0.00	-	-	-	0.00	-23.49	-29.6
FINAL CONSUMPTION	TFC	0.00	1050.24	0.00	0.00	-	-	-	4311.15	220.13	5581.52
	Industry	0.00	13.85	0.00	0.00	-	-	-	0.00	22.77	36.62
	Transport	-	936.42	0.00	0.00	-	-	-	0.00	0.00	936.42
	Households	-	75.75	0.00	0.00	-	-	-	4008.81	151.82	4236.38
	Com. & Public	0.00	20.14	0.00	0.00	-	-	-	302.34	302.34	345.25
	Agriculture/Forestry	0.00	3.72	0.00	0.00	-	-	-	0.00	20.24	23.96
	Others (Non Specified)	0.00	0	0.00	0.00	-	-	-	0.00	2.53	2.53
	Non-Energy Use	0.00	0.36	0.00	0.00	-	-	-	-	-	0.36

Burundi

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

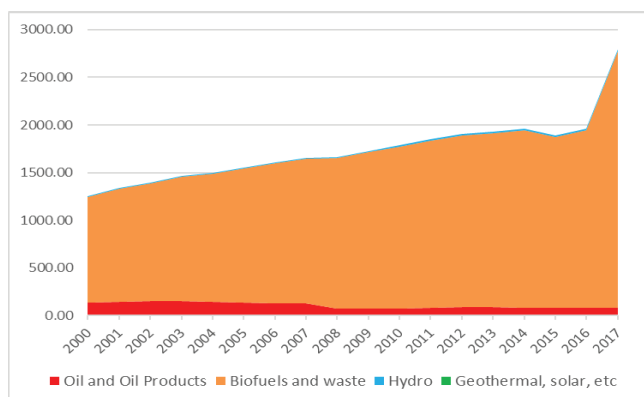


Figure 3.2. - Total Final Consumption (ktoe)

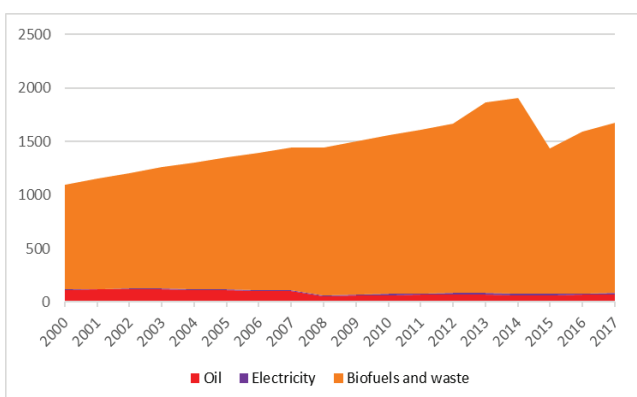


Figure 3.3. - Electricity Generation By Source (GWh)

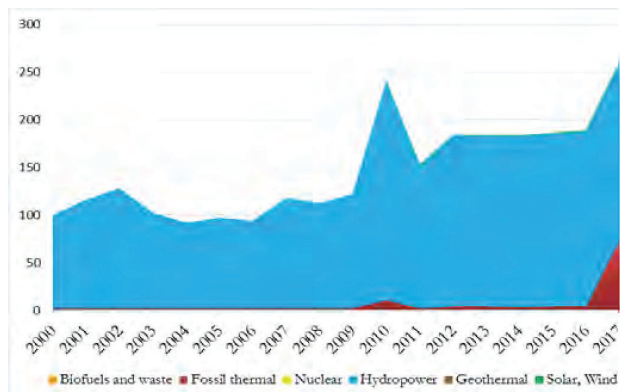


Figure 3.4. - Electricity Production and Consumption (GWh)

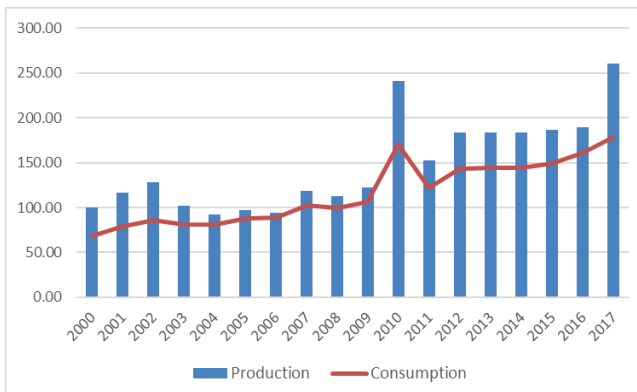


Figure 3.5. - Selected Indicators

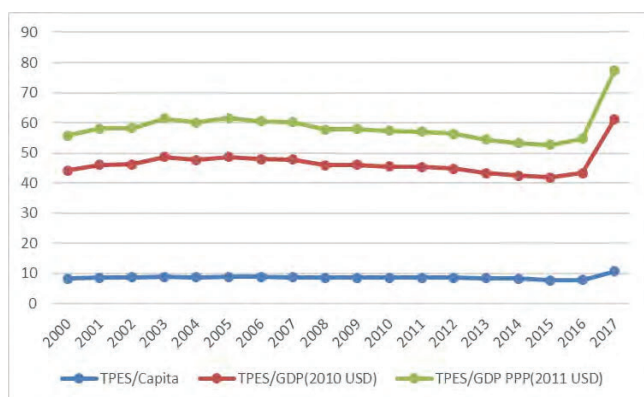
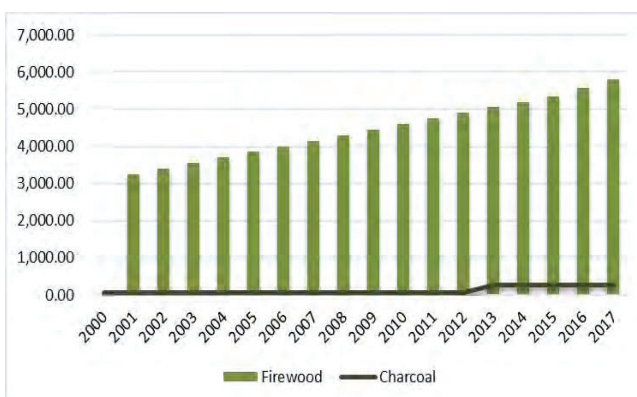


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Burundi

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil¹	Oil Products	Coal²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	15.95	0.09	2702.06	-	2718.10
	Imports	0.00	73.92	0.00	0.00	-	-	-	0.00	9.67	83.59
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	3.86	0.00	0.00	-	-	-	-	-	3.86
	TPES³	0.00	77.78	0.00	0.00	0.00	15.95	0.09	2702.06	9.67	2805.55
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-5.19	0.00	0.00	0.00	0.00	0.00	370.51	-0.01	365.31
	Transformation	0.00	0.00	0.00	0.00	0.00	-15.95	-0.09	-723.88	22.39	-717.53
	Electricity Producers	0.00	0.00	0.00	0.00	0.00	-15.95	-0.09	0.00	22.39	6.35
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-723.88	-	-723.88
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-0.25	-0.25
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-16.51	-16.51
FINAL CONSUMPTION	TFC	0.00	72.59	0.00	0.00	-	-	-	2348.69	15.29	2436.57
	Industry	0.00	22.14	0.00	0.00	-	-	-	0.00	2.99	25.13
	Transport	-	50.16	0.00	0.00	-	-	-	0.00	0.00	50.16
	Households	-	0.23	0.00	0.00	-	-	-	2046.22	8.34	2054.79
	Com. & Public	0.00	0.06	0.00	0.00	-	-	-	302.47	3.96	306.49
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Cape Verde

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

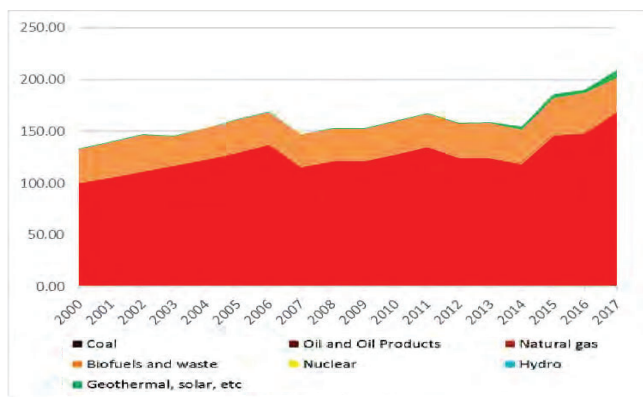


Figure 3.2. - Total Final Consumption (ktoe)

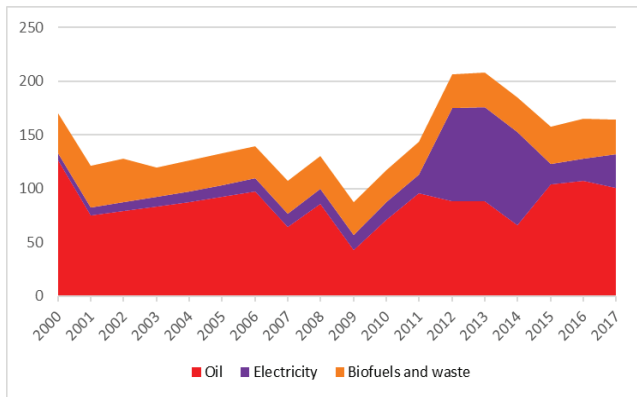


Figure 3.3. - Electricity Generation By Source (GWh)

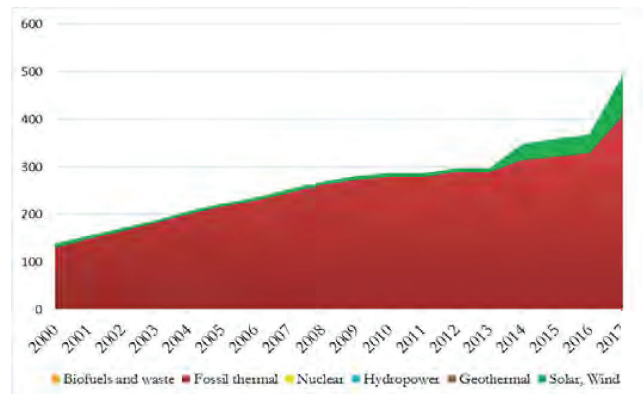


Figure 3.4. - Electricity Production and Consumption (GWh)

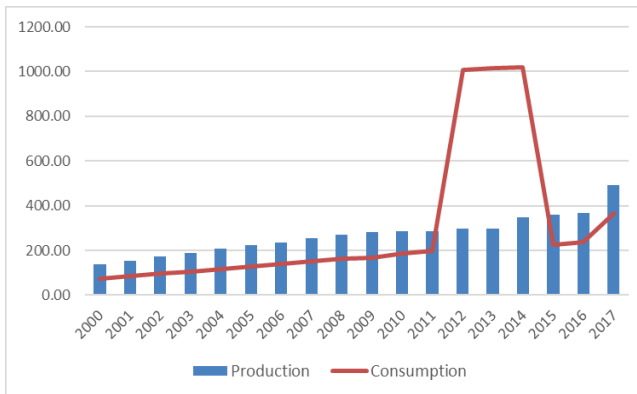


Figure 3.5. - Selected Indicators

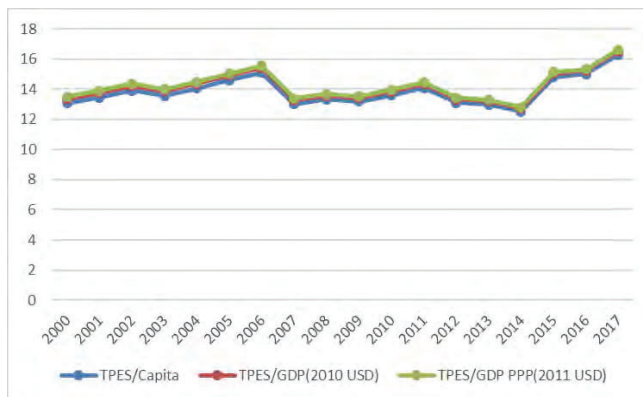
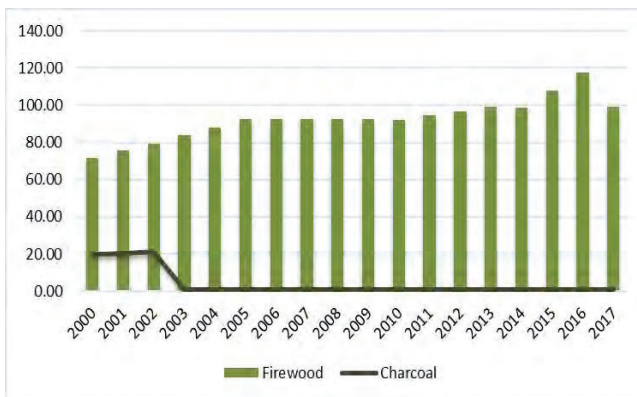


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Cape Verde

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	7.13	33.12	-	40.25
	Imports	0.00	410.23	0.00	0.00	-	-	0.00	0.00	410.23
	Exports (-)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	-143.34	-	-	-	-	-	-	-143.34
	Int. Aviation Bunkers (-)	-	-85.25	-	-	-	-	-	-	-85.25
	ΔStock (+ draw, - build)	0.00	-12.93	0.00	0.00	-	-	-	-	-12.93
	TPES³	0.00	168.71	0.00	0.00	0.00	7.13	33.12	0.00	208.96
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	25.90	0.00	0.00	0.00	0.00	1.76	-0.06	27.60
	Transformation	0.00	-90.9	0.00	0.00	0.00	-7.13	-1.94	42.21	-57.76
	Electricity Producers	0.00	-90.9	0.00	0.00	0.00	-7.13	0.00	42.21	-55.82
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-1.94	-	-1.94
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	0.00	-	0.00
	Own Use	0.00	-0.47	0.00	0.00	-	-	0.00	-1.22	-1.69
	Losses	0.00	-0.41	0.00	0.00	-	-	0.00	-9.61	-10.02
FINAL CONSUMPTION	TFC	0.00	102.83	0.00	0.00	-	-	32.94	31.32	167.09
	Industry	0.00	14.31	0.00	0.00	-	-	0.00	9.38	23.69
	Transport	-	68.24	0.00	0.00	-	-	0.00	0.00	68.24
	Households	-	7.73	0.00	0.00	-	-	22.74	9.40	39.87
	Com. & Public	0.00	7.95	0.00	0.00	-	-	10.20	11.41	29.56
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	2.56	0.00	0.00	-	-	0.00	1.13	3.69
	Non-Energy Use	0.00	2.04	0.00	0.00	-	-	-	-	2.04

Cameroon

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

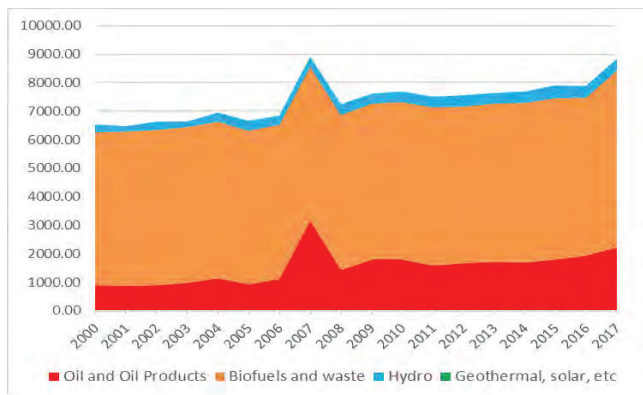


Figure 3.2. - Total Final Consumption (ktoe)

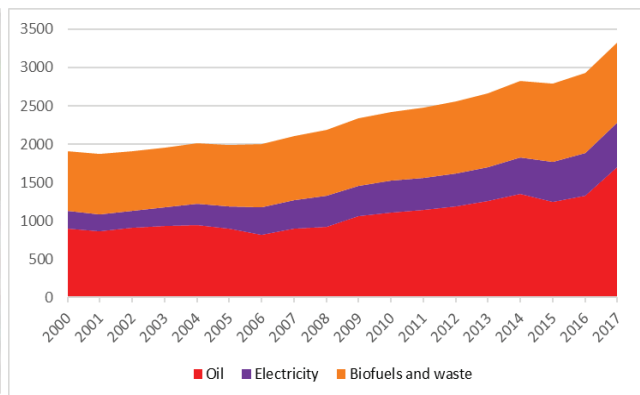


Figure 3.3. - Electricity Generation By Source (GWh)

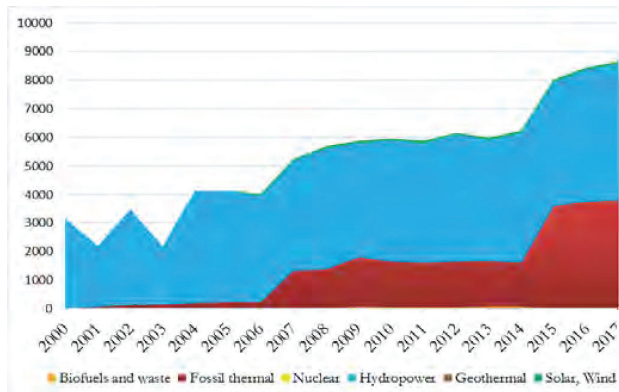


Figure 3.4. - Electricity Production and Consumption (GWh)

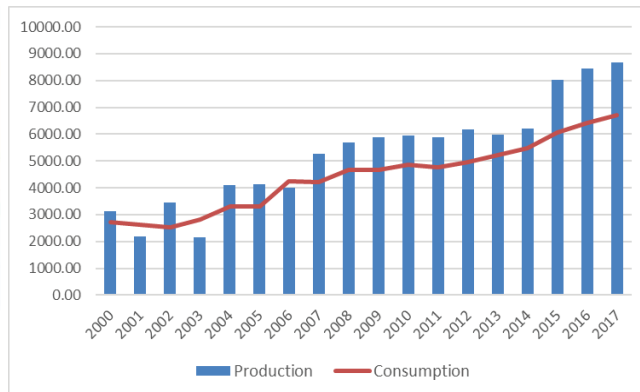


Figure 3.5. - Selected Indicators

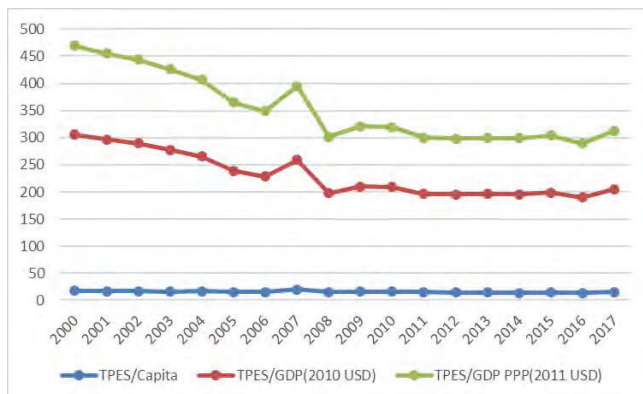
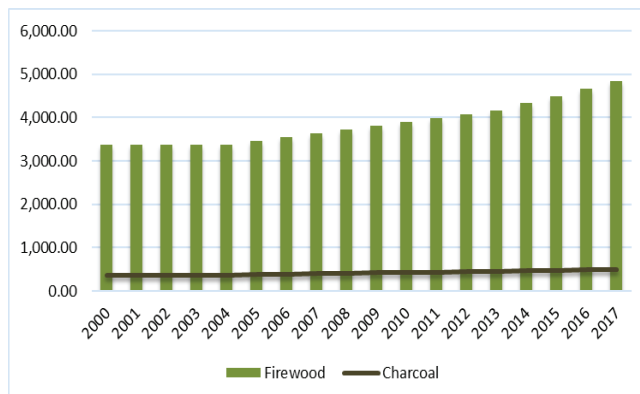


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Cameroon

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	3636.56	-	0.00	445.18	0.00	411.61	6.62	6205.38	-	10705.35
	Imports	1240.47	966.47	0.00	0.00	-	-	-	0.00	5.18	2212.12
	Exports (-)	-3192.20	-330.67	0.00	0.00	-	-	-	0.00	0.00	-3522.87
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	-109.55	-	-	-	-	-	-	-	-109.55
	ΔStock (+ draw, - build)	0.00	10.36	0.00	0.00	-	-	-	-	-	10.36
	TPES ³	1684.83	536.61	0.00	445.18	0.00	411.61	6.62	6205.38	5.18	9295.41
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	-80.41	91.04	0.00	-4.87	0.00	0.00	0.00	762.21	-2.76	765.21
	Transformation	-1604.42	1106.75	0.00	-440.31	0.00	-411.61	-6.62	-1332.13	745.20	-1943.41
	Electricity Producers	0.00	-336.11	0.00	-440.31	0.00	-411.61	-6.62	0.12	745.20	-449.33
	Petroleum Refineries	-1604.42	1442.86	-	-	-	-	-	-	-	-161.56
	Charcoal Plants	-	-	-	-	-	-	-	-1332.25	-	-1332.25
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-21.17	-21.17
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-150.74	-150.74
FINAL CONSUMPTION	TFC	0.00	1734.40	0.00	0.00	-	-	-	5635.46	575.71	7945.57
	Industry	0.00	90.52	0.00	0.00	-	-	-	61.44	315.17	467.13
	Transport	-	1349.67	0.00	0.00	-	-	-	0.00	0.00	1349.67
	Households	-	173.75	0.00	0.00	-	-	-	5387.63	127.99	5689.37
	Com. & Public	0.00	36.85	0.00	0.00	-	-	-	186.39	46.62	269.86
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	24.47	0.00	0.00	-	-	-	0.00	85.93	110.40
	Non-Energy Use	0.00	59.14	0.00	0.00	-	-	-	-	-	59.14

Central African Republic

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

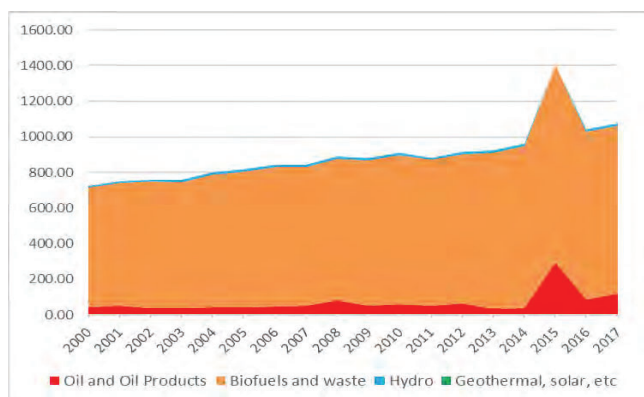


Figure 3.2. - Total Final Consumption (ktoe)

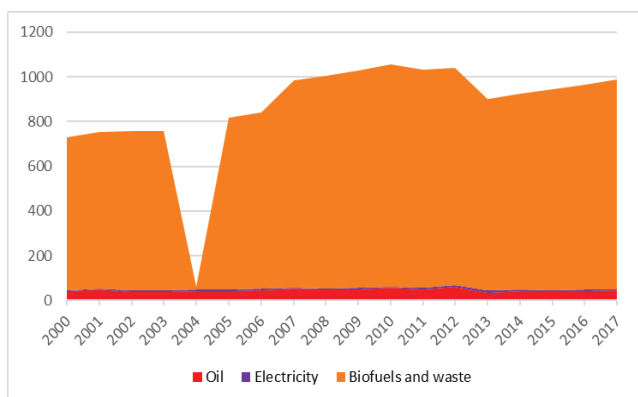


Figure 3.3. - Electricity Generation By Source (GWh)

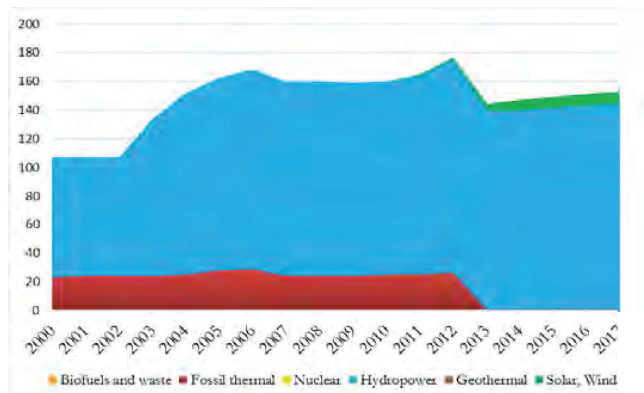


Figure 3.4. - Electricity Production and Consumption (GWh)

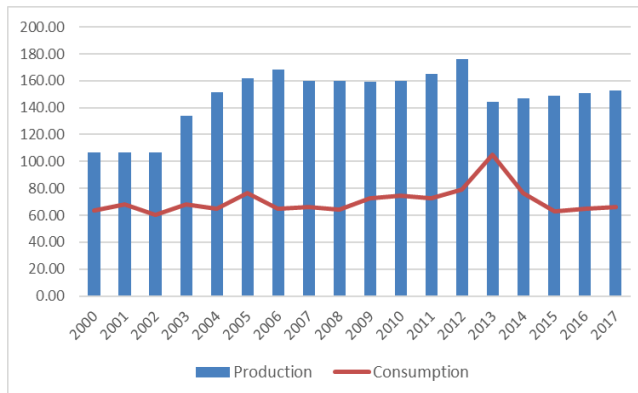


Figure 3.5. - Selected Indicators

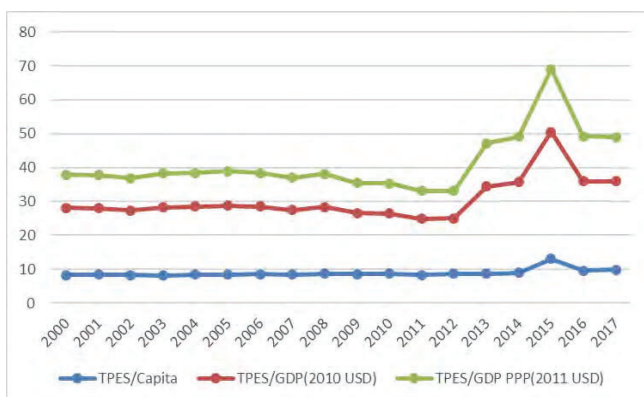
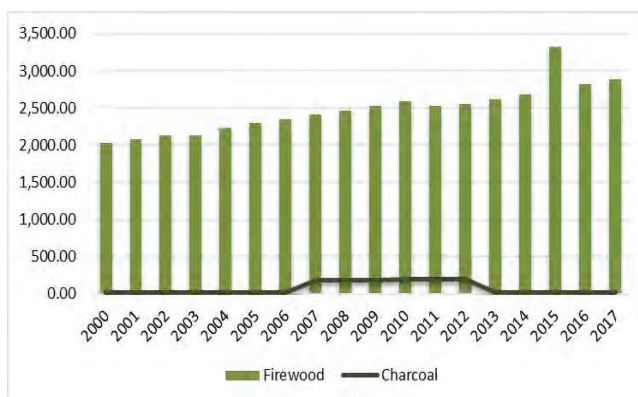


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Central African Republic

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	12.00	0.00	943.45	-	955.45
	Imports	0.00	103.05	0.00	0.00	-	-	-	0	0.00	103.05
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	15.76	-	-	-	-	-	-	-	15.76
	ΔStock (+ draw, - build)	0.00	1.57	0.00	0.00	-	-	-	-	-	1.57
	TPES ³	0.00	120.38	0.00	0.00	0.00	12.00	0.00	943.45	0.00	1075.83
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-14.08	0.00	0.00	0.00	0.00	0.00	20.89	0.66	7.47
	Transformation	0.00	-0.88	0.00	0.00	0.00	-12.00	0.00	-41.33	12.44	-41.77
	Electricity Producers	0.00	-0.88	0.00	0.00	0.00	-12.00	0.00	0.00	12.44	-0.44
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-41.33	-	-41.33
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-0.2	-0.20
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-4.77	-4.77
	TFC	0.00	105.42	0.00	0.00	-	-	-	923.01	8.13	1036.56
	Industry	0.00	10.14	0.00	0.00	-	-	-	0.00	0.68	10.82
	Transport	-	84.04	0.00	0.00	-	-	-	0.00	0.00	84.04
	Households	-	8.94	0.00	0.00	-	-	-	885.08	2.74	896.76
	Com. & Public	0.00	2.30	0.00	0.00	-	-	-	37.93	4.71	44.94
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00	

Chad

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

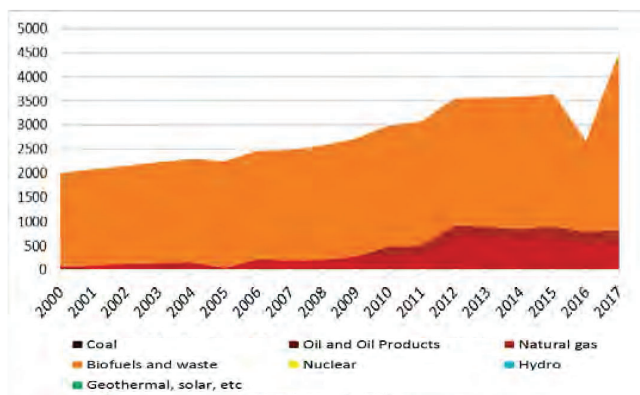


Figure 3.2. - Total Final Consumption (ktoe)

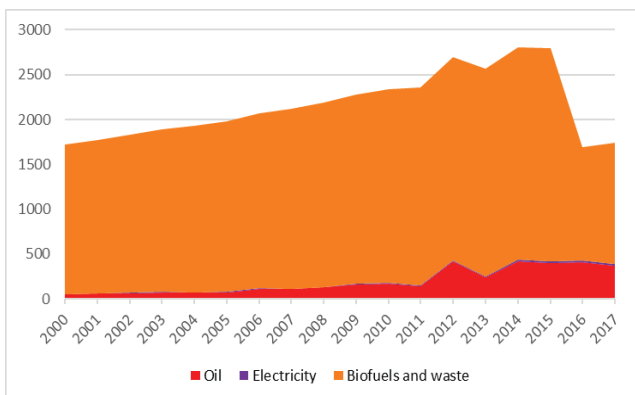


Figure 3.3. - Electricity Generation By Source (GWh)

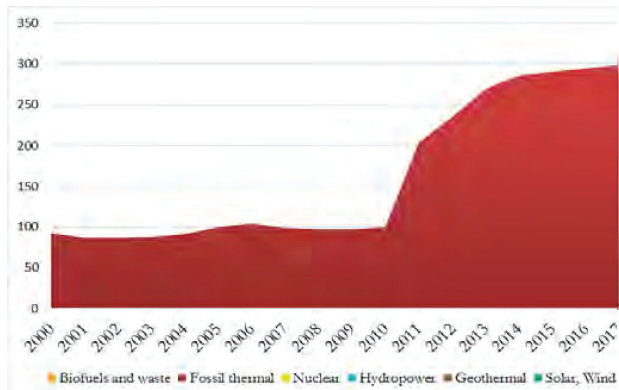


Figure 3.4. - Electricity Production and Consumption (GWh)

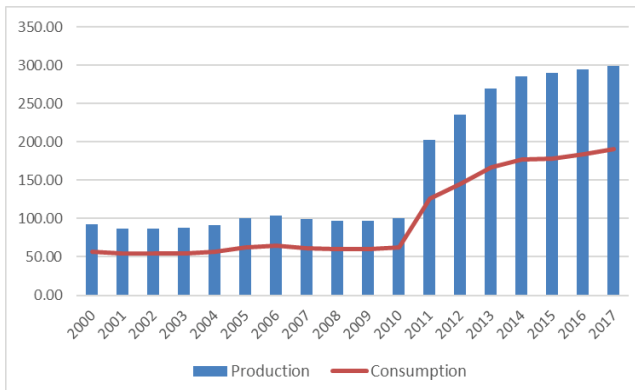


Figure 3.5. - Selected Indicators

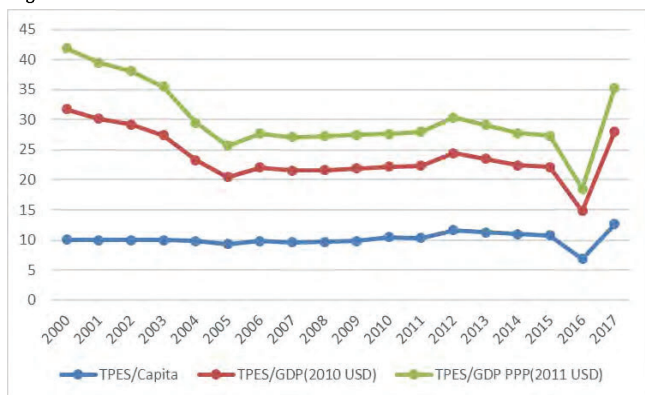
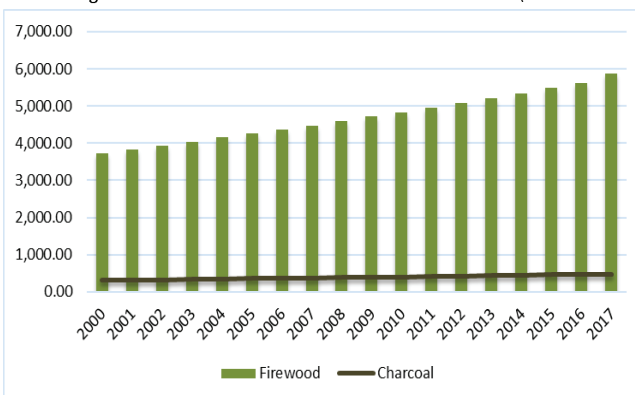


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Chad

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY	Production	5287.00	-	0.00	0.00	0.00	0.00	3684.67	-	8971.67
	Imports	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Exports (-)	-4796.79	-2.56	0.00	0.00	-	-	0.00	0.00	-4799.35
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	93.39	0.00	0.00	0.00	-	-	-	-	93.39
	TPES³	583.6	-2.56	0.00	0.00	0.00	0.00	3684.67	0.00	4265.71
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	-23.27	-2.55	0.00	0.00	0.00	0.00	670.74	-1.55	643.36
	Transformation	-560.33	380.49	0.00	0.00	0.00	0.00	-1283.27	25.68	-1434.29
	Electricity Producers	0.00	-147.07	0.00	0.00	0.00	0.00	0.00	25.68	-121.39
	Petroleum Refineries	-560.33	530.70	-	-	-	-	-	-	-29.63
	Charcoal Plants	-	-	-	-	-	-	-1283.27	-	-1283.27
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	0.00	-0.00	0.00
	Losses	0.00	0.00	0.00	0.00	-	-	0.00	-7.74	-7.74
	TFC	0.00	375.37	0.00	0.00	-	-	3072.14	16.39	3463.9
	Industry	0.00	71.55	0.00	0.00	-	-	0.00	7.45	79.00
	Transport	-	275.34	0.00	0.00	-	-	0.00	0.00	275.34
	Households	-	4.52	0.00	0.00	-	-	2815.4	6.56	2826.48
	Com. & Public	0.00	23.96	0.00	0.00	-	-	256.74	2.38	283.08
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	0.00

Comoros

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

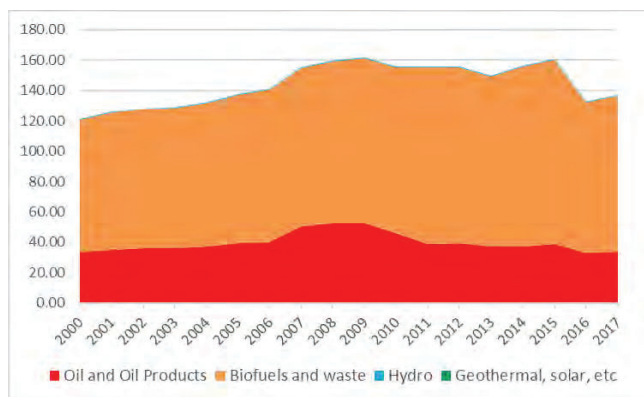


Figure 3.2. - Total Final Consumption (ktoe)

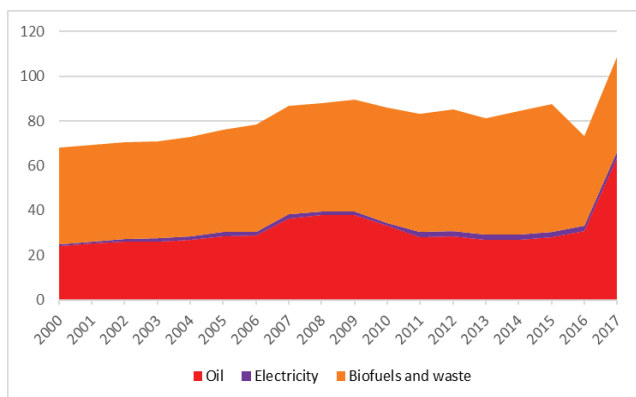


Figure 3.3. - Electricity Generation By Source (GWh)

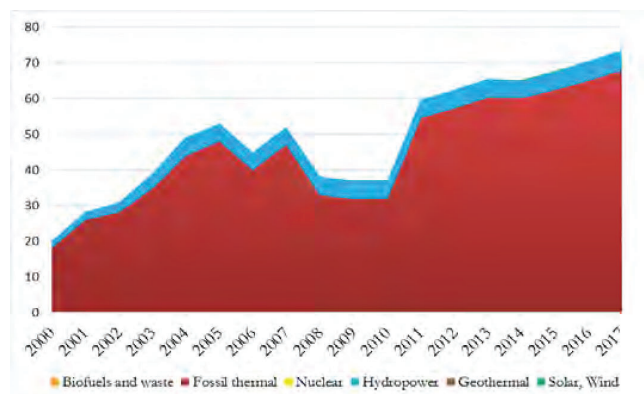


Figure 3.4. - Electricity Production and Consumption (GWh)

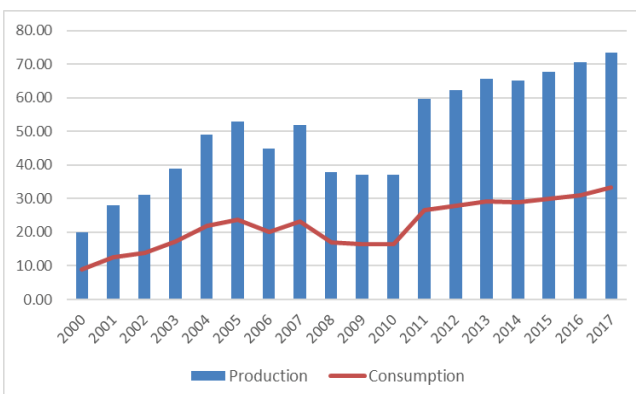


Figure 3.5. - Selected Indicators

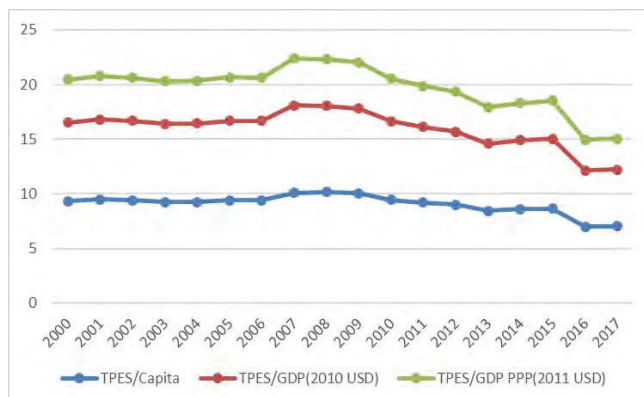
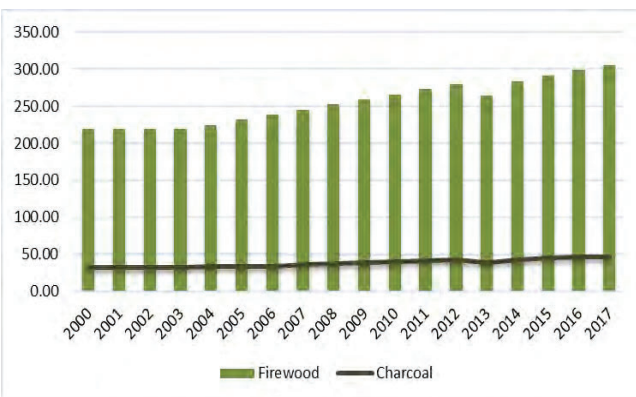


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Comoros

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Prod-ucts	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	0.49	0.00	102.24	-	102.73
	Imports	0.00	34.09	0.00	0.00	-	-	-	0.00	0.00	34.09
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	34.09	0.00	0.00	0.00	0.49	0.00	102.24	0.00	136.82
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	38.99	0.00	0.00	0.00	0.00	0.00	71.81	-5.05	105.75
	Transformation	0.00	-9.17	0.00	0.00	0.00	-0.49	0.00	-131.81	6.32	-135.15
	Electricity Producers	0.00	-9.17	0.00	0.00	0.00	-0.49	0.00	0.00	6.32	-3.34
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-131.81	-	-131.81
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces		-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	TFC	0.00	63.91	0.00	0.00	-	-	-	42.24	1.27	107.42
	Industry	0.00	0.29	0.00	0.00	-	-	-	0.00	0.89	1.18
	Transport	-	44.94	0.00	0.00	-	-	-	0.00	0.00	44.94
	Households	-	1.61	0.00	0.00	-	-	-	34.4	0.00	36.01
	Com. & Public	0.00	9.67	0.00	0.00	-	-	-	7.84	0.38	17.89
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	7.4	0.00	0.00	-	-	-	-	-	7.40

Congo Republic

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

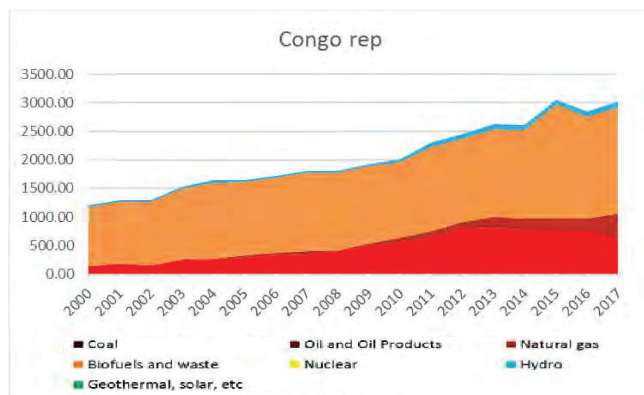


Figure 3.2. - Total Final Consumption (ktoe)

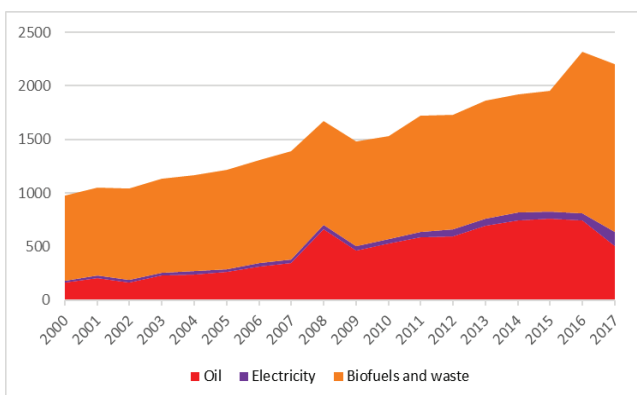


Figure 3.3. - Electricity Generation By Source (GWh)

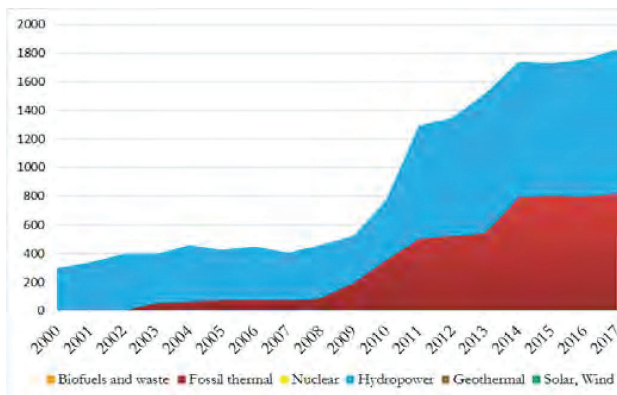


Figure 3.4. - Electricity Production and Consumption (GWh)

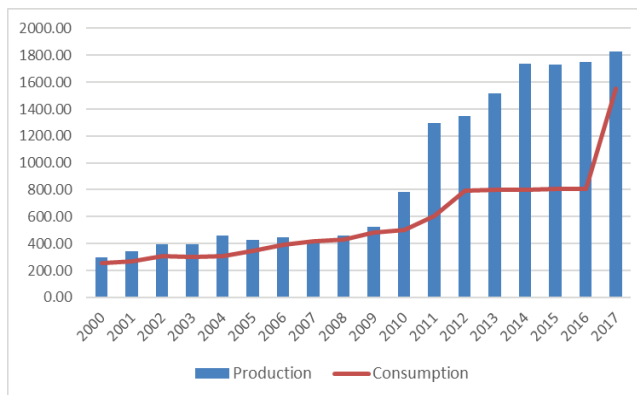


Figure 3.5. - Selected Indicators

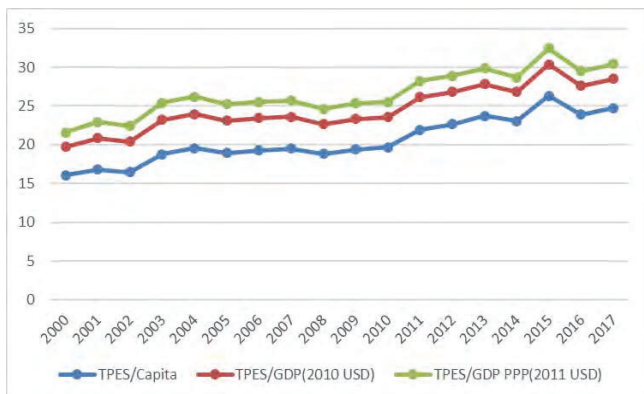
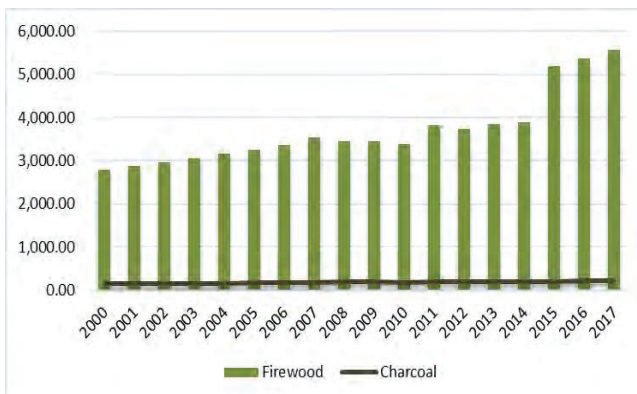


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Congo Republic

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	12765.31	-	0.00	427.91	0.00	103.44	0.00	1860.18	-	15156.84
Imports	0.00	197.05	0.00	0.00	-	-	-	0.00	1.85	198.9
Exports (-)	-12005.78	-328.85	0.00	0.00	-	-	-	0.00	-1.92	-12336.55
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	759.53	-131.8	0.00	427.91	0.00	103.44	0.00	1860.18	-0.07	3019.19
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	1.13	-18.68	0.00	0.00	0.00	0.00	0.00	319.27	2.55	303.14
TRANSFORMATION	-759.53	668.01	0.00	-427.91	0.00	-103.44	0.00	-695.32	245.04	-1073.15
Electricity Producers	0.00	-8.93	0.00	-427.91	0	-103.44	0.00	0.00	245.04	-295.24
Petroleum Refineries	-759.53	676.94	-	-	-	-	-	-	-	-82.59
Charcoal Plants	-	-	-	-	-	-	-	-695.32	-	-695.32
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-113.84	-113.84
FINAL CONSUMPTION	0.00	517.53	0.00	0.00	-	-	-	1484.13	133.68	2135.34
Industry	0.00	35.93	0.00	0.00	-	-	-	0.00	8.89	44.82
Transport	-	469.50	0.00	0.00	-	-	-	0.00	0.00	469.50
Households	-	5.50	0.00	0.00	-	-	-	1121.08	58.09	1184.67
Com. & Public	0.00	6.60	0.00	0.00	-	-	-	363.05	66.7	436.35
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Côte d'Ivoire

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

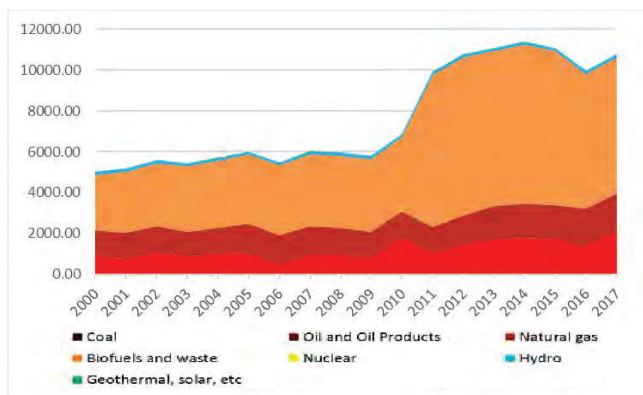


Figure 3.2. - Total Final Consumption (ktoe)

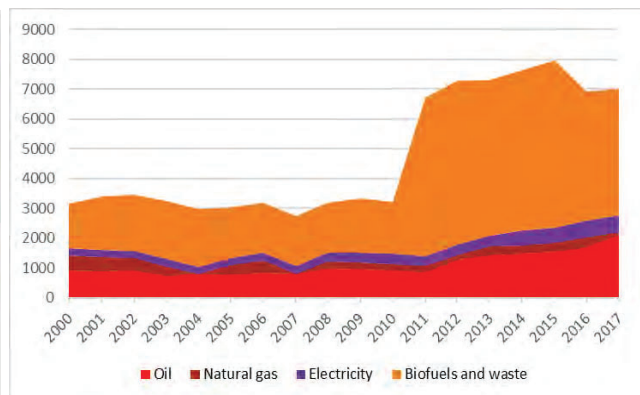


Figure 3.3. - Electricity Generation By Source (GWh)

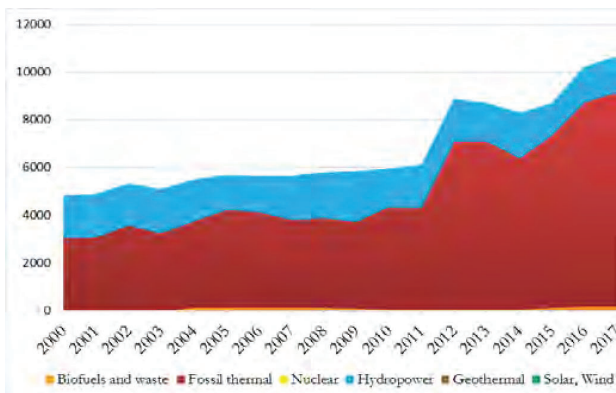


Figure 3.4. - Electricity Production and Consumption (GWh)

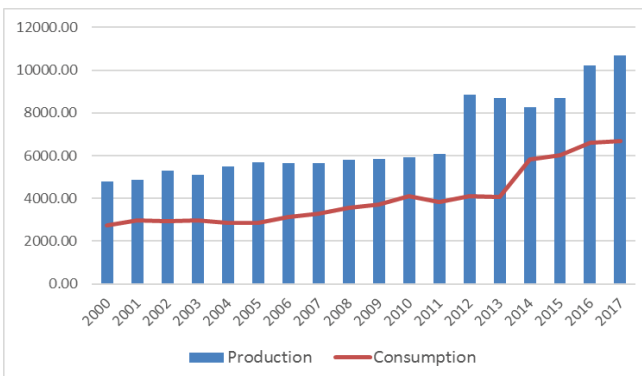


Figure 3.5. - Selected Indicators

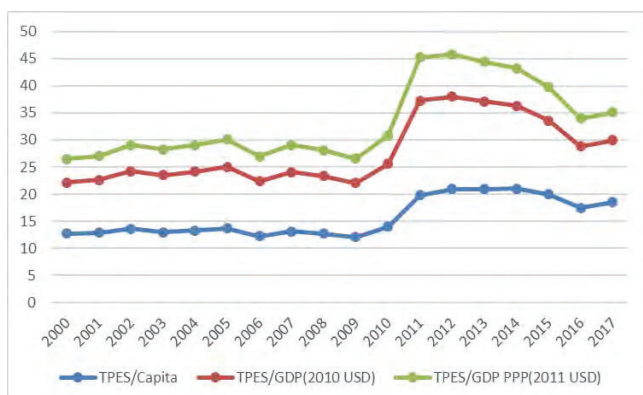
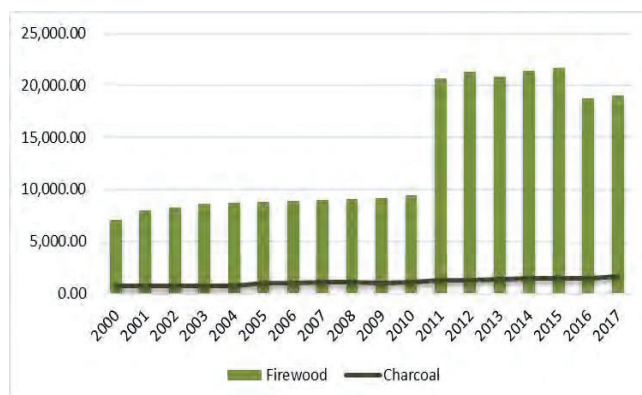


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Côte d'Ivoire

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	1648.31	-	0.00	1881.88	0.00	176.03	0.00	6672.74	-	10378.96
	Imports	3039.34	335.53	0.00	0.00	-	-	-	0.00	3.07	3377.94
	Exports (-)	-1507.29	-1245.13	0.00	0.00	-	-	-	0.00	-107.17	-2859.59
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	-248.19	-	-	-	-	-	-	-	-248.19
	ΔStock (+ draw, - build)	0.00	39.94	0.00	0.00	-	-	-	-	-	39.94
	TPES ³	3180.36	-1117.85	0.00	1881.88	0.00	176.03	0.00	6672.74	-104.1	10689.06
TRANSFORMATION	Transfers	0.00	-23385.93	-	-	-	-	-	-	-	-23385.93
	Statistical Difference	-7.93	23538.68	0.00	-196.88	0.00	0.00	0.00	2716.35	-16.03	26034.18
	Transformation	-3172.42	3149.8	0.00	-1625.02	0.00	-176.03	0.00	-4866.74	871.38	-5819.03
	Electricity Producers	0.00	-2.30	0.00	-1625.02	0.00	-176.03	0.00	-46.37	871.38	-978.34
	Petroleum Refineries	-3172.42	3152.1	-	-	-	-	-	-	-	-20.32
	Charcoal Plants	-	-	-	-	-	-	-	-4551.74	-	-4551.74
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	-268.63	-	-268.63
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0	-0.50	-0.50
	Losses	0.00	0.00	0.00	0.00	-	-	-	-30.22	-180.40	-210.62
	TFC	0.00	2184.7	0.00	59.98	-	-	-	4253.72	570.35	7068.75
	Industry	0.00	20.16	0.00	59.98	-	-	-	0.00	183.25	263.39
	Transport	-	1623.48	0.00	0.00	-	-	-	0.00	0.00	1623.48
	Households	-	294.15	0.00	0.00	-	-	-	3763.5	191.45	4249.1
	Com. & Public	0.00	90.23	0.00	0.00	-	-	-	490.22	194.38	774.83
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	1.27	1.27
	Non-Energy Use	0.00	156.68	0.00	0.00	-	-	-	-	-	156.68

Democratic Republic of the Congo

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

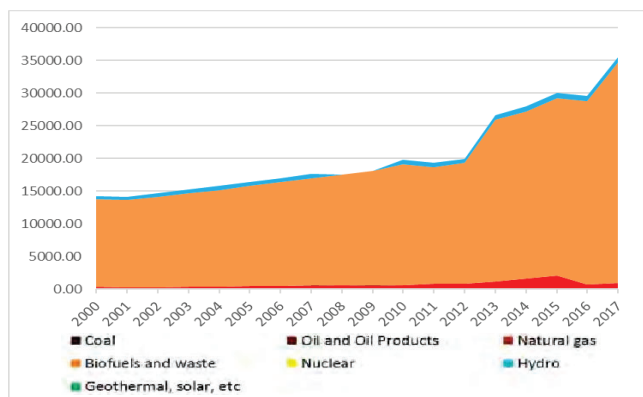


Figure 3.2. - Total Final Consumption (ktoe)

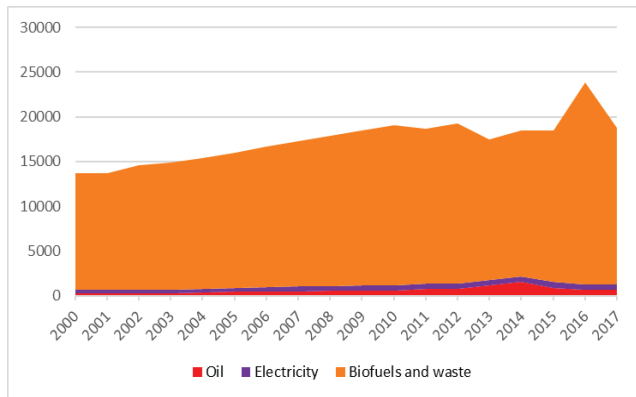


Figure 3.3. - Electricity Generation By Source (GWh)

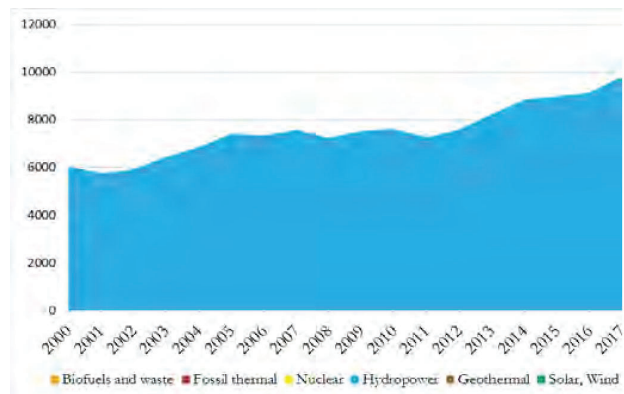


Figure 3.4. - Electricity Production and Consumption (GWh)

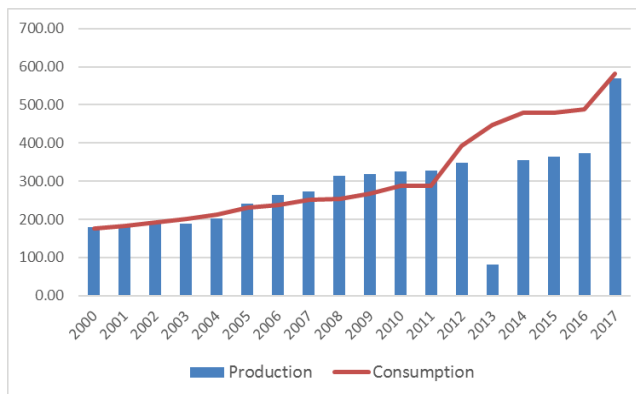


Figure 3.5. - Selected Indicators

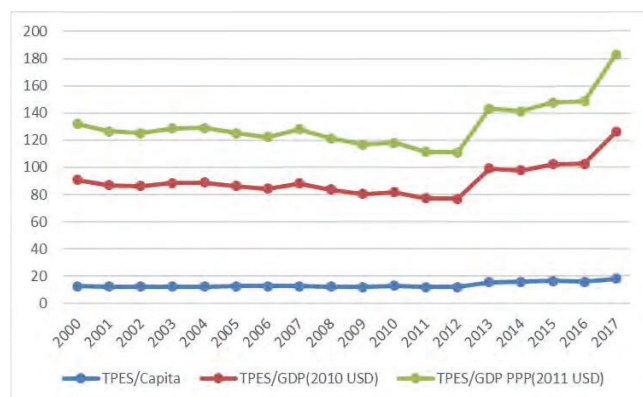
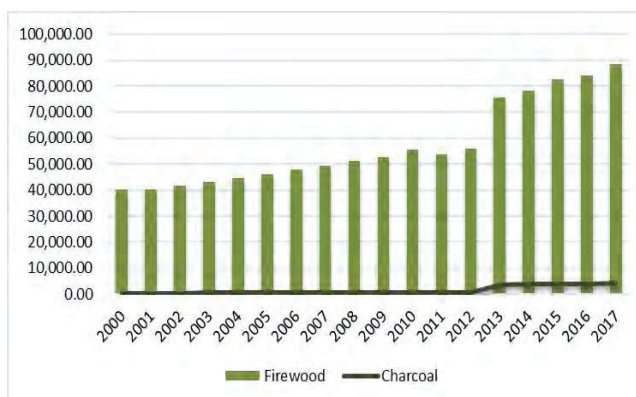


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Democratic Republic of the Congo

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	1118.94	-	0.00	0.00	0.00	815.31	0.66	33832.9	-	35767.81
	Imports	0.00	849.76	0.00	0.00	-	-	-	0.00	57.40	907.16
	Exports (-)	-1118.94	0.00	0.00	0.00	-	-	-	0.00	-5.29	-1124.23
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	849.76	0.00	0.00	0.00	815.31	0.66	33832.9	52.11	35550.74
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-0.37	0.00	0.00	0.00	0.00	0.00	6002.07	-68.43	5933.27
	Transformation	0.00	-6.21	0.00	0.00	0.00	-815.31	-0.66	-22375.78	820.18	-22377.78
	Electricity Producers	0.00	-6.21	0.00	0.00	0.00	-815.31	-0.66	-5732.3	820.18	-5734.3
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-16643.48	-	-16643.48
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-1.43	-1.43
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-124.08	-124.08
	TFC	0.00	843.18	0.00	0.00	-	-	-	17459.19	678.35	18980.72
	Industry	0.00	15.59	0.00	0.00	-	-	-	0.00	399.25	414.84
	Transport	-	826.86	0.00	0.00	-	-	-	0.00	0.00	826.86
	Households	-	0.73	0.00	0.00	-	-	-	12834.54	214.03	13049.3
	Com. & Public	0.00	0.00	0.00	0.00	-	-	-	4624.65	65.07	4689.72
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00	

Djibouti

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

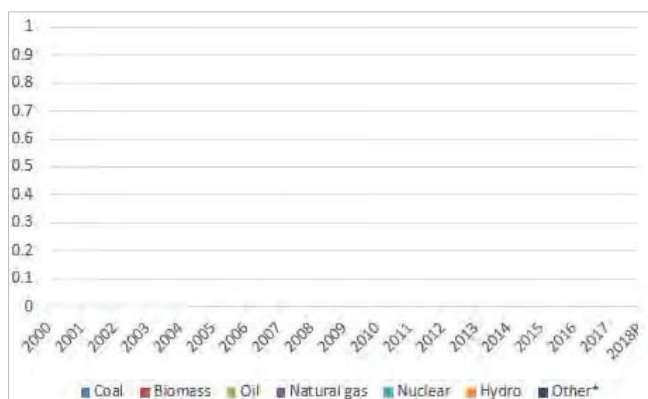


Figure 3.2. - Total Final Consumption (ktoe)

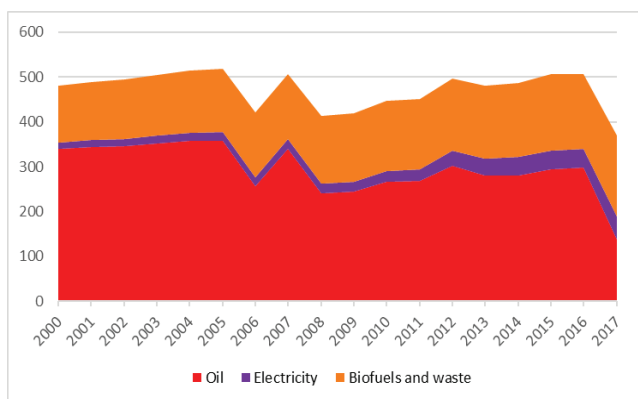


Figure 3.3. - Electricity Generation By Source (GWh)

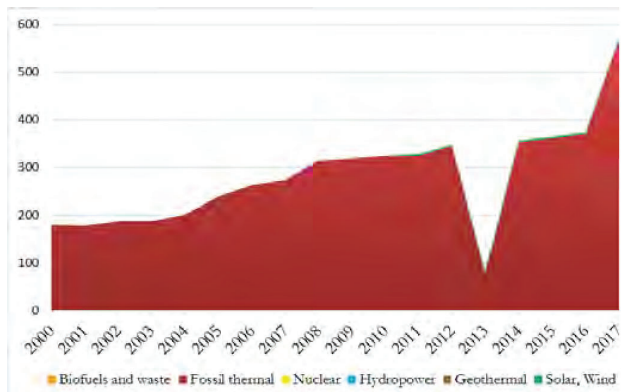


Figure 3.4. - Electricity Production and Consumption (GWh)

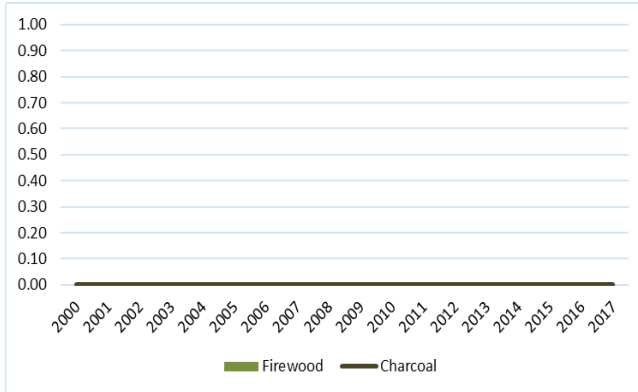


Figure 3.5. - Selected Indicators

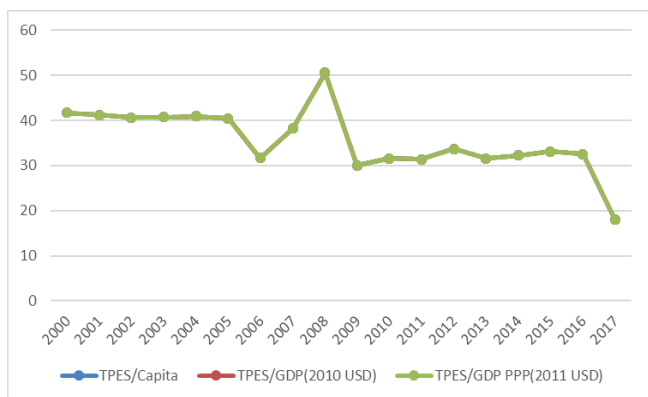
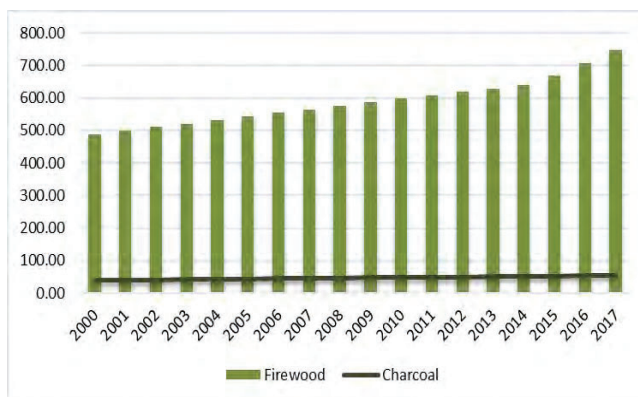


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Djibouti

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	0.02	249.85	-	249.87
	Imports	0.00	157.14	0.00	0.00	-	-	0.00	43.70	200.84
	Exports (-)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	0.00
	TPES³	0.00	157.14	0.00	0.00	0.00	0.02	249.85	43.70	450.71
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	0.01	0.00	0.00	0.00	0.00	75.31	-42.68	32.64
	Transformation	0.00	-15.81	0.00	0.00	0.00	-0.02	-144.41	48.98	-111.26
	Electricity Producers	0.00	-15.81	0.00	0.00	0.00	-0.02	0.00	48.98	33.15
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-144.41	-	-144.41
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Losses	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	TFC	0.00	141.34	0.00	0.00	-	-	180.75	50.00	372.09
	Industry	0.00	0.00	0.00	0.00	-	-	0.00	10.33	10.33
	Transport	-	126.35	0.00	0.00	-	-	0.00	0.00	126.35
	Households	-	14.99	0.00	0.00	-	-	146.36	23.30	184.65
	Com. & Public	0.00	0.00	0.00	0.00	-	-	34.39	11.98	46.37
FINAL CONSUMPTION	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	0.00	4.39	4.39
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	0.00

Egypt

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

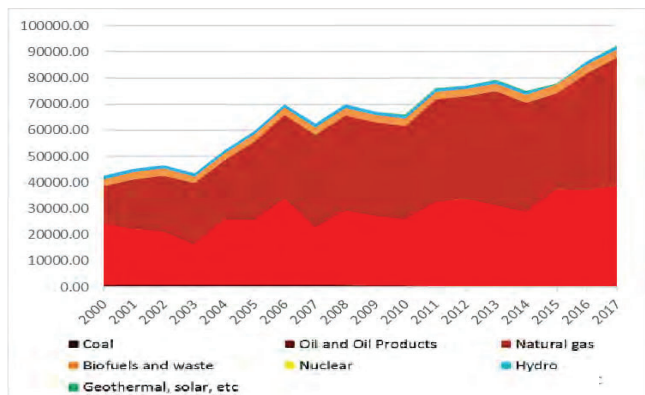


Figure 3.2. - Total Final Consumption (ktoe)

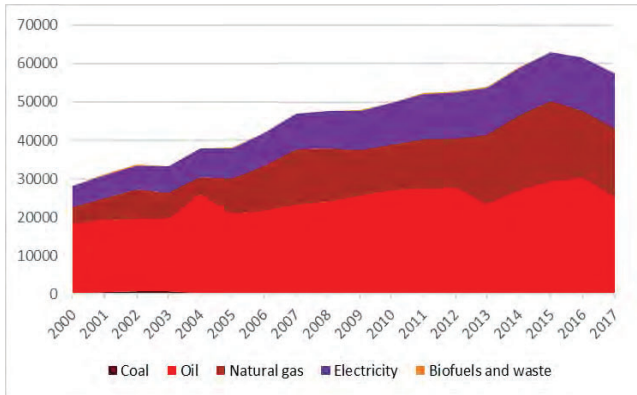


Figure 3.3. - Electricity Generation By Source (GWh)

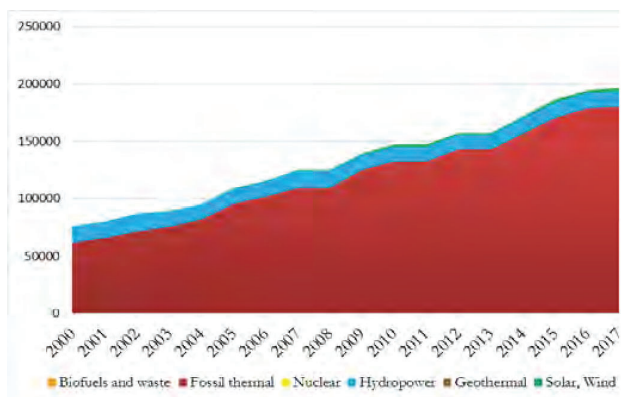


Figure 3.4. - Electricity Production and Consumption (GWh)

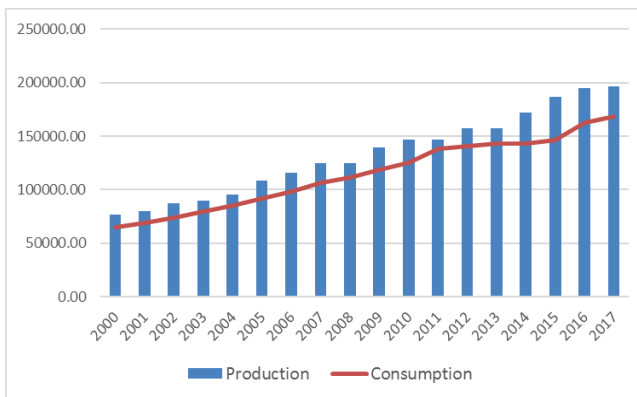


Figure 3.5. - Selected Indicators

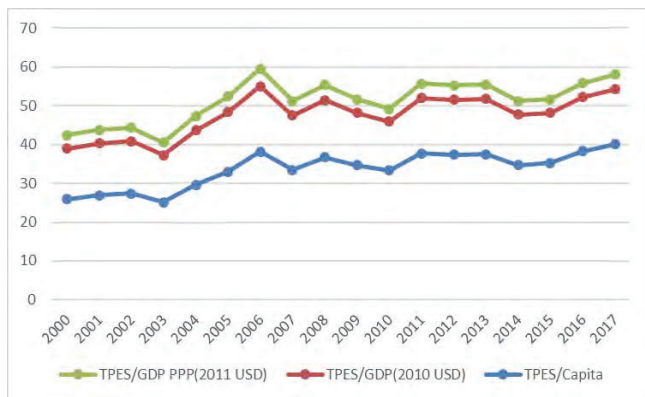
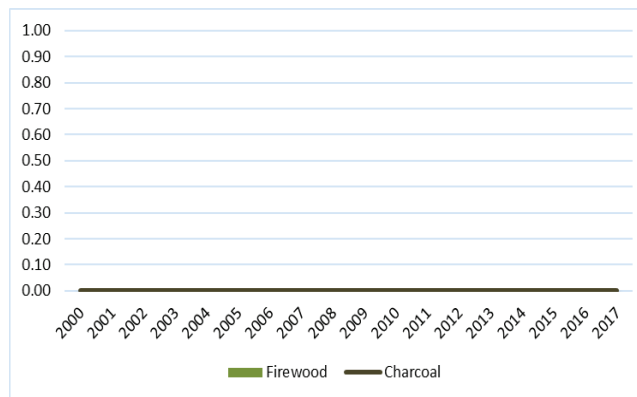


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Egypt

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	30700.62	-	0.00	36619.57	0.00	1175.8	193.55	0.00	-	68689.54
Imports	0.00	14371.4	305.51	12523.96	-	-	-	0.00	0.00	27200.87
Exports (-)	-9097.82	0.00	0.00	0.00	-	-	-	0.00	-55.12	-9152.94
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	2334.72	0.00	0.00	0.00	-	-	-	-	-	2334.72
TPES³	23937.52	14371.4	305.51	49143.53	0.00	1175.8	193.55	0.00	-55.12	89072.19
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	-30.00	-2996.93	0.00	-7578.87	0.00	0.00	0.00	0.00	-90.49	-10696.29
TRANSFORMATION	-23907.52	15044.49	-305.51	-25554.80	0.00	-1175.8	-193.55	0.00	16906.07	-19186.62
Electricity Producers	0.00	-8332.08	0.00	-25554.80	0.00	-1175.8	-193.55	0.00	16906.07	-18350.16
Petroleum Refineries	-23907.52	23376.57	-	-	-	-	-	-	-	-530.95
Charcoal Plants	-	-	-	-	-	-	-	0.00	-	0.00
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	-305.51	0.00	-	-	-	0.00	-	-305.51
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-322.44	-322.44
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-1951.85	-1951.85
FINAL CONSUMPTION	0.00	26418.96	0.00	16009.86	-	-	-	0.00	14486.17	56914.99
TFC	0.00	26418.96	0.00	16009.86	-	-	-	0.00	14486.17	56914.99
Industry	0.00	3283.85	0.00	4968.66	-	-	-	0.00	3589.25	11841.76
Transport	-	10931.18	0.00	314.07	-	-	-	0.00	50.83	11296.08
Households	-	4427.99	0.00	1630.12	-	-	-	0.00	6728.3	12786.41
Com. & Public	0.00	90.86	0.00	0.00	-	-	-	0.00	3456.57	3547.43
Agriculture/Forestry	0.00	808.5	0.00	0.00	-	-	-	0.00	0.00	808.50
Others (Non Specified)	0.00	5374.74	0.00	9097.01	-	-	-	0.00	661.22	15132.97
Non-Energy Use	0.00	1501.84	0.00	0.00	-	-	-	-	-	1501.84

Equatorial Guinea

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

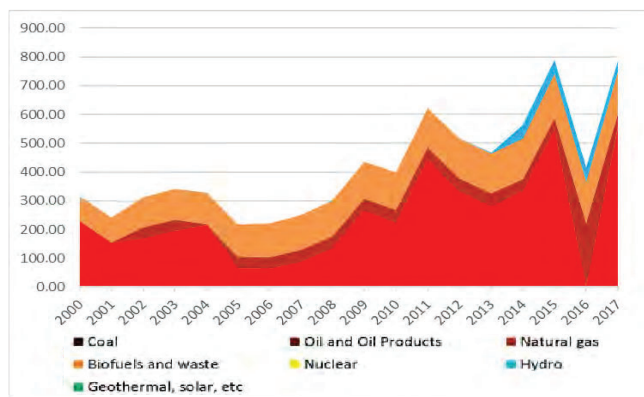


Figure 3.2. - Total Final Consumption (ktoe)

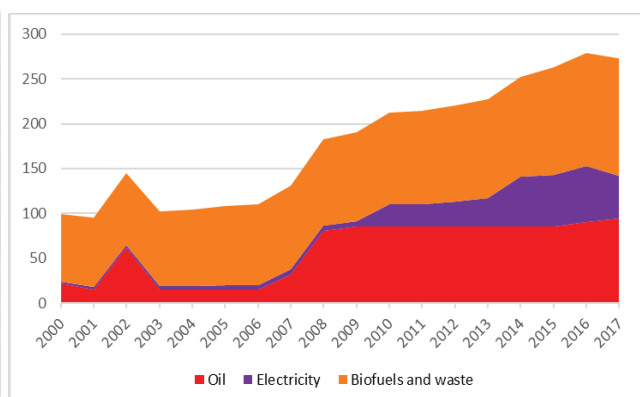


Figure 3.3. - Electricity Generation By Source (GWh)

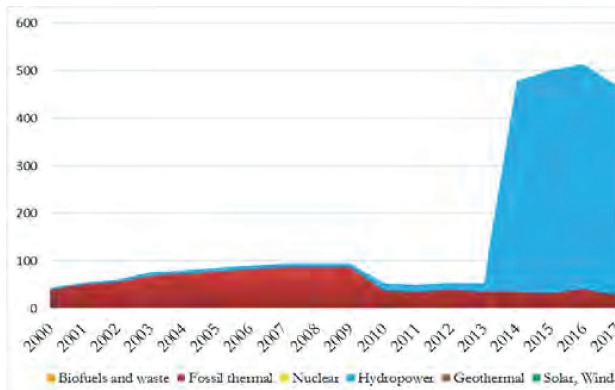


Figure 3.4. - Electricity Production and Consumption (GWh)

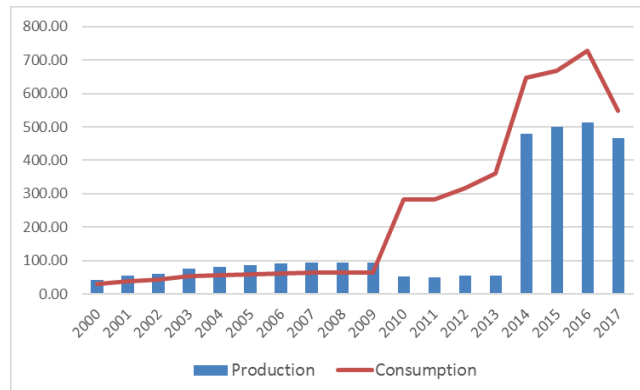


Figure 3.5. - Selected Indicators

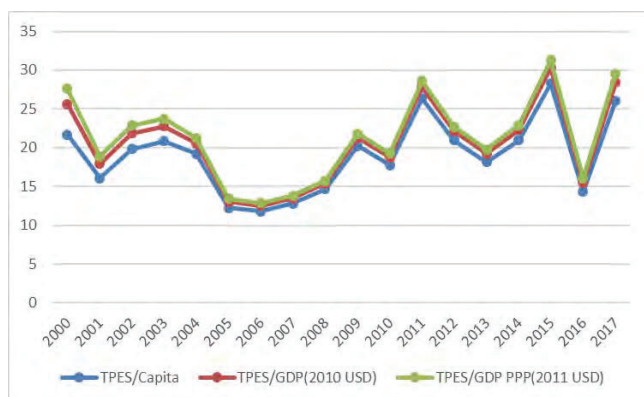
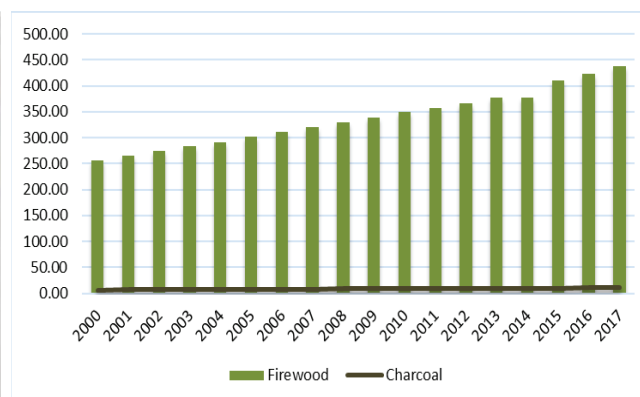


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Equatorial Guinea

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude	Oil	Coal ²	Natural	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
	Oil ¹	Products		Gas						
2017										
PRIMARY SUPPLY										
Production	10549.19	-	0.00	237.34	0.00	37.68	0.00	146.13	-	10970.34
Imports	0.00	289.38	0.00	0.00	-	-	-	0.00	0.00	289.38
Exports (-)	-10557.60	0.00	0.00	-190.44	-	-	-	0.00	0.00	-10748.04
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	264.29	10.34	0.00	0.00	-	-	-	-	-	274.63
TPES³	255.88	299.72	0.00	46.90	0.00	37.68	0.00	146.13	0.00	786.31
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	-255.88	6.14	0.00	0.00	0.00	0.00	0.00	17.05	14.94	-217.74
TRANSFORMATION	0.00	-203.07	0.00	-46.91	0.00	-37.68	0.00	-32.1	40.08	-279.68
Electricity Producers	0.00	-203.07	0.00	-46.91	0.00	-37.68	0.00	0.00	40.08	-247.58
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-32.10	-	-32.1
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-7.77	-7.77
FINAL CONSUMPTION	0.00	102.79	0.00	0.00	-	-	-	131.08	47.25	281.12
TFC	0.00	8.67	0.00	0.00	-	-	-	0.00	19.49	28.16
Industry	0.00	8.67	0.00	0.00	-	-	-	0.00	19.49	28.16
Transport	-	67.05	0.00	0.00	-	-	-	0.00	0.00	67.05
Households	-	19.78	0.00	0.00	-	-	-	105.87	21.86	147.51
Com. & Public	0.00	2.08	0.00	0.00	-	-	-	25.21	5.90	33.19
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0	0.00	0.00
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0	0.00	0.00
Non-Energy Use	0.00	5.21	0.00	0.00	-	-	-	-	-	5.21

Eritrea

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

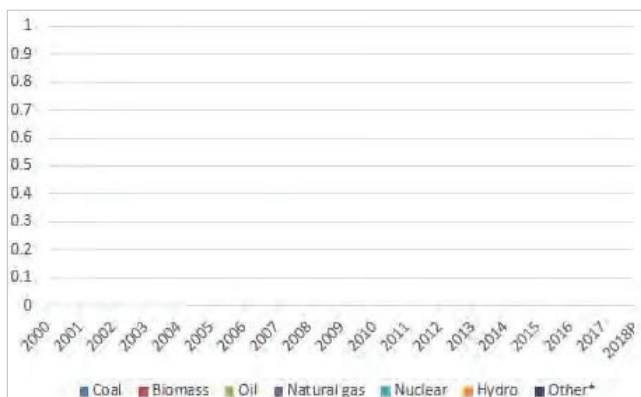


Figure 3.2. - Total Final Consumption (ktoe)

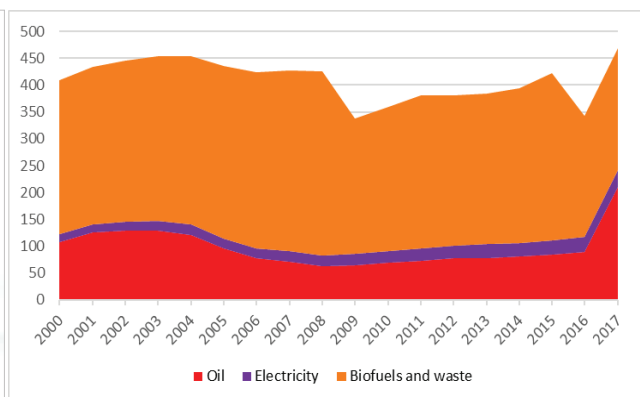


Figure 3.3. - Electricity Generation By Source (GWh)

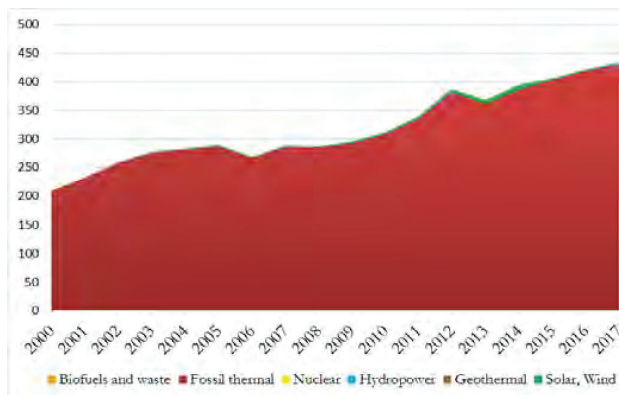


Figure 3.4. - Electricity Production and Consumption (GWh)

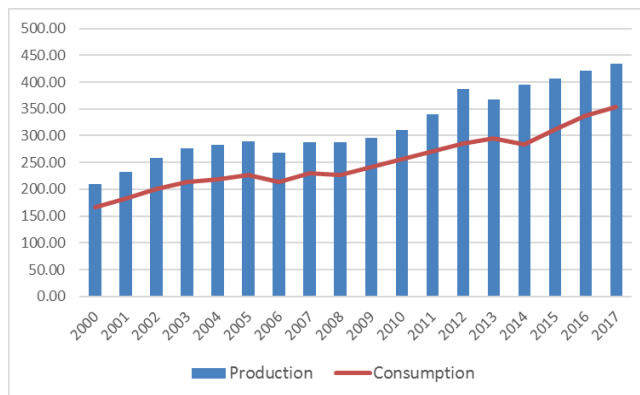


Figure 3.5. - Selected Indicators

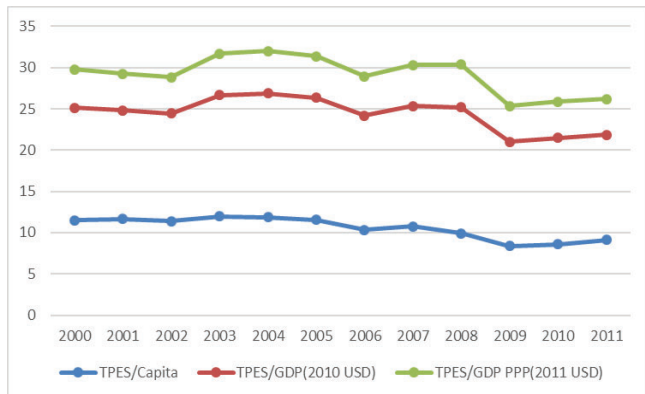
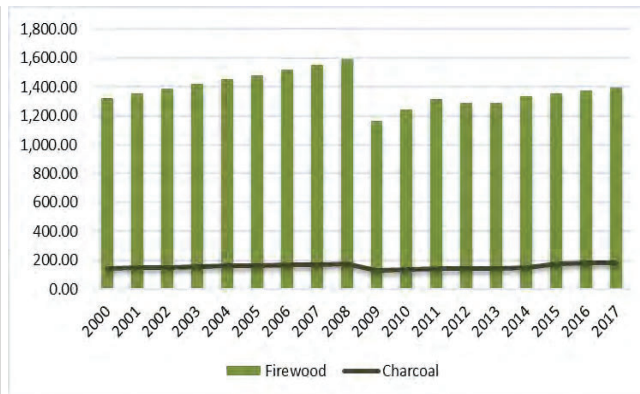


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Eritrea

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude	Oil	Coal ²	Natural	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
	Oil ¹	Products		Gas						
2017										
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	0.18	465.50	-	465.68
	Imports	0.00	208.42	0.00	0.00	-	-	0.00	0.00	208.42
	Exports (-)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	-1.10	-	-	-	-	-	-	-1.1
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	0.00
	TPES³	0.00	207.32	0.00	0.00	0.00	0.18	465.5	0.00	673.00
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	116.54	0.00	0.00	0.00	0.00	268.65	0.15	385.34
	Transformation	0.00	-116.54	0.00	0.00	0.00	-0.18	-507.14	37.41	-586.45
	Electricity Producers	0.00	-116.54	0.00	0.00	0.00	-0.18	0.00	37.41	-79.31
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-507.14	-	-507.14
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	0.00	-1.83	-1.83
	Losses	0.00	0.00	0.00	0.00	-	-	0.00	-5.36	-5.36
FINAL CONSUMPTION	TFC	0.00	207.32	0.00	0.00	-	-	227.01	30.37	464.7
	Industry	0.00	69.37	0.00	0.00	-	-	0.00	8.08	77.45
	Transport	-	105.98	0.00	0.00	-	-	0.00	0.00	105.98
	Households	-	17.39	0.00	0.00	-	-	184.68	12.51	214.58
	Com. & Public	0.00	0.00	0.00	0.00	-	-	42.33	9.78	52.11
	Agriculture/Forestry	0.00	14.58	0.00	0.00	-	-	0.00	0.00	14.58
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	0.00

Eswatini

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

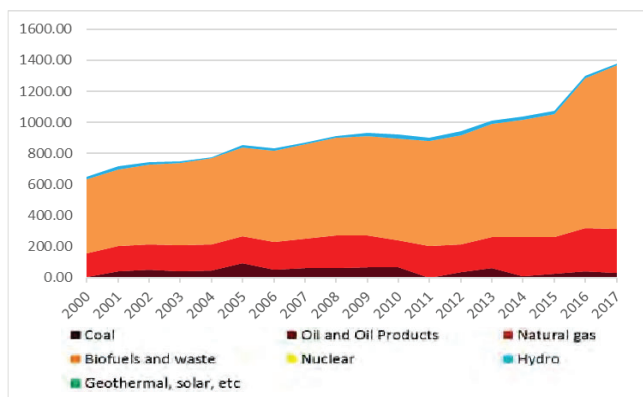


Figure 3.2. - Total Final Consumption (ktoe)

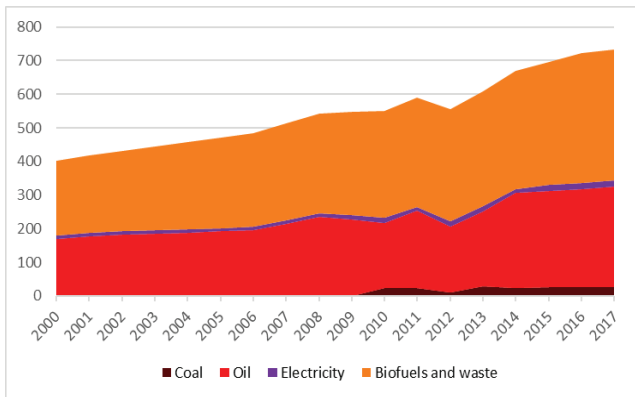


Figure 3.3. - Electricity Generation By Source (GWh)

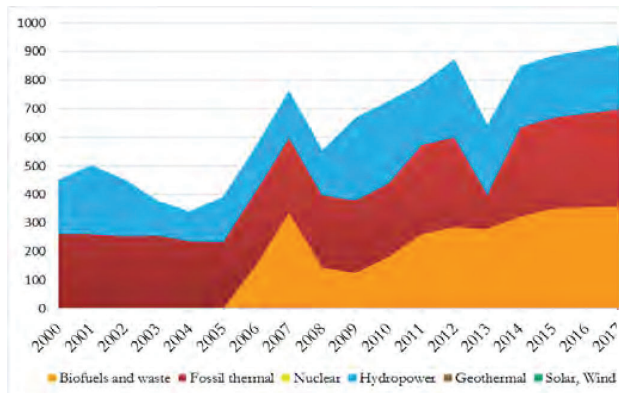


Figure 3.4. - Electricity Production and Consumption (GWh)

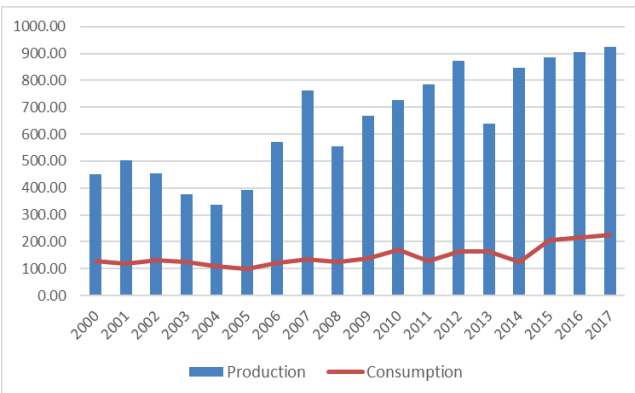


Figure 3.5. - Selected Indicators

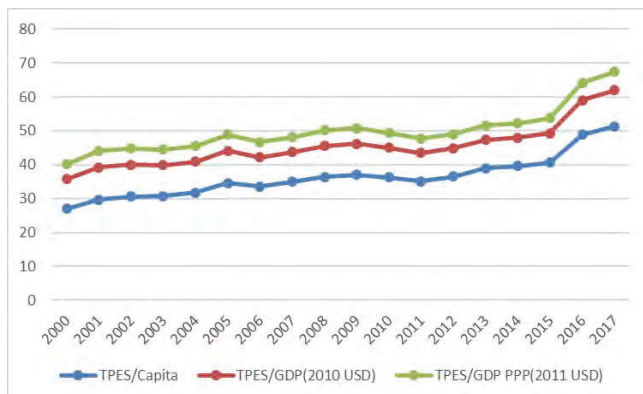
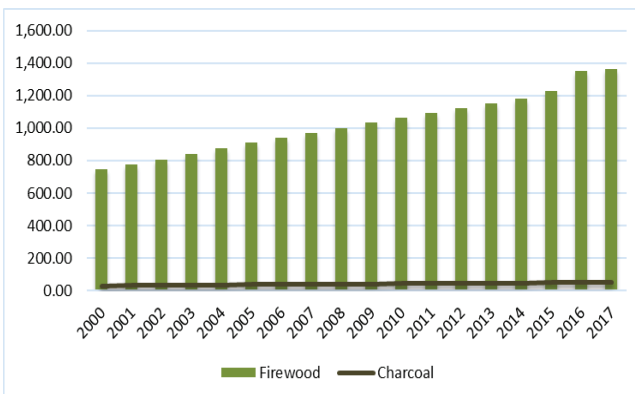


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Eswatini

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	93.05	0.00	0.00	10.07	0.01	1058.94	-	1162.07
	Imports	0.00	283.87	31.52	0.00	-	-	-	0.00	90.09	405.48
	Exports (-)	0.00	0.00	-93.05	0.00	-	-	-	-4.35	0.00	-97.4
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	283.87	31.52	0.00	0.00	10.07	0.01	1054.59	90.09	1470.15
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-0.29	-0.01	0.00	0.00	0.00	0.00	61.79	4.26	65.74
	Transformation	0.00	0.00	-15.93	0.00	0.00	-10.07	-0.01	-233.77	35.62	-224.16
	Electricity Producers	0.00	0.00	-15.93	0.00	0.00	-10.07	-0.01	-95	35.62	-85.39
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-138.77	-	-138.77
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-17.91	-17.91
FINAL CONSUMPTION	TFC	0.00	283.58	15.57	0.00	-	-	-	882.61	112.06	1293.82
	Industry	0.00	49.06	15.46	0.00	-	-	-	496.8	45.98	607.3
	Transport	-	207.34	0.00	0.00	-	-	-	0.00	0.00	207.34
	Households	-	1.92	0.00	0.00	-	-	-	311.31	34.06	347.29
	Com. & Public	0.00	14.61	0.11	0.00	-	-	-	0.00	9.30	24.02
	Agriculture/Forestry	0.00	10.65	0.00	0.00	-	-	-	0.00	22.72	33.37
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	74.50	0.00	74.5
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	0.00	0.00

Ethiopia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

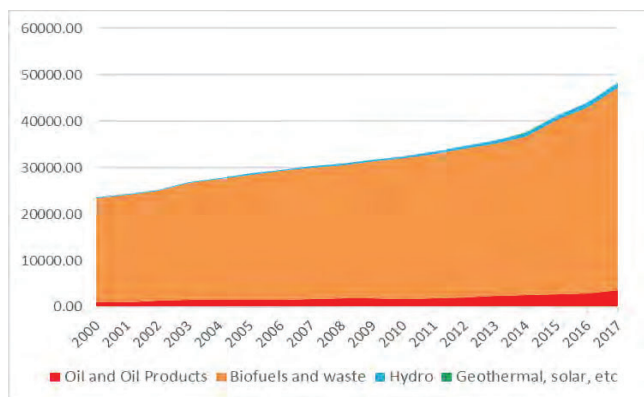


Figure 3.2. - Total Final Consumption (ktoe)

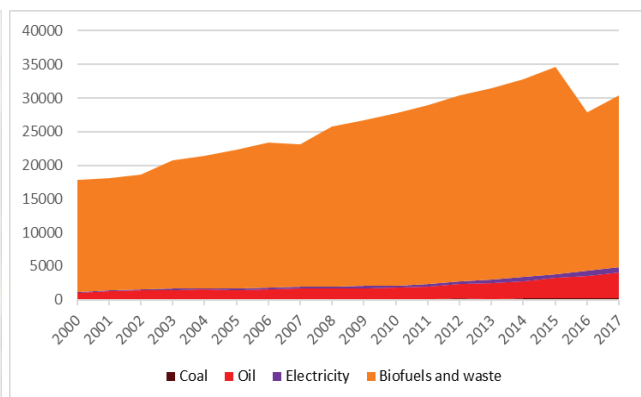


Figure 3.3. - Electricity Generation By Source (GWh)

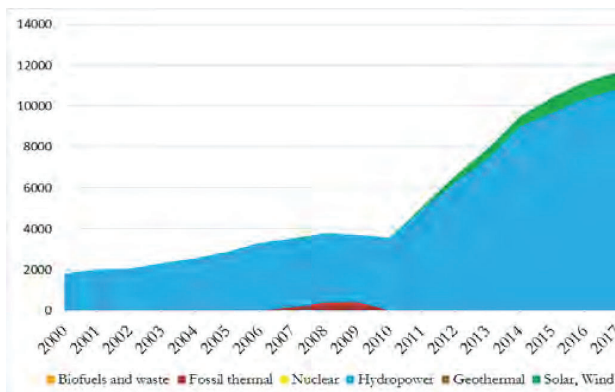


Figure 3.4. - Electricity Production and Consumption (GWh)

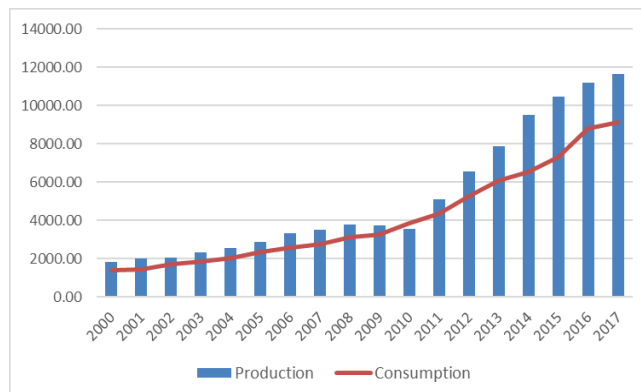


Figure 3.5. - Selected Indicators

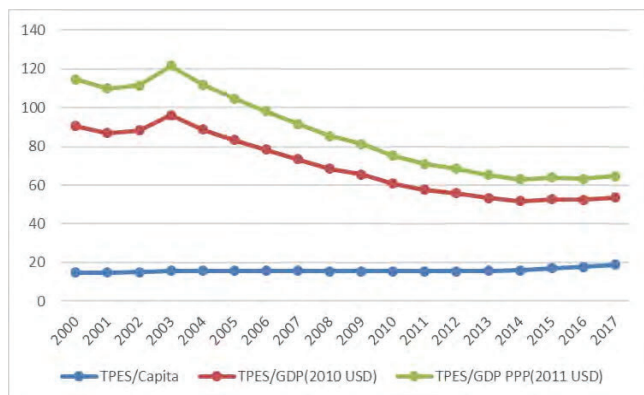
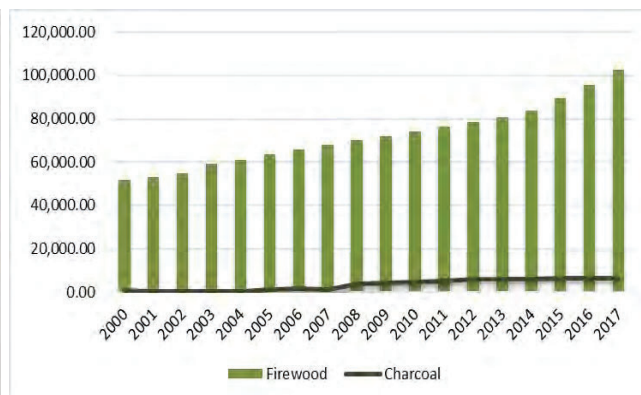


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Ethiopia

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	3.53	0.00	0.00	930.79	71.48	43677.64	-	44683.44
Imports	0.00	3620.00	268.84	0.00	-	-	-	0.00	0.00	3888.84
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	-15.14	-15.14
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	10.23	0.00	0.00	-	-	-	-	-	10.23
TPES³	0.00	3630.23	272.37	0.00	0.00	930.79	71.48	43677.64	-15.14	48567.37
Transfers	0.00	-51.06	-	-	-	-	-	-	-	-51.06
Statistical Difference	0.00	-72.11	5.68	0.00	0.00	0.00	0.00	10122.73	61.30	10111.92
TRANSFORMATION	0.00	-0.96	0.00	0.00	0.00	-930.79	-71.48	-18189.88	1002.64	-18190.47
Electricity Producers	0.00	-0.96	0.00	0.00	0.00	-930.79	-71.48	0.00	1002.64	-0.59
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-18189.88	-	-18189.88
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-42.68	-42.68
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-223.27	-223.27
FINAL CONSUMPTION	0.00	3506.10	272.37	0.00	-	-	-	35610.49	782.85	40171.81
TFC										
Industry	0.00	35.72	272.37	0.00	-	-	-	0.00	265.99	574.08
Transport	-	3289.39	0.00	0.00	-	-	-	0.00	0.00	3289.39
Households	-	180.99	0.00	0.00	-	-	-	30749.33	306.26	31236.58
Com. & Public	0.00	0.00	0.00	0.00	-	-	-	4861.16	207.93	5069.09
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	2.67	2.67
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Gabon

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

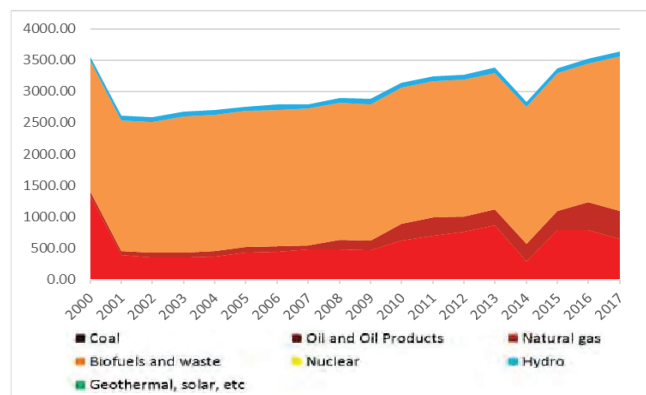


Figure 3.2. - Total Final Consumption (ktoe)

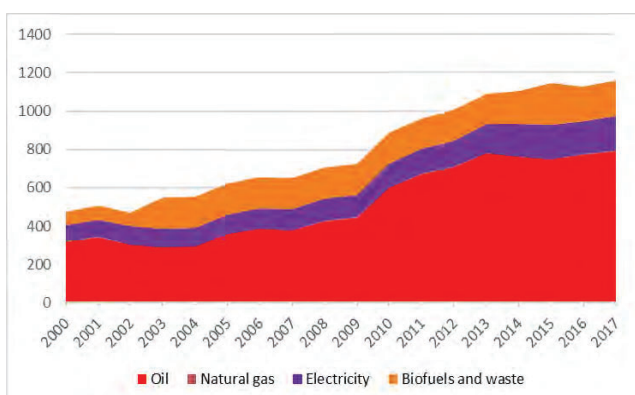


Figure 3.3. - Electricity Generation By Source (GWh)

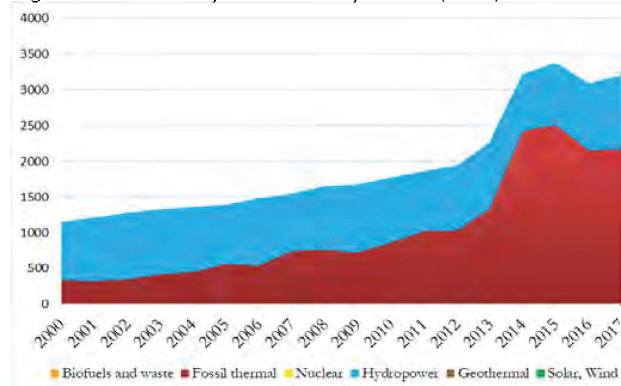


Figure 3.4. - Electricity Production and Consumption (GWh)

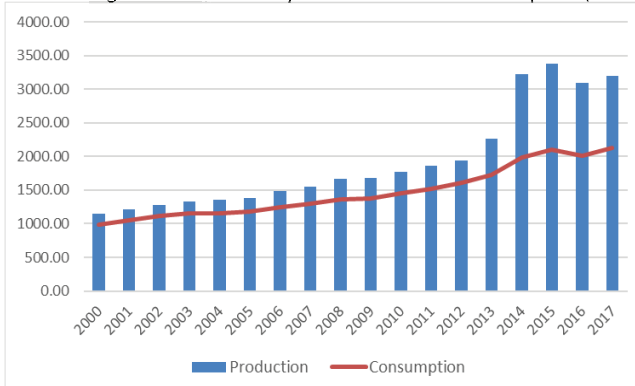


Figure 3.5. - Selected Indicators

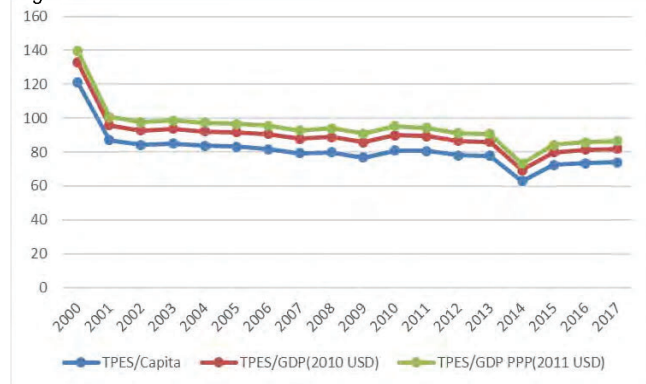
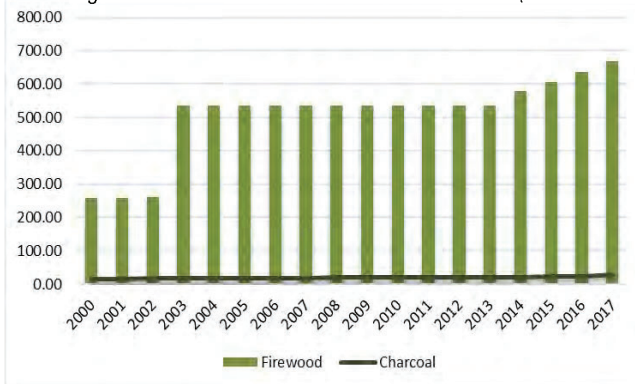


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Gabon

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY	Production	9805.16	-	0.00	446.26	0.00	87.07	0.17	2467.13	12805.79
	Imports	0.00	277.52	0.00	0.00	-	-	-	0.00	309.28
	Exports (-)	-8755.38	-371.31	0.00	0.00	-	-	-	0.00	-9126.69
	Int. Marine Bunkers (-)	-	-33.1	-	-	-	-	-	-	-33.1
	Int. Aviation Bunkers (-)	-	-0.31	-	-	-	-	-	-	-0.31
	ΔStock (+ draw, - build)	-280.17	0.00	0.00	0.00	-	-	-	-	-280.17
	TPES³	769.61	-127.2	0.00	446.26	0.00	87.07	0.17	2467.13	3674.8
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	-12.26	-15.84	0.00	-102.90	0.00	0.00	0.00	1188.87	1013.53
	Transformation	-757.35	615.37	0.00	-340.67	0.00	-87.07	-0.17	-2381.35	-2676.45
	Electricity Producers	0.00	-169.32	0.00	-340.67	0.00	-87.07	-0.17	-2292.78	-2615.22
	Petroleum Refineries	-757.35	784.69	-	-	-	-	-	-	27.34
	Charcoal Plants	-	-	-	-	-	-	-	-88.57	-88.57
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00
	Own Use	0.00	-132.61	0.00	0.00	-	-	-	0.00	-144.67
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-69.36
FINAL CONSUMPTION	TFC	0.00	339.72	0.00	2.69	-	-	-	1274.65	1797.85
	Industry	0.00	160.02	0.00	2.69	-	-	-	0.00	209.66
	Transport	-	96.59	0.00	0.00	-	-	-	0.00	96.59
	Households	-	57.66	0.00	0.00	-	-	-	1238.8	1393.38
	Com. & Public	0.00	17.00	0.00	0.00	-	-	-	35.85	79.56
	Agriculture/Forestry	0.00	0.82	0.00	0.00	-	-	-	0.00	0.82
	Others (Non Specified)	0.00	6.27	0.00	0.00	-	-	-	0.00	16.48
	Non-Energy Use	0.00	1.36	0.00	0.00	-	-	-	-	1.36

Gambia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

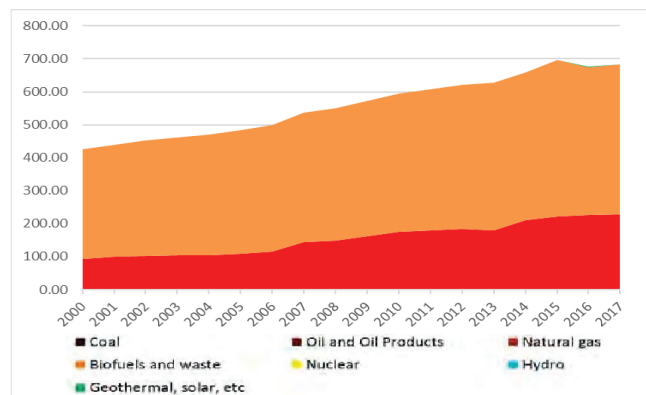


Figure 3.2. - Total Final Consumption (ktoe)

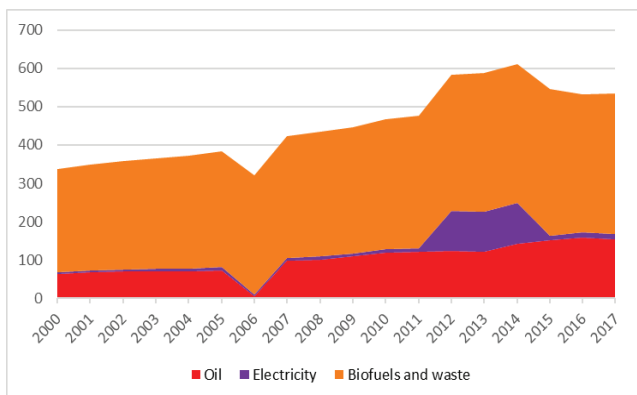


Figure 3.3. - Electricity Generation By Source (GWh)

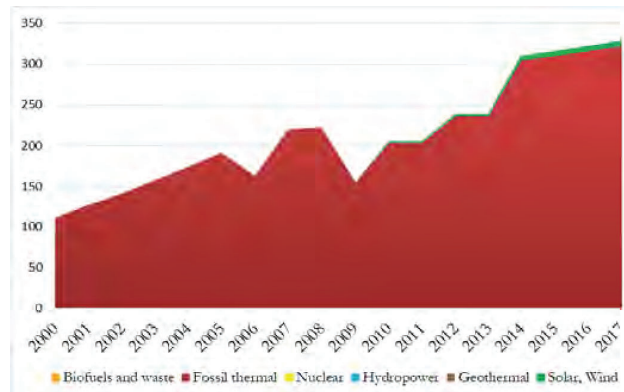


Figure 3.4. - Electricity Production and Consumption (GWh)

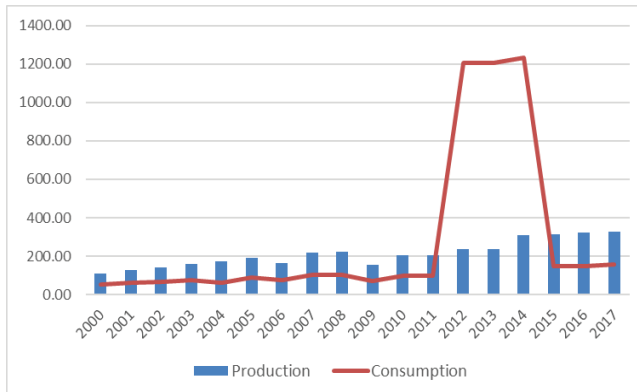


Figure 3.5. - Selected Indicators

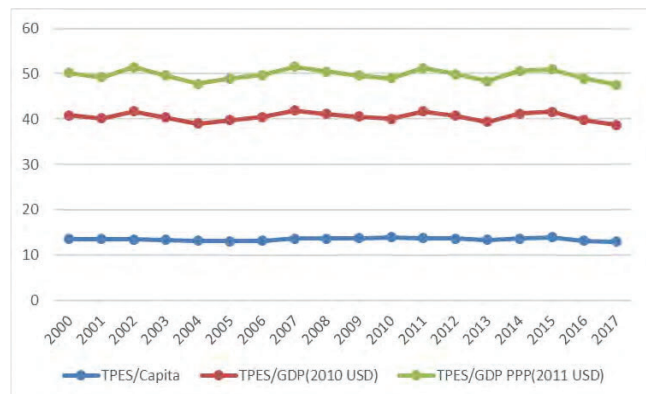
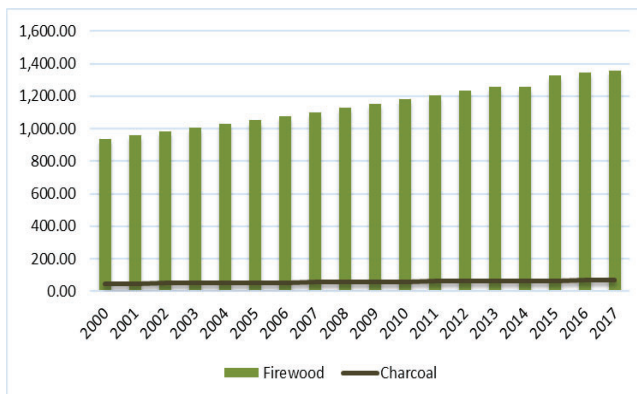


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Gambia

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	0.00	0.00	0.00	0.54	454.75	-	455.29
Imports	0.00	229.08	0.00	0.00	-	-	-	0.00	0.00	229.08
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	0.00	229.08	0.00	0.00	0.00	0.00	0.54	454.75	0.00	684.37
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	-0.75	0.00	0.00	0.00	0.00	0.00	93.69	-14.81	78.13
TRANSFORMATION	0.00	-70.19	0.00	0.00	0.00	0.00	-0.54	-183.26	28.25	-225.74
Electricity Producers	0.00	-70.19	0.00	0.00	0.00	0.00	-0.54	0.00	28.25	-42.48
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-183.26	-	-183.26
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	0.00	158.14	0.00	0.00	-	-	-	365.18	13.44	536.76
TFC										
Industry	0.00	48.55	0.00	0.00	-	-	-	0.00	3.51	52.06
Transport	-	100.75	0.00	0.00	-	-	-	0.00	0.00	100.75
Households	-	5.74	0.00	0.00	-	-	-	295.47	8.27	309.48
Com. & Public	0.00	3.10	0.00	0.00	-	-	-	69.71	1.38	74.19
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.28	0.28
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Ghana

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

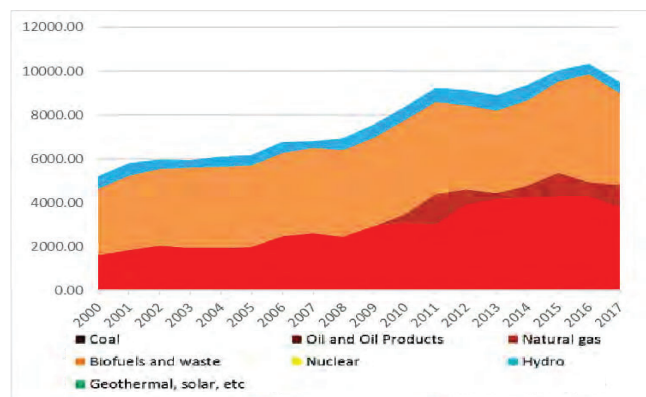


Figure 3.2. - Total Final Consumption (ktoe)

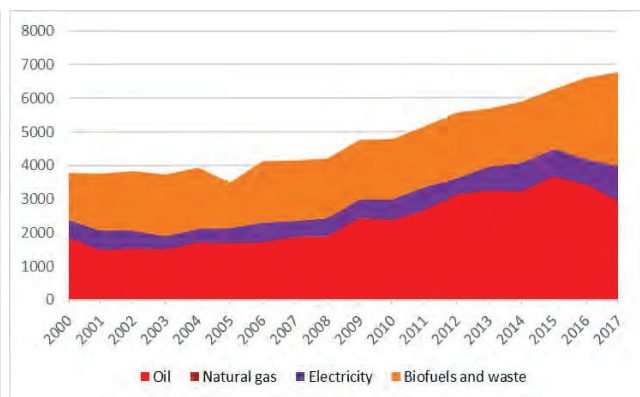


Figure 3.3. - Electricity Generation By Source (GWh)

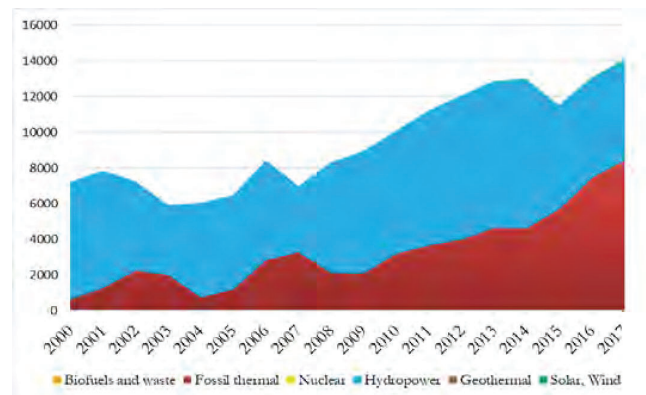


Figure 3.4. - Electricity Production and Consumption (GWh)

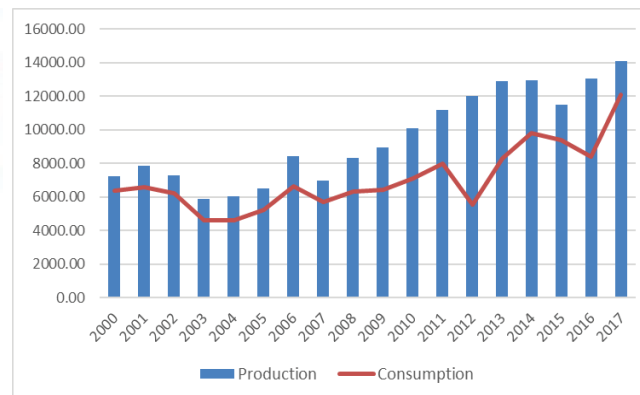


Figure 3.5. - Selected Indicators

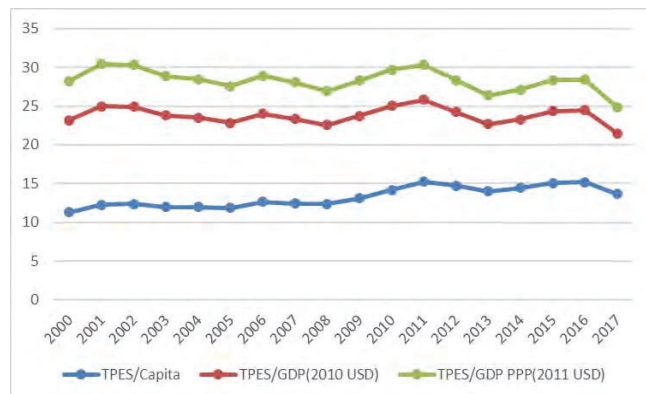
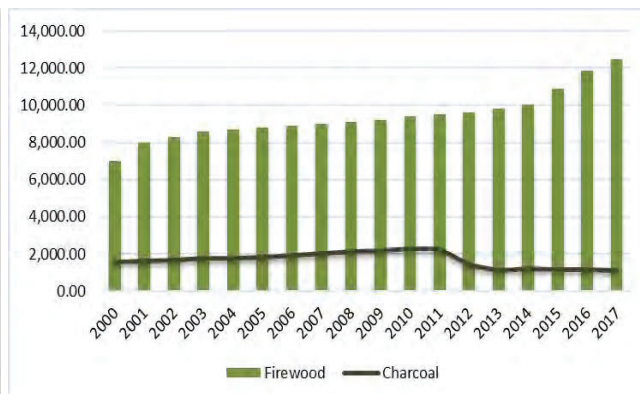


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Ghana

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	372034.00	-	140629.46	174969.42	3964.87	9664.7	5058.64	476831.73	-	1183152.82
	Imports	29051.29	124569.31	6027.72	20618.19	-	-	-	2340.69	2928.1	185535.3
	Exports (-)	-292402.68	-26998.23	-42929.49	-76268.95	-	-	-	-4.35	-1724.77	-440328.47
	Int. Marine Bunkers (-)	-	36669.95	-	-	-	-	-	-	-	36669.95
	Int. Aviation Bunkers (-)	-	-3620.78	-	-	-	-	-	-	-	-3620.78
	ΔStock (+ draw, - build)	2587.74	509.83	595.38	-62.31	-	-	-	-	-	3630.64
	TPES ³	111270.35	131130.08	104323.07	119256.35	3964.87	9664.70	5058.64	479168.07	1203.33	965039.46
TRANSFORMATION	Transfers	-10735.55	-6923.01	-	-	-	-	-	-	-	-17658.56
	Statistical Difference	-3579.27	-20445.28	-737099.74	-6771.29	0.00	0.00	0.00	23191.44	-1904.22	-746608.36
	Transformation	-95619.37	70346.65	2060146.56	-63219.52	-3964.87	-9664.70	-5058.64	-137523.29	69525.94	1884968.76
	Electricity Producers	-160.51	-17777.35	-65946.92	-62898.72	-3964.87	-9664.70	-5058.64	-25647.88	69525.94	-121593.65
	Petroleum Refineries	-95968.2	88124.00	-	-	-	-	-	-	-	-7844.2
	Charcoal Plants	-	-	-	-	-	-	-	-111606.78	-	-111606.78
	Gas-to-Liquids	509.34	-	-	-320.80	-	-	-	-	-	188.54
	Coal-to-Liquids	0.00	-	-1711.59	-	-	-	-	-	-	-1711.59
	Blast Furnaces	-	-	-1361.71	-	-	-	-	-	-	-1361.71
	Other Transformation	0.00	0.00	2129166.78	0.00	-	-	-	-268.63	-	2128898.15
	Own Use	-500.76	-215.48	-11291.12	-9437	-	-	-	0.00	-4381.92	-25826.28
	Losses	-835.40	-82.45	-	-1027.07	-	-	-	-6216.72	-9122.99	-1419173.71
	FINAL CONSUMPTION	TFC	0.00	173810.51	14189.69	38801.47	-	-	-	364567.59	55320.14
Industry		0.00	15429.62	8877.11	15022.21	-	-	-	13885.73	22524.99	75739.66
Transport		-	122642.81	2.55	544.18	-	-	-	3.68	496.17	123689.39
Households		-	14536.58	2662.25	9163.18	-	-	-	323228.52	19287.39	368877.92
Com. & Public		0.00	3838.52	1291.36	1069.52	-	-	-	26772.83	10314.97	43287.2
Agriculture/Forestry		0.00	4567.12	144.07	67.22	-	-	-	0.00	1454.71	6233.12
Others (Non Specified)		0.00	6790.7	4.09	9097.01	-	-	-	676.83	1241.91	17810.54
Non-Energy Use		0.00	6005.16	1208.26	3838.15	-	-	-	-	-	11051.57

Guinea

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

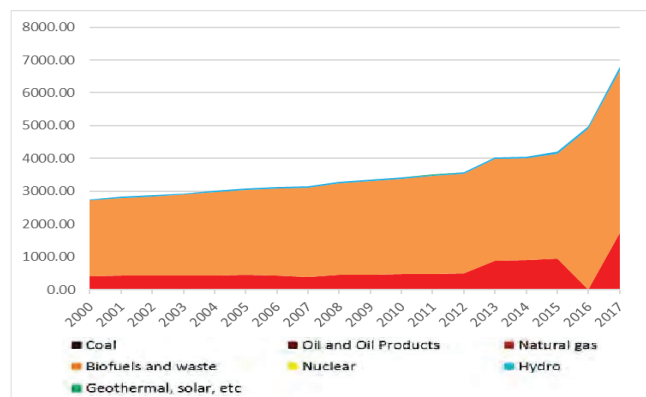


Figure 3.2. - Total Final Consumption (ktoe)

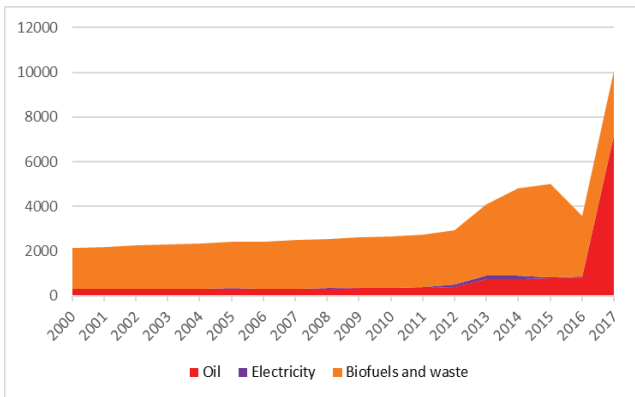


Figure 3.3. - Electricity Generation By Source (GWh)

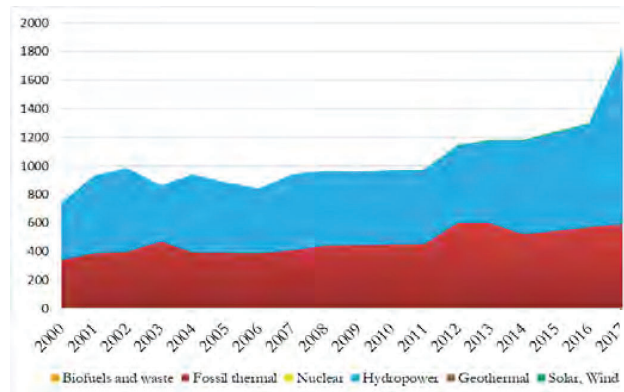


Figure 3.4. - Electricity Production and Consumption (GWh)

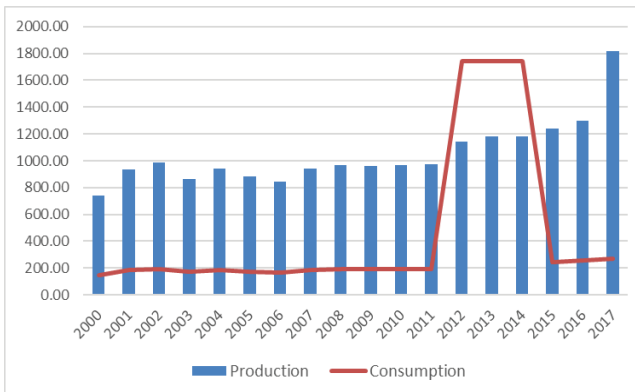


Figure 3.5. - Selected Indicators

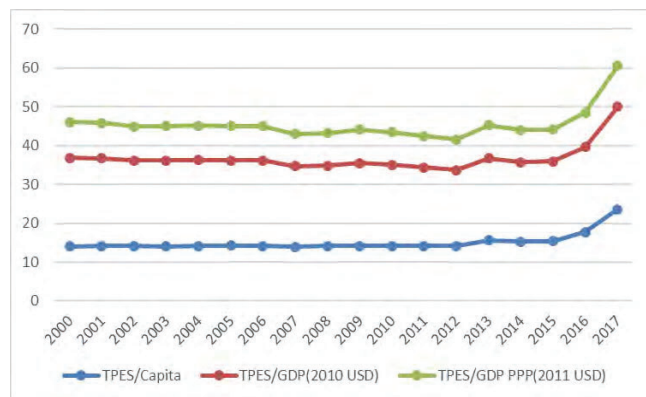
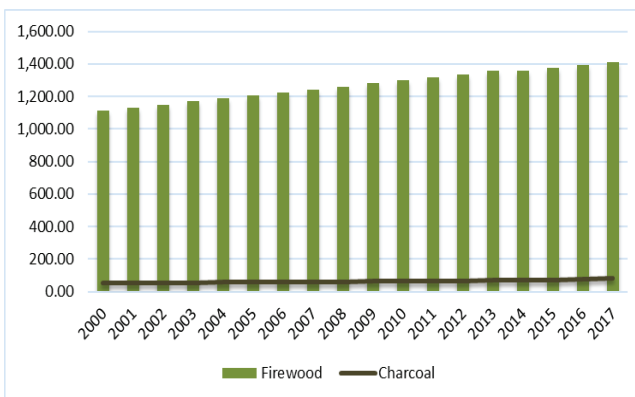


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Guinea

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	104.22	0.66	4954.91	-	5059.79
	Imports	0.00	7590.81	0.00	0.00	-	-	-	0.00	0.00	7590.81
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	7590.81	0.00	0.00	0.00	104.22	0.66	4954.91	0.00	12650.6
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-223.34	0.00	0.00	0.00	0.00	0.00	3590.55	-128.03	3239.18
	Transformation	0.00	-105.47	0.00	0.00	0.00	-104.22	-0.66	-5870.52	151.39	-5929.48
	Electricity Producers	0.00	-105.47	0.00	0.00	0.00	-104.22	-0.66	0.00	151.39	-58.96
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-5870.52	-	-5870.52
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	TFC	0.00	7262	0.00	0.00	-	-	-	2674.94	23.36	9960.3
	Industry	0.00	933.9	0.00	0.00	-	-	-	0.00	11.4	945.30
	Transport	-	6315.01	0.00	0.00	-	-	-	0.00	0.00	6315.01
	Households	-	10.32	0.00	0.00	-	-	-	2391.72	10.34	2412.38
	Com. & Public	0.00	2.77	0.00	0.00	-	-	-	283.22	1.62	287.61
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Guinea-Bissau

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

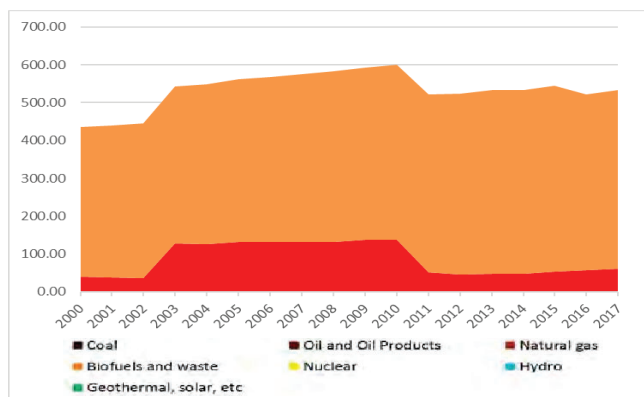


Figure 3.2. - Total Final Consumption (ktoe)

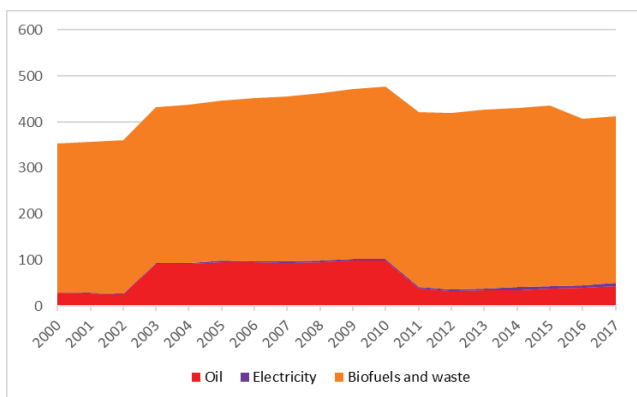


Figure 3.3. - Electricity Generation By Source (GWh)

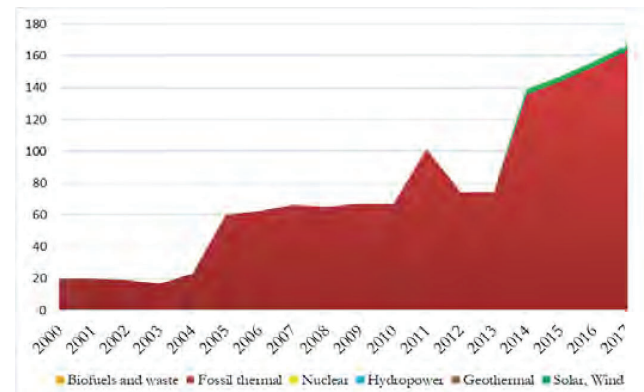


Figure 3.4. - Electricity Production and Consumption (GWh)

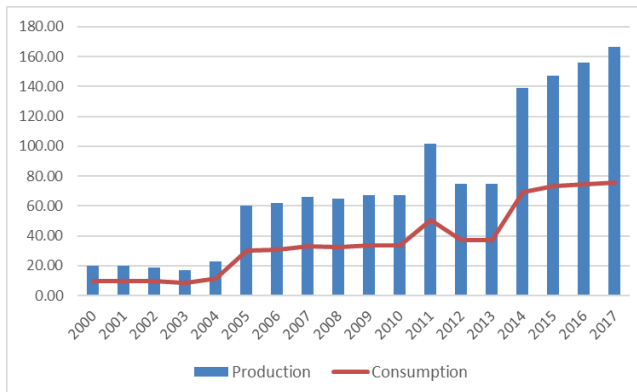


Figure 3.5. - Selected Indicators

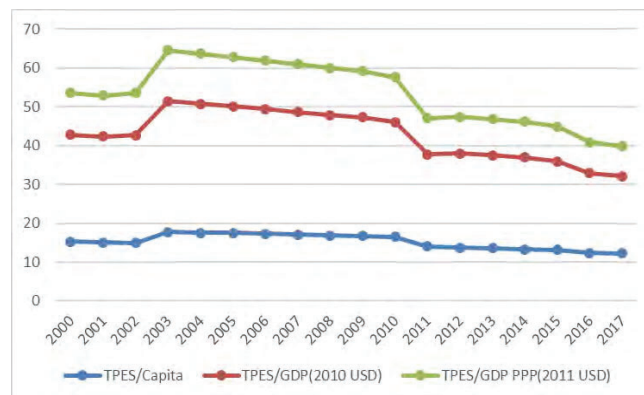
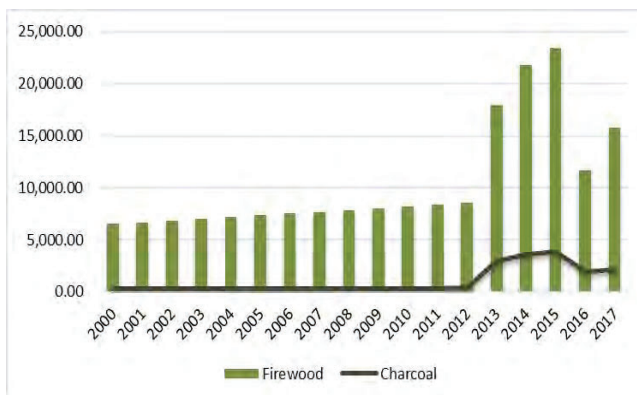


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Guinea-Bissau

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	0.00	0.00	0.00	0.26	471.33	-	471.59
Imports	0.00	61.77	0.00	0.00	-	-	-	0.00	0.00	61.77
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	0.00	61.77	0.00	0.00	0.00	0.00	0.26	471.33	0.00	533.36
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	-0.05	0.00	0.00	0.00	0.00	0.00	114.68	-7.88	106.75
TRANSFORMATION	0.00	-16.13	0.00	0.00	0.00	0.00	-0.26	-224.81	14.41	-226.79
Electricity Producers	0.00	-16.13	0.00	0.00	0.00	0.00	-0.26	0.00	14.41	-1.98
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-224.81	-	-224.81
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	0.00	45.59	0.00	0.00	-	-	-	361.20	6.53	413.32
TFC										
Industry	0.00	11.38	0.00	0.00	-	-	-	0.00	1.93	13.31
Transport	-	28.62	0.00	0.00	-	-	-	0.00	0.00	28.62
Households	-	0.85	0.00	0.00	-	-	-	292.23	3.94	297.02
Com. & Public	0.00	1.66	0.00	0.00	-	-	-	68.97	0.66	71.29
Agriculture/Forestry	0.00	2.56	0.00	0.00	-	-	-	0.00	0.00	2.56
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	0.52	0.00	0.00	-	-	-	-	-	0.52

Kenya

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

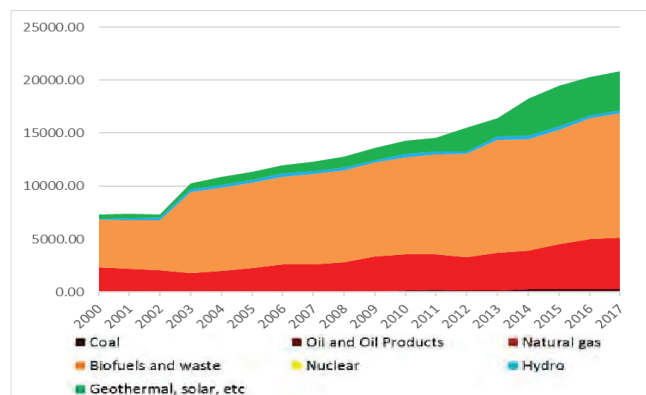


Figure 3.2. - Total Final Consumption (ktoe)

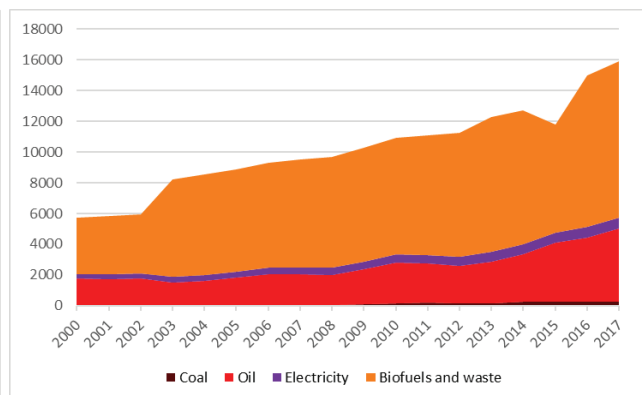


Figure 3.3. - Electricity Generation By Source (GWh)

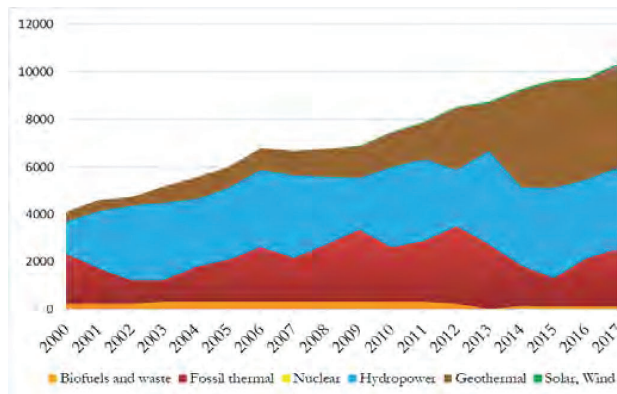


Figure 3.4. - Electricity Production and Consumption (GWh)

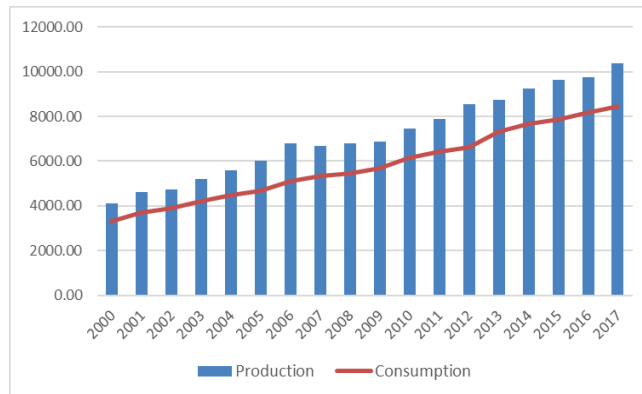


Figure 3.5. - Selected Indicators

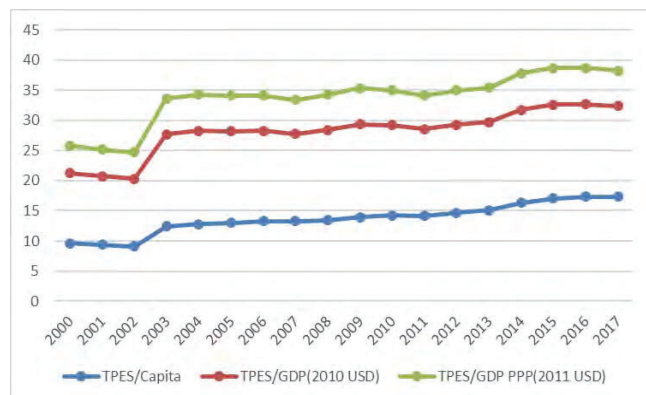
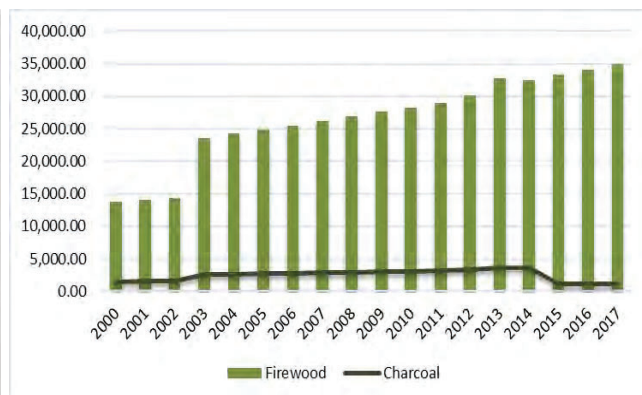


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Kenya

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	700.16	-	0.00	0.00	0.00	297.69	3686.26	11747.62	-	16431.73
Imports	0.00	4802.52	270.26	0.00	-	-	-	0.00	14.93	5087.71
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	-669.94	-	-	-	-	-	-	-	-669.94
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	700.16	4132.58	270.26	0.00	0.00	297.69	3686.26	11747.62	14.93	20849.5
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	575.00	0.00	0.00	0.00	0.00	0.00	1591.34	-7.09	2159.25
TRANSFORMATION	-700.16	96.84	0.00	0.00	0.00	-297.69	-3686.26	-3210.67	890.83	-6907.11
Electricity Producers	0.00	-586.55	0.00	0.00	0.00	-297.69	-3686.26	-38.22	890.83	-3717.89
Petroleum Refineries	-700.16	683.39	-	-	-	-	-	-	-	-16.77
Charcoal Plants	-	-	-	-	-	-	-	-3172.45	-	-3172.45
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-1.81	-1.81
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-169.91	-169.91
FINAL CONSUMPTION	0.00	4804.42	270.26	0.00	-	-	-	10128.29	726.95	15929.92
Industry	0.00	923.30	270.26	0.00	-	-	-	0.00	389.66	1583.22
Transport	-	3209.06	0.00	0.00	-	-	-	0.00	0.00	3209.06
Households	-	423.6	0.00	0.00	-	-	-	8191.48	215.25	8830.33
Com. & Public	0.00	0.00	0.00	0.00	-	-	-	1936.81	122.04	2058.85
Agriculture/Forestry	0.00	63.65	0.00	0.00	-	-	-	0.00	0.00	63.65
Others (Non Specified)	0.00	43.34	0.00	0.00	-	-	-	0.00	0.00	43.34
Non-Energy Use	0.00	141.47	0.00	0.00	-	-	-	-	-	141.47

Lesotho

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

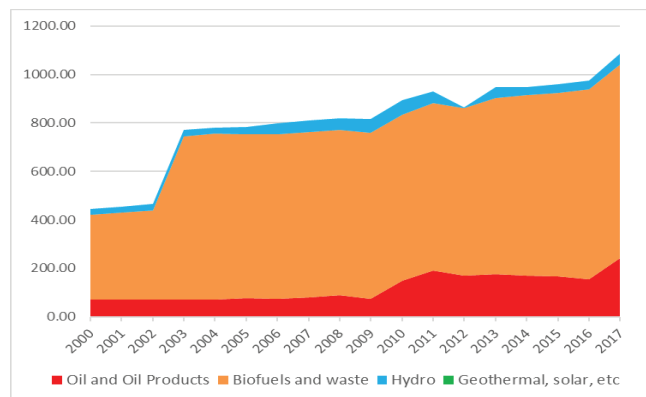


Figure 3.2. - Total Final Consumption (ktoe)

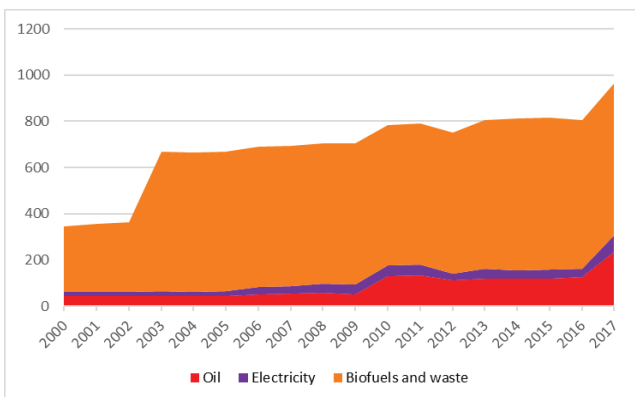


Figure 3.3. - Electricity Generation By Source (GWh)

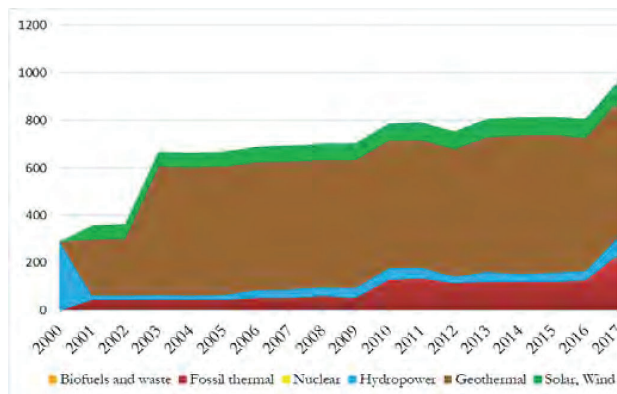


Figure 3.4. - Electricity Production and Consumption (GWh)

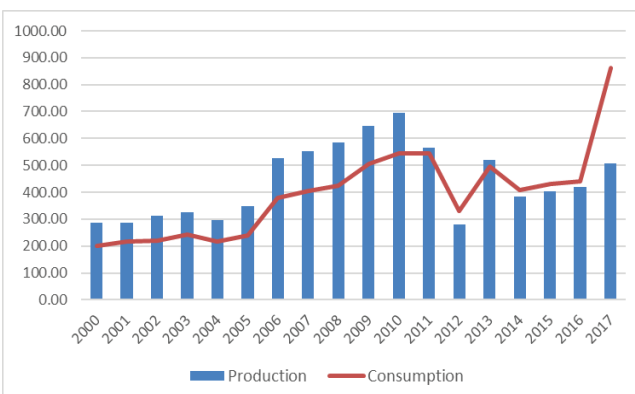


Figure 3.5. - Selected Indicators

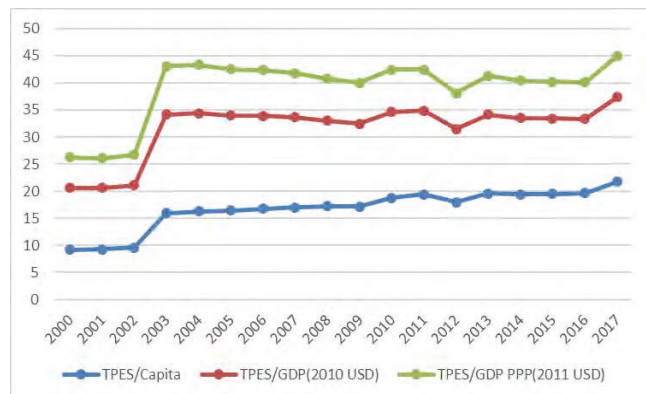
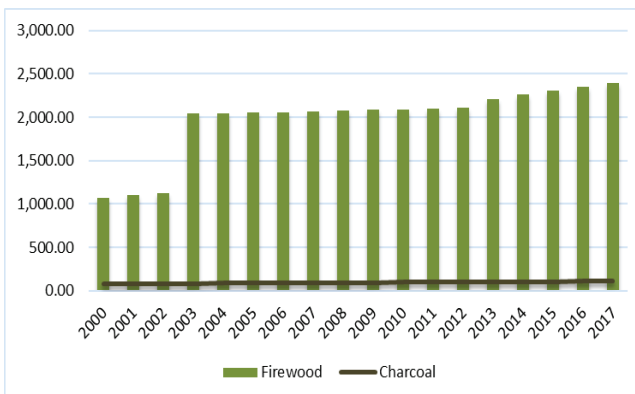


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Lesotho

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	43.66	0.00	800.57	-	844.23
	Imports	0.00	240.92	0.00	0.00	-	-	-	0.00	32.53	273.45
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	-0.22	-0.22
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	240.92	0.00	0.00	0.00	43.66	0.00	800.57	32.31	1117.46
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-0.22	0.00	0.00	0.00	0.00	0.00	145.08	0.37	145.23
	Transformation	0.00	0.00	0.00	0.00	0.00	-43.66	0.00	-289.04	43.66	-289.04
	Electricity Producers	0.00	0.00	0.00	0.00	0.00	-43.66	0.00	0.00	43.66	0.00
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-289.04	-	-289.04
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-0.64	-0.64
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-12.95	-12.95
FINAL CONSUMPTION	TFC	0.00	240.7	0.00	0.00	-	-	-	656.61	62.75	960.06
	Industry	0.00	21.14	0.00	0.00	-	-	-	0.00	22.03	43.17
	Transport	-	174.77	0.00	0.00	-	-	-	0.00	0.00	174.77
	Households	-	31.92	0.00	0.00	-	-	-	531.37	21.12	584.41
	Com. & Public	0.00	1.93	0.00	0.00	-	-	-	125.24	11.68	138.85
	Agriculture/Forestry	0.00	10.94	0.00	0.00	-	-	-	0.00	0.00	10.94
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	7.92	7.92
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Liberia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

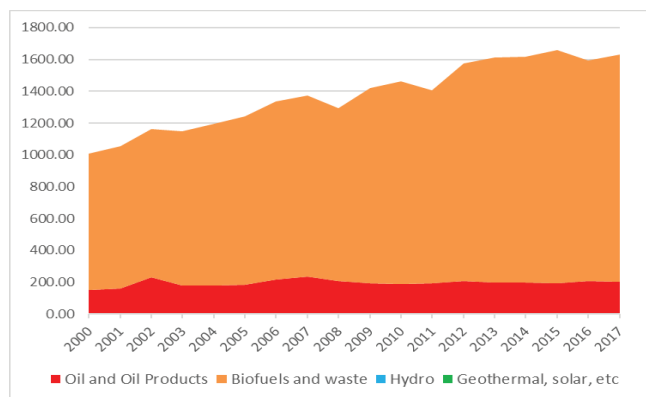


Figure 3.2. - Total Final Consumption (ktoe)

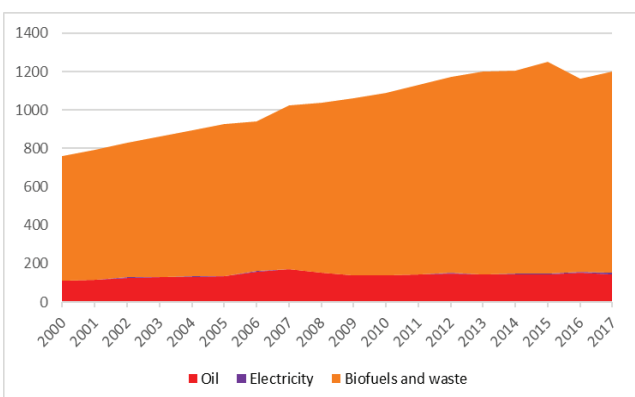


Figure 3.3. - Electricity Generation By Source (GWh)

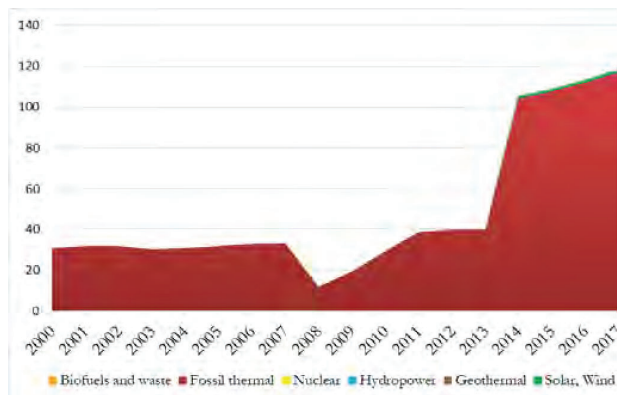


Figure 3.4. - Electricity Production and Consumption (GWh)

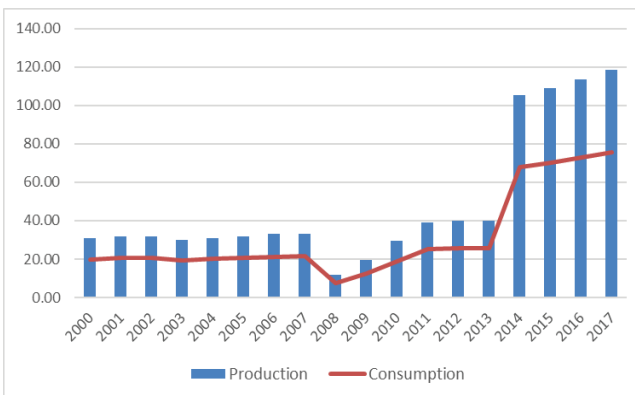


Figure 3.5. - Selected Indicators

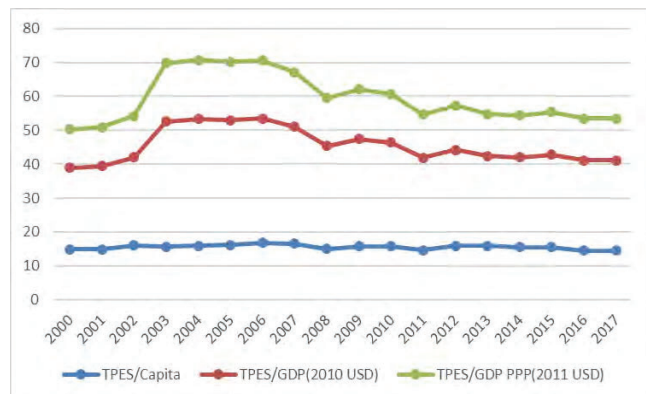
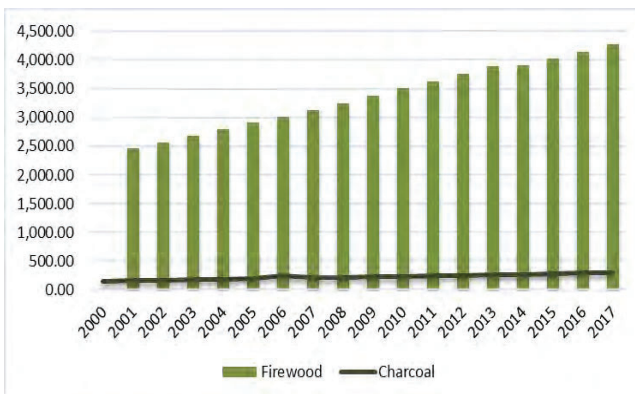


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Liberia

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	0.11	1429.66	-	1429.77
	Imports	0.00	202.80	0.00	0.00	-	-	0.00	0.00	202.80
	Exports (-)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	0.00
	TPES³	0.00	202.80	0.00	0.00	0.00	0.11	1429.66	0.00	1632.57
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-0.04	0.00	0.00	0.00	0.00	415.18	-3.58	411.56
	Transformation	0.00	-55.26	0.00	0.00	0.00	-0.11	-798.17	10.18	-843.36
	Electricity Producers	0.00	-55.26	0.00	0.00	0.00	-0.11	0.00	10.18	-45.19
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-798.17	-	-798.17
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Losses	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	TFC	0.00	147.50	0.00	0.00	-	-	1046.67	6.60	1200.77
	Industry	0.00	37.37	0.00	0.00	-	-	0.00	2.15	39.52
	Transport	-	93.94	0.00	0.00	-	-	0.00	0.00	93.94
	Households	-	2.76	0.00	0.00	-	-	847.59	3.79	854.14
	Com. & Public	0.00	5.45	0.00	0.00	-	-	199.08	0.66	205.19
	Agriculture/Forestry	0.00	6.28	0.00	0.00	-	-	0.00	0.00	6.28
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	1.70	0.00	0.00	-	-	-	-	1.70

Libya

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

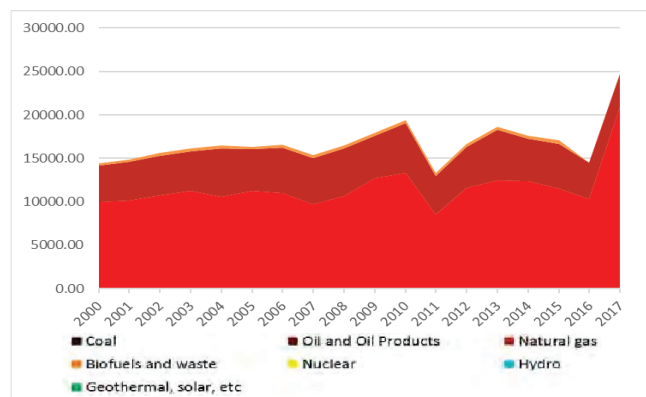


Figure 3.2. - Total Final Consumption (ktoe)

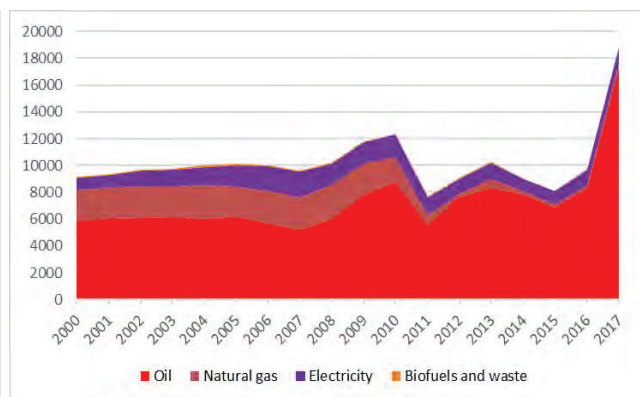


Figure 3.3. - Electricity Generation By Source (GWh)



Figure 3.4. - Electricity Production and Consumption (GWh)

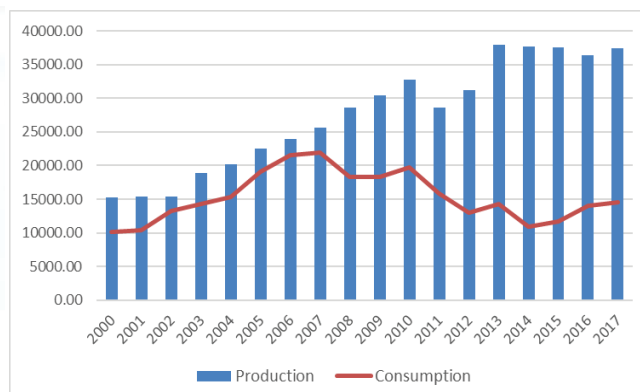


Figure 3.5. - Selected Indicators

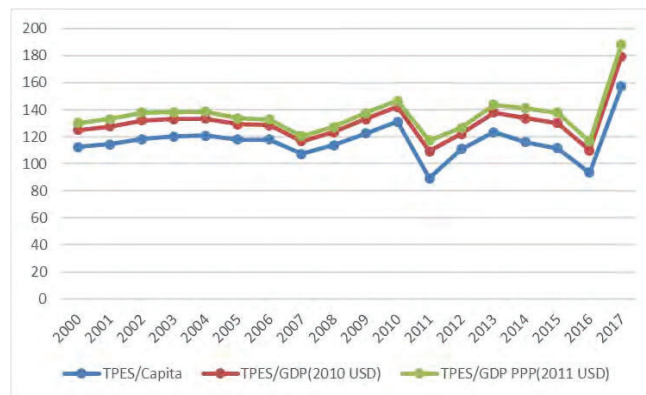
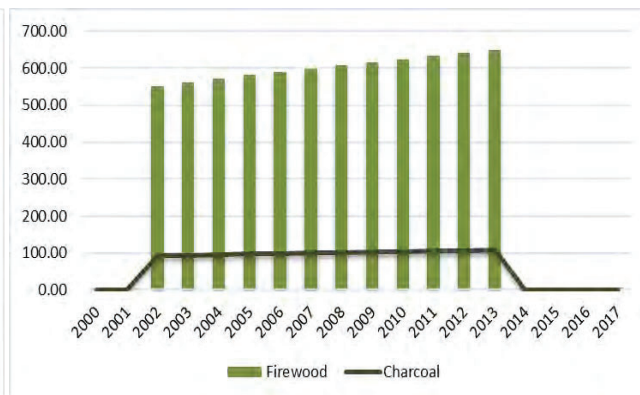


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Libya

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	38764.92	-	0.00	7431.74	0.00	0.00	0.71	0.00	-	46197.37
	Imports	0.00	14859.04	0.00	0.00	-	-	-	0.00	32.34	14891.38
	Exports (-)	-31086.93	-1531.7	0.00	-3603.37	-	-	-	0.00	0.00	-36222
	Int. Marine Bunkers (-)	-	-113.43	-	-	-	-	-	-	-	-113.43
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	7677.99	13213.91	0.00	3828.37	0.00	0.00	0.71	0.00	32.34	24753.32
TRANSFORMATION	Transfers	-717.56	720.37	-	-	-	-	-	-	-	2.81
	Statistical Difference	-1269.32	767.99	0.00	1145.80	0.00	0.00	0.00	0.00	-1300.15	-655.68
	Transformation	-5691.11	3015.85	0.00	-4811.40	0.00	0.00	-0.71	0.00	3216.92	-4270.45
	Electricity Producers	0.00	-2486.30	0.00	-4811.40	0.00	0.00	-0.71	0.00	3216.92	-4081.49
	Petroleum Refineries	-5691.11	5502.15	-	-	-	-	-	-	-	-188.96
	Charcoal Plants	-	-	-	-	-	-	0.00	-	-	0.00
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	0.00	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	-45.25	-	-	-	0.00	-53.85	-99.1
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-646.57	-646.57
	TFC	0.00	17718.12	0.00	117.52	-	-	-	0.00	1248.69	19084.33
	Industry	0.00	647.25	0.00	41.52	-	-	-	0.00	107.08	795.85
	Transport	-	16496.92	0.00	0.00	-	-	-	0.0	0.00	16496.92
	Households	-	489.56	0.00	0.00	-	-	-	0.00	534.86	1024.42
	Com. & Public	0.00	0.00	0.00	0.00	-	-	-	0.00	132.95	132.95
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	107.88	107.88
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	365.92	365.92
	Non-Energy Use	0.00	84.39	0.00	76.00	-	-	-	-	-	160.39

Madagascar

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

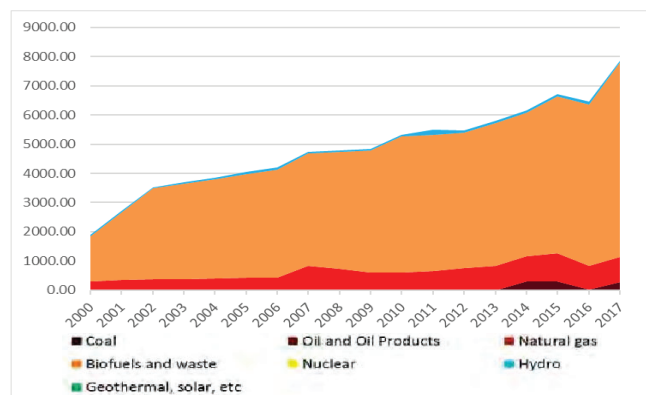


Figure 3.2. - Total Final Consumption (ktoe)

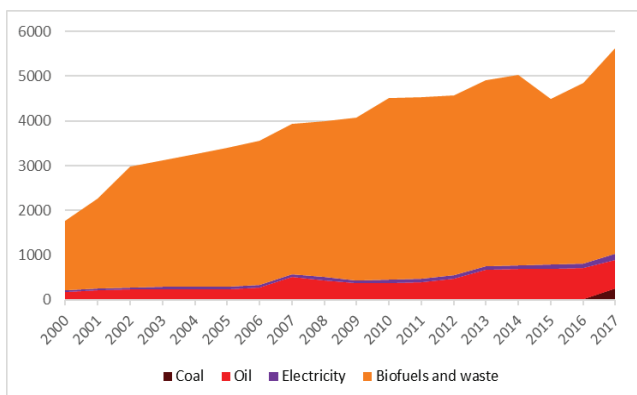


Figure 3.3. - Electricity Generation By Source (GWh)

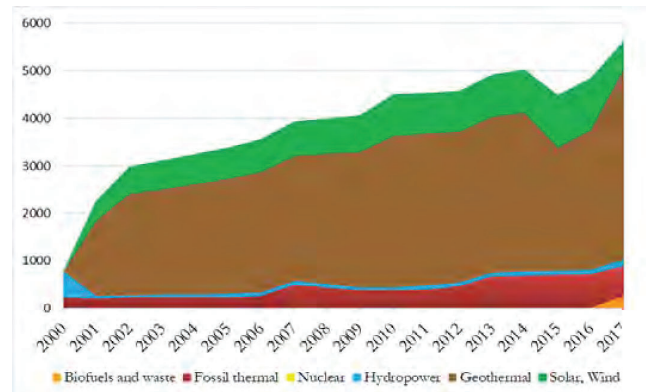


Figure 3.4. - Electricity Production and Consumption (GWh)

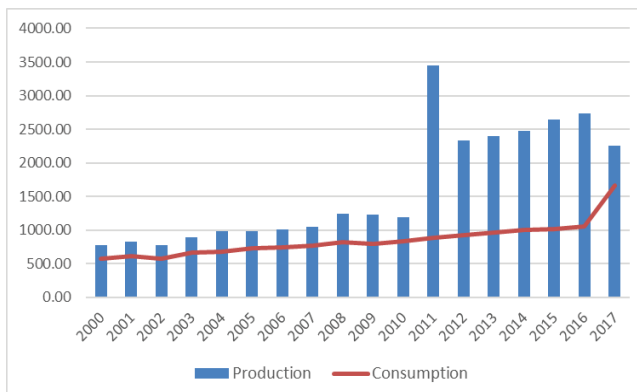


Figure 3.5. - Selected Indicators

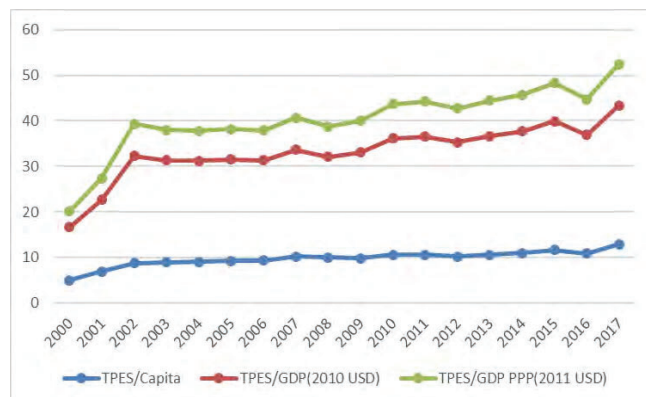
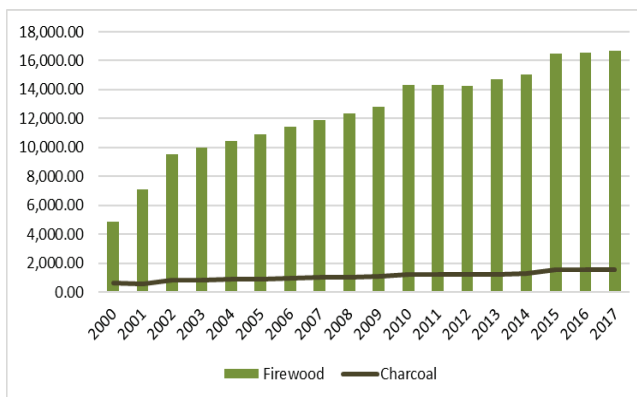


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Madagascar

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	67.39	0.00	6659.41	-	6726.8
	Imports	0.00	877.18	280.58	0.00	-	-	-	0.00	0.00	1157.76
	Exports (-)	0.00	-0.52	0.00	0.00	-	-	-	0.00	0.00	-0.52
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	-40.48	-	-	-	-	-	-	-	-40.48
	ΔStock (+ draw, - build)	0.00	20.29	0.00	0.00	-	-	-	-	-	20.29
	TPES ³	0.00	856.47	280.58	0.00	0.00	67.39	0.00	6659.41	0.00	7863.85
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	97.13	-0.61	0.00	0.00	0.00	0.00	1214.74	-4.29	1306.97
	Transformation	0.00	-341.86	-18.90	0.00	0.00	-67.39	0.00	-2339.67	193.85	-2573.97
	Electricity Producers	0.00	-341.86	-18.90	0.00	0.00	-67.39	0.00	-140.63	193.85	-374.93
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-2199.04	-	-2199.04
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-9.51	-9.51
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-36.95	-36.95
FINAL CONSUMPTION	TFC	0.00	611.74	261.07	0.00	-	-	-	5534.48	143.10	6550.39
	Industry	0.00	94.76	261.07	0.00	-	-	-	1440.75	40.74	1837.32
	Transport	-	441.22	0.00	0.00	-	-	-	0.00	0.00	441.22
	Households	-	42.67	0.00	0.00	-	-	-	2806.42	53.79	2902.88
	Com. & Public	0.00	0.00	0.00	0.00	-	-	-	2902.88	4.24	1291.55
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	33.09	0.00	0.00	-	-	-	0.00	44.33	77.42
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Malawi

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

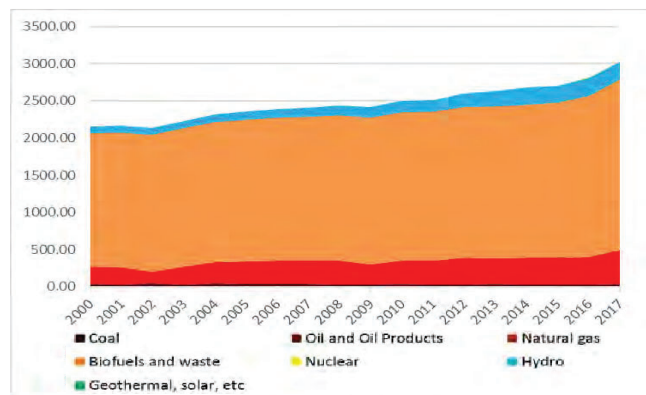


Figure 3.2. - Total Final Consumption (ktoe)

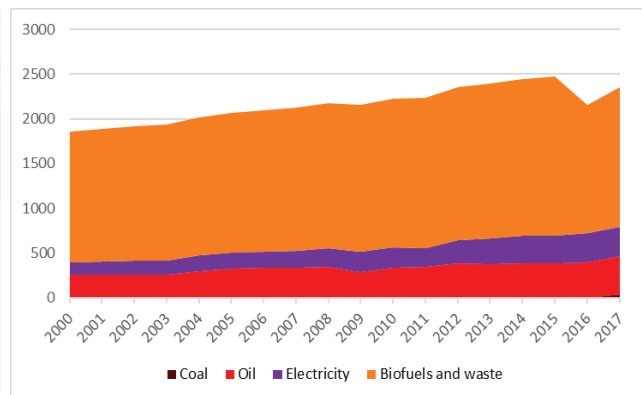


Figure 3.3. - Electricity Generation By Source (GWh)

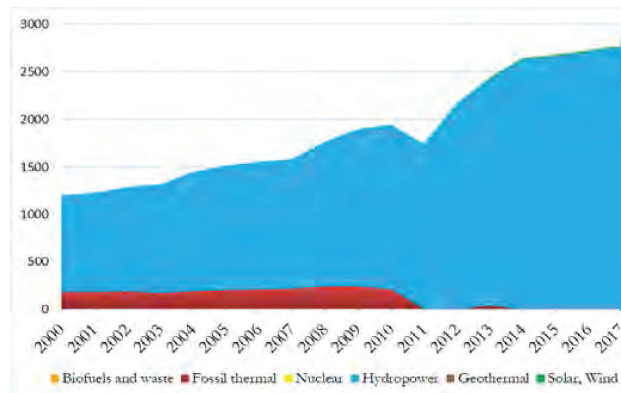


Figure 3.4. - Electricity Production and Consumption (GWh)

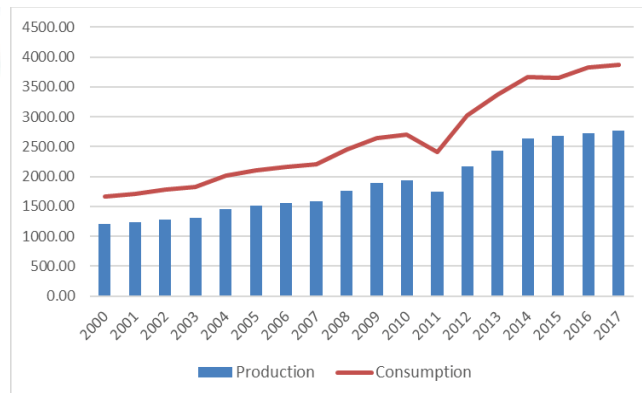


Figure 3.5. - Selected Indicators

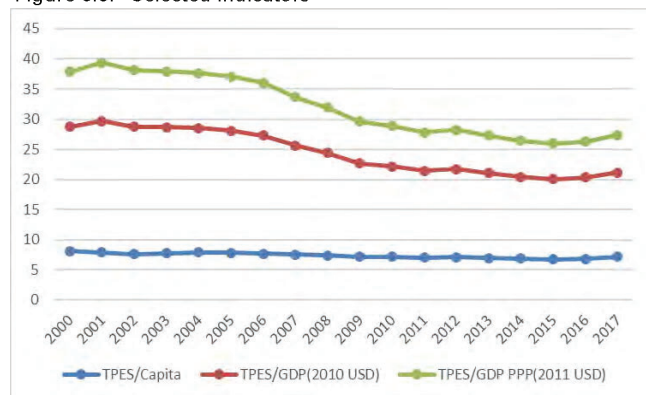
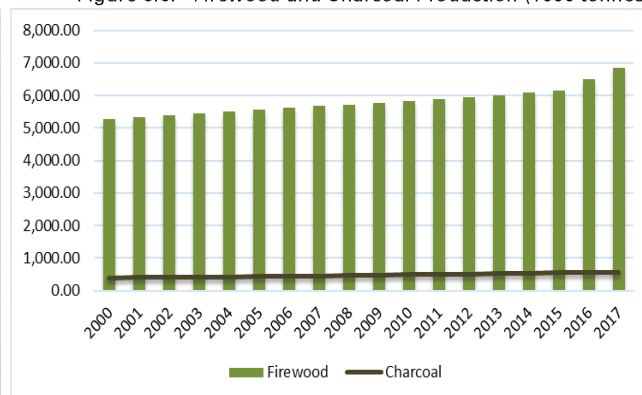


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Malawi

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	5.72	0.00	0.00	236.26	2.07	2295.04	-	2539.09
Imports	0.00	452.21	35.61	0.00	-	-	-	0.00	0.00	487.82
Exports (-)	0.00	0.00	-1.53	0.00	-	-	-	0.00	-0.01	-1.54
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	0.00	452.21	39.80	0.00	0.00	236.26	2.07	2295.04	-0.01	3025.37
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	-12.49	0.00	0.00	0.00	0.00	0.00	584.77	94.71	666.99
TRANSFORMATION	0.00	-4.74	0.00	0.00	0.00	-236.26	-2.07	-1322.65	238.28	-1327.44
Electricity Producers	0.00	-4.74	0.00	0.00	0.00	-236.26	-2.07	0.00	238.28	-4.79
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-1322.65	-	-1322.65
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	0.00	434.98	39.80	0.00	-	-	-	1557.16	332.98	2364.92
Industry	0.00	68.47	39.80	0.00	-	-	-	0.00	141.59	249.86
Transport	-	334.29	0.00	0.00	-	-	-	0.00	0.00	334.29
Households	-	10.27	0.00	0.00	-	-	-	1261.43	163.39	1435.09
Com. & Public	0.00	21.95	0.00	0.00	-	-	-	295.73	28.00	345.68
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Mali

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

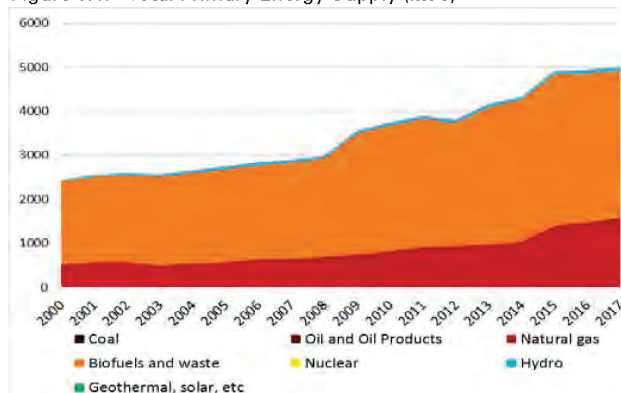


Figure 3.2. - Total Final Consumption (ktoe)

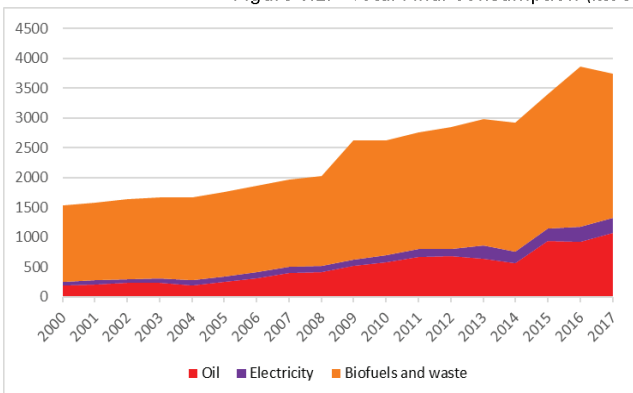


Figure 3.3. - Electricity Generation By Source (GWh)

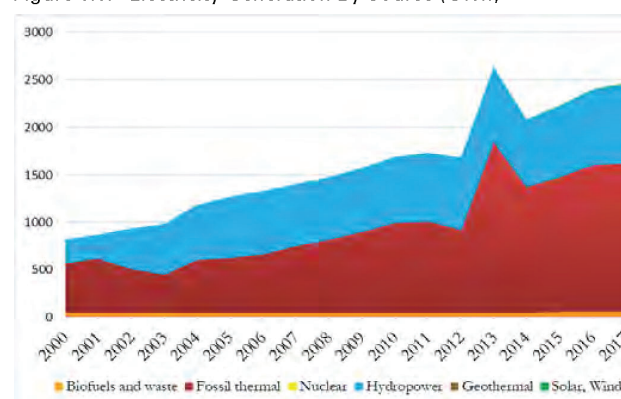


Figure 3.4. - Electricity Production and Consumption (GWh)

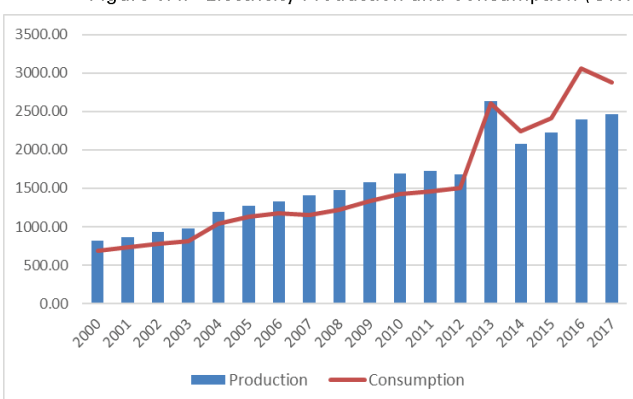


Figure 3.5. - Selected Indicators

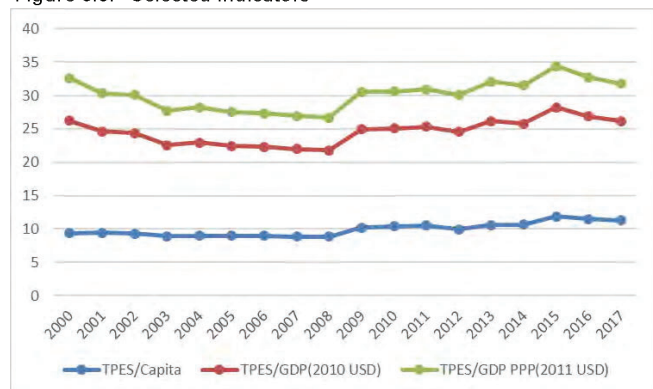
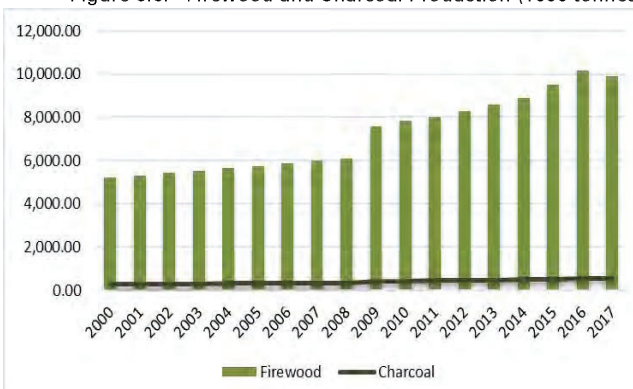


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Mali

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	72.05	0.62	3354.27	-	3426.94
	Imports	0.00	1587.39	0.00	0.00	-	-	-	0.00	104.87	1692.26
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	1587.39	0.00	0.00	0.00	72.05	0.62	3354.27	104.87	5119.20
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-0.02	0.00	0.00	0.00	0.00	0.00	809.83	-39.19	770.61
	Transformation	0.00	-502.38	0.00	0.00	0.00	-72.05	-0.62	-1737.26	212.17	-2100.14
	Electricity Producers	0.00	-502.38	0.00	0.00	0.00	-72.05	-0.62	-44.33	212.17	-407.21
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-1692.93	-	-1692.93
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-1.73	-1.73
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-28.30	-28.3
FINAL CONSUMPTION	TFC	0.00	1084.98	0.00	0.00	-	-	-	2426.84	247.82	3759.64
	Industry	0.00	192.37	0.00	0.00	-	-	-	0.00	104.18	296.55
	Transport	-	794.96	0.00	0.00	-	-	-	0.00	0.00	794.96
	Households	-	16.48	0.00	0.00	-	-	-	2190.07	93.28	2299.83
	Com. & Public	0.00	0.00	0.00	0.00	-	-	-	236.77	38.67	275.44
	Agriculture/Forestry	0.00	42.33	0.00	0.00	-	-	-	0.00	0.00	42.33
	Others (Non Specified)	0.00	38.84	0.00	0.00	-	-	-	0.00	11.69	50.53
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Mauritania

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

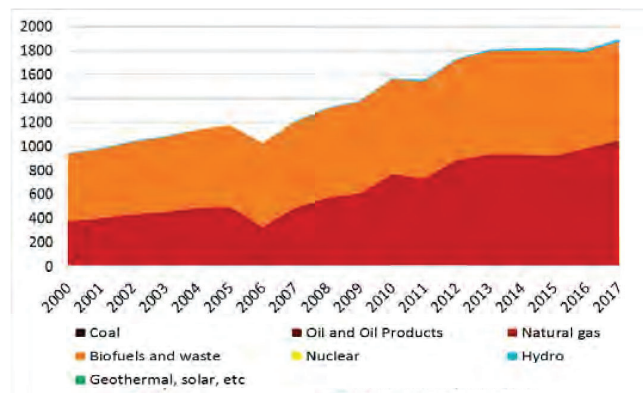


Figure 3.2. - Total Final Consumption (ktoe)

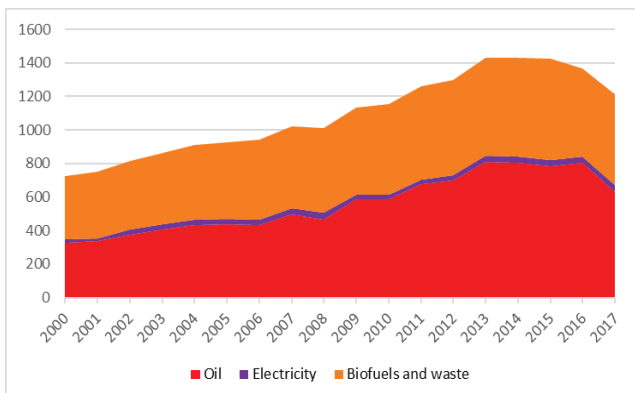


Figure 3.3. - Electricity Generation By Source (GWh)

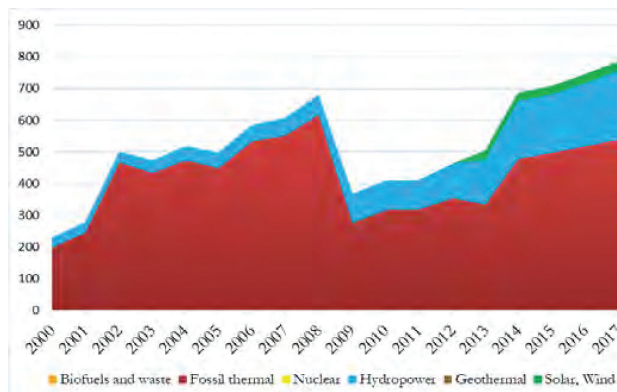


Figure 3.4. - Electricity Production and Consumption (GWh)

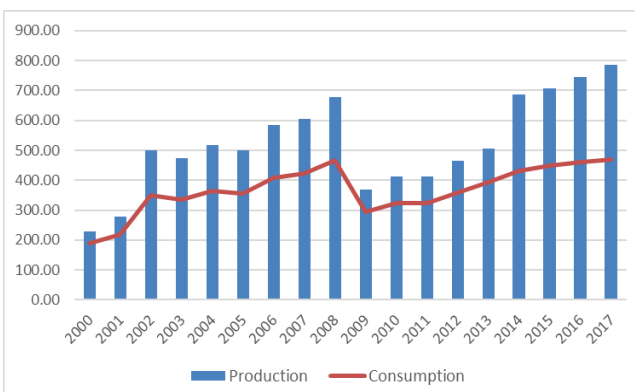


Figure 3.5. - Selected Indicators

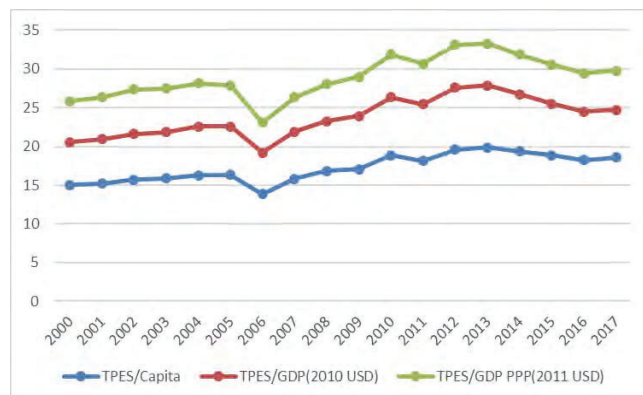
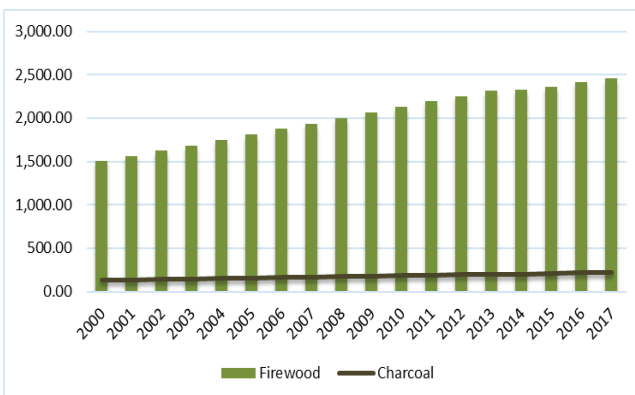


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Mauritania

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	292.81	-	0.00	0.00	0.00	18.65	2.52	822.29	-	1136.27
	Imports	0.00	930.41	0.00	0.00	-	-	-	0.00	0.00	930.41
	Exports (-)	-167.74	0.00	0.00	0.00	-	-	-	0.00	0.00	-167.74
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	125.07	930.41	0.00	0.00	0.00	18.65	2.52	822.29	0.00	1898.94
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	-125.07	0.04	0.00	0.00	0.00	0.00	0.00	310.48	-2.00	183.45
	Transformation	0.00	-285.07	0.00	0.00	0.00	-18.65	-2.52	-592.72	67.63	-831.33
	Electricity Producers	0.00	-285.07	0.00	0.00	0.00	-18.65	-2.52	0.00	67.63	-238.61
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-592.72	-	-592.72
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-7.48	-7.48
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-17.72	-17.72
	TFC	0.00	645.38	0.00	0.00	-	-	-	540.05	40.43	1225.86
	Industry	0.00	197.92	0.00	0.00	-	-	-	0.00	13.98	211.90
	Transport	-	411.60	0.00	0.00	-	-	-	0.00	0.00	411.60
	Households	-	23.28	0.00	0.00	-	-	-	437.8	19.77	480.85
	Com. & Public	0.00	12.58	0.00	0.00	-	-	-	102.25	6.68	121.51
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00	

Mauritius

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

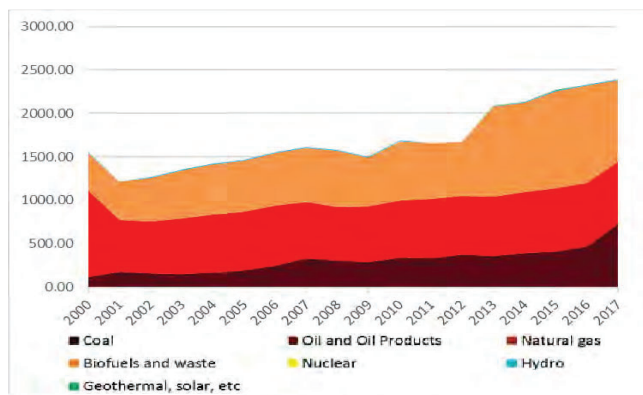


Figure 3.2. - Total Final Consumption (ktoe)

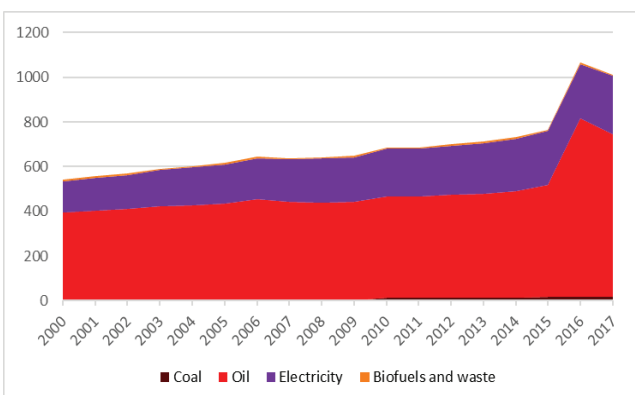


Figure 3.3. - Electricity Generation By Source (GWh)

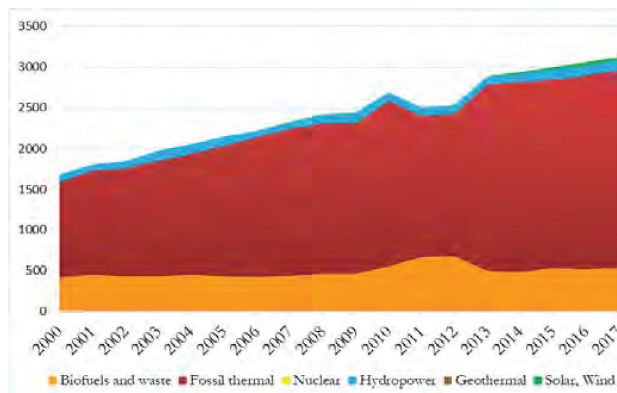


Figure 3.4. - Electricity Production and Consumption (GWh)

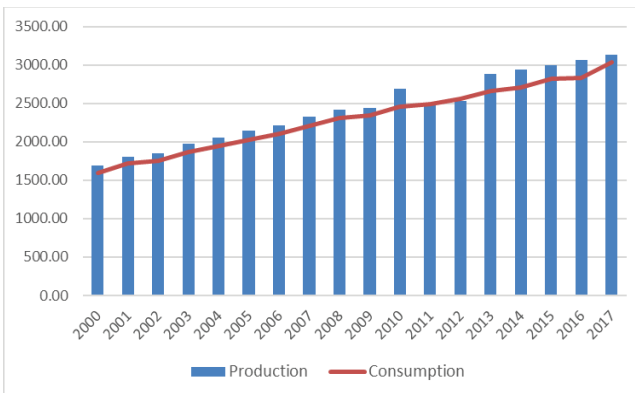


Figure 3.5. - Selected Indicators

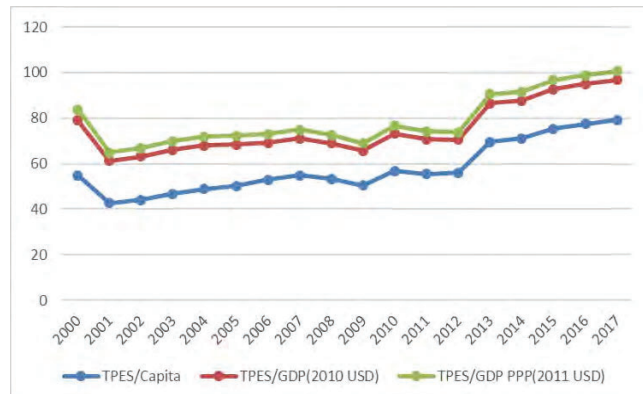
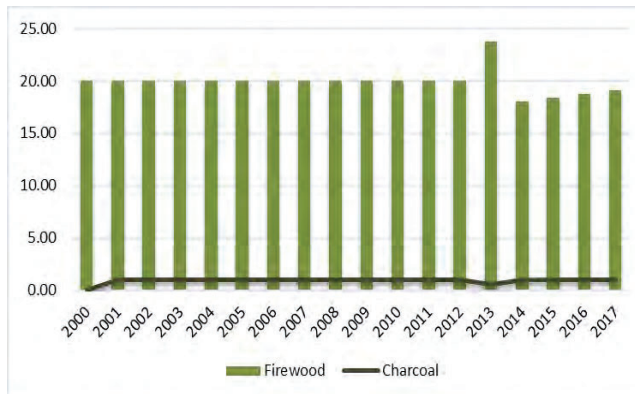


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Mauritius

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	10.10	4.26	555.9	-	570.26
	Imports	0.00	1408.00	731.09	0.00	-	-	-	0.00	0.00	2139.09
	Exports (-)	0.00	-105.10	0.00	0.00	-	-	-	0.00	0.00	-105.1
	Int. Marine Bunkers (-)	-	-325.56	-	-	-	-	-	-	-	-325.56
	Int. Aviation Bunkers (-)	-	-301.48	-	-	-	-	-	-	-	-301.48
	ΔStock (+ draw, - build)	0.00	35.42	0.00	0.00	-	-	-	-	-	35.42
	TPES ³	0.00	711.28	731.09	0.00	0.00	10.10	4.26	555.90	0.00	2012.63
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	225.10	-160.59	0.00	0.00	0.00	0.00	1.43	11.12	77.06
	Transformation	0.00	-207.95	-553.44	0.00	0.00	-10.10	-4.26	-552.25	269.02	-1058.98
	Electricity Producers	0.00	-207.95	-553.44	0.00	0.00	-10.10	-4.26	-549.52	269.02	-1056.25
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-2.73	-	-2.73
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-3.96	-3.96
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-15.31	-15.31
FINAL CONSUMPTION	TFC	0.00	728.43	17.06	0.00	-	-	-	5.08	260.87	1011.44
	Industry	0.00	263.07	17.06	0.00	-	-	-	0.00	90.61	370.74
	Transport	-	382.40	0.00	0.00	-	-	-	3.68	0.00	386.08
	Households	-	63.22	0.00	0.00	-	-	-	1.40	78.43	143.05
	Com. & Public	0.00	17.70	0.00	0.00	-	-	-	0.00	85.21	102.91
	Agriculture/Forestry	0.00	2.04	0.00	0.00	-	-	-	0.00	6.62	8.66
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Morocco

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

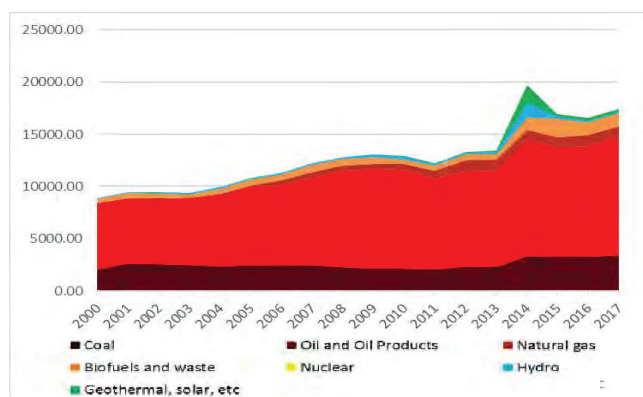


Figure 3.2. - Total Final Consumption (ktoe)

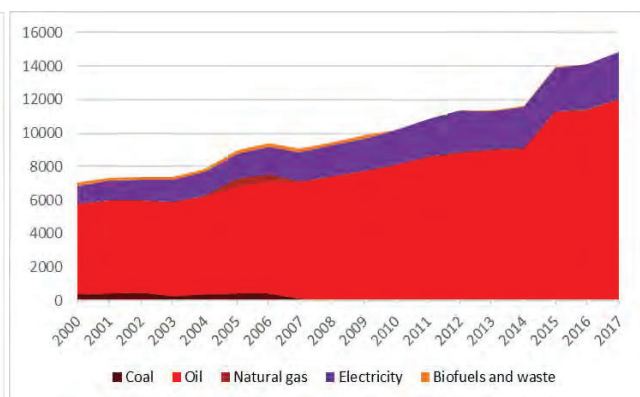


Figure 3.3. - Electricity Generation By Source (GWh)

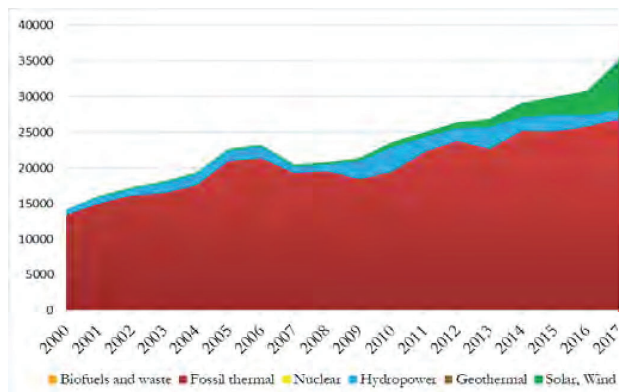


Figure 3.4. - Electricity Production and Consumption (GWh)

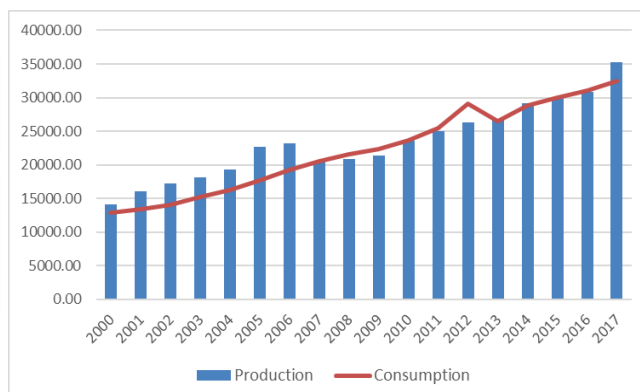


Figure 3.5. - Selected Indicators

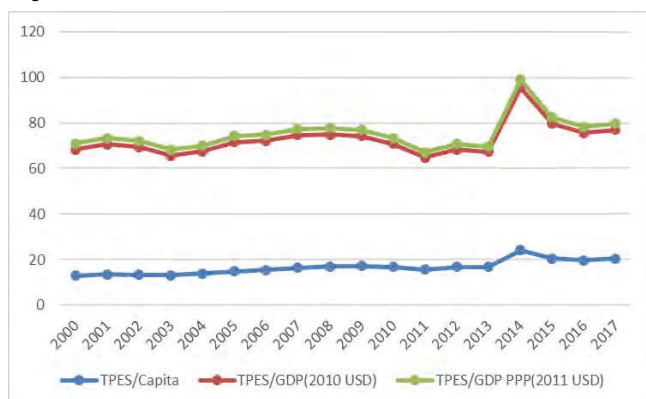
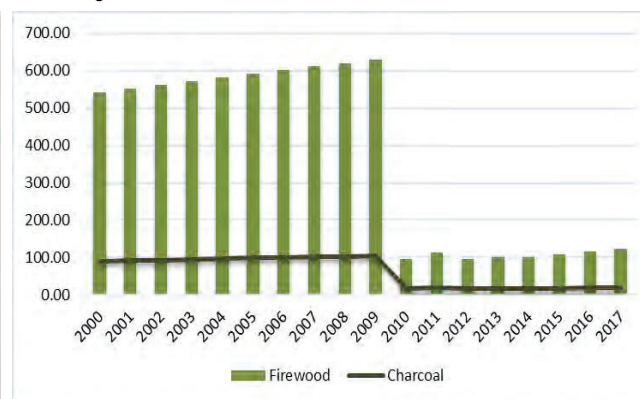


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Morocco

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017		Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
PRIMARY SUPPLY	Production	4.67	-	-	73.25	0.00	101.87	296.66	1215.20	-	1691.65
	Imports	0.00	11967.62	3478.47	963.25	-	-	-	0.00	520.88	16930.22
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	-13.88	-13.88
	Int. Marine Bunkers (-)	-	-133.24	-	-	-	-	-	-	-	-133.24
	Int. Aviation Bunkers (-)	-	-722.24	-	-	-	-	-	-	-	-722.24
	ΔStock (+ draw, - build)	0.00	211.89	-31.98	0.00	-	-	-	-	-	179.91
	TPES ³	4.67	11324.03	3446.49	1036.5	0.00	101.87	296.66	1215.20	507.00	17932.42
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	531.55	0.00	-3.37	0.00	0.00	0.00	29.08	-0.01	557.25
	Transformation	0.00	-835.12	-3432.50	-959.88	0.00	-101.87	-296.66	-58.18	2821.32	-2862.89
	Electricity Producers	0.00	-835.12	-3432.50	-959.88	0.00	-101.87	-296.66	0.00	2821.32	-2804.71
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-58.18	-	-58.18
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	-4.67	0.00	0.00	0.00	-	-	-	0.00	-16.29	-20.96
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-521.60	-521.60
FINAL CONSUMPTION	TFC	0.00	11020.46	13.99	73.25	-	-	-	1186.10	2790.42	15084.22
	Industry	0.00	1203.72	0.00	0.00	-	-	-	64.58	1016.79	2372.33
	Transport	-	5744.11	0.00	0.00	-	-	-	0.00	31.67	5775.78
	Households	-	2520.45	0.00	0.00	-	-	-	507.46	942.39	3970.30
	Com. & Public	0.00	148.89	0.00	0.00	-	-	-	614.06	479.78	1242.73
	Agriculture/Forestry	0.00	902.88	0.00	0.00	-	-	-	0.00	319.79	1222.67
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	500.41	0.00	0.00	-	-	-	-	-	500.41

Mozambique

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

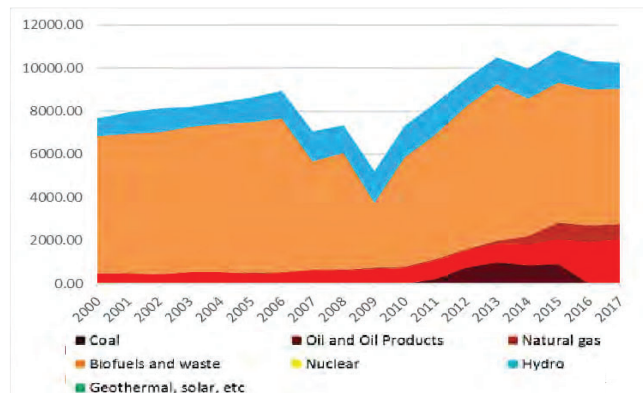


Figure 3.2. - Total Final Consumption (ktoe)

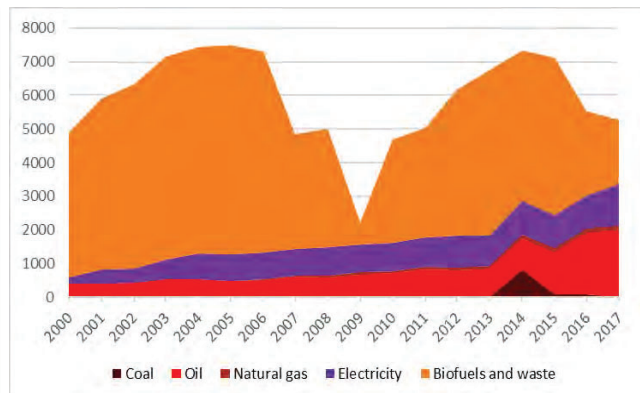


Figure 3.3. - Electricity Generation By Source (GWh)

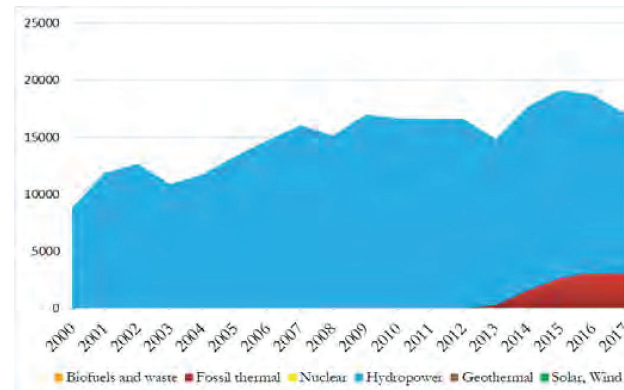


Figure 3.4. - Electricity Production and Consumption (GWh)

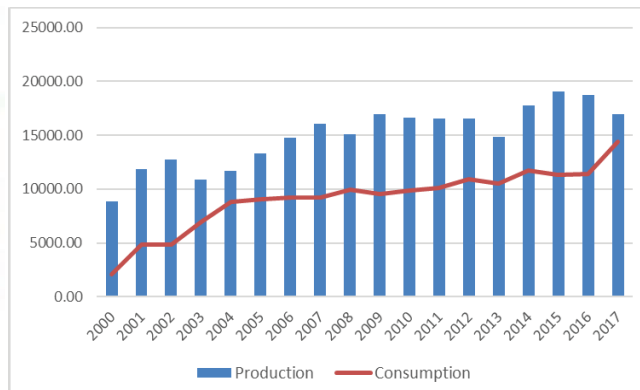


Figure 3.5. - Selected Indicators

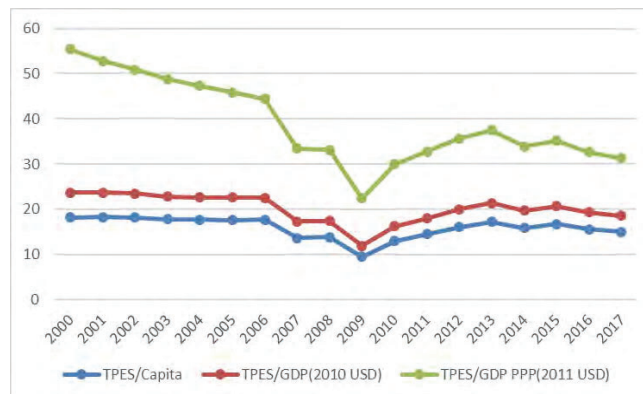
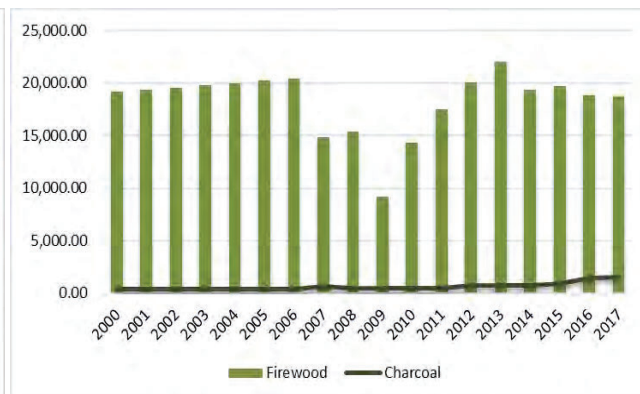


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Mozambique

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	6017.16	4135.93	0.00	1209.01	0.13	6267.70	-	17629.93
	Imports	0.00	2247.56	0.00	0.00	-	-	-	0.00	854.22	3101.78
	Exports (-)	0.00	0.00	-6536.07	-3416.18	-	-	-	0.00	-855.15	-10807.40
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	-190.71	519.21	0.00	-	-	-	-	-	328.50
	TPES ³	0.00	2056.85	0.30	719.75	0.00	1209.01	0.13	6267.70	-0.93	10252.81
TRANSFORMATION	Transfers	0.00	-0.52	-	-	-	-	-	-	-	-0.52
	Statistical Difference	0.00	-11.45	-1.82	-0.10	0.00	0.00	0.00	2557.30	-1.14	2545.75
	Transformation	0.00	0.00	0.00	-506.04	0.00	-1209.01	-0.13	-6915.80	1461.09	-7169.89
	Electricity Producers	0.00	0.00	0.00	-506.04	0.00	-1209.01	-1209.01	0.00	1464.09	-254.09
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-6915.80	-	-6915.80
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-4.97	-4.97
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-213.24	-213.24
	TFC	0.00	2044.88	0.30	213.61	-	-	-	1909.20	1241.95	5409.94
	Industry	0.00	151.77	0.30	101.04	-	-	-	0.00	1073.80	1326.91
	Transport	-	1406.91	0.00	2.44	-	-	-	0.00	0.00	1409.35
	Households	-	37.09	0.00	0.55	-	-	-	1211.61	131.38	1380.63
	Com. & Public	0.00	6.78	0.00	0.24	-	-	-	697.59	33.31	737.92
	Agriculture/Forestry	0.00	424.95	0.00	0.00	-	-	-	0.00	1.63	426.58
	Others (Non Specified)	0.00	17.38	0.00	0.00	-	-	-	0.00	1.83	19.21
	Non-Energy Use	0.00	0.00	0.00	109.34	-	-	-	-	-	109.34

Namibia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

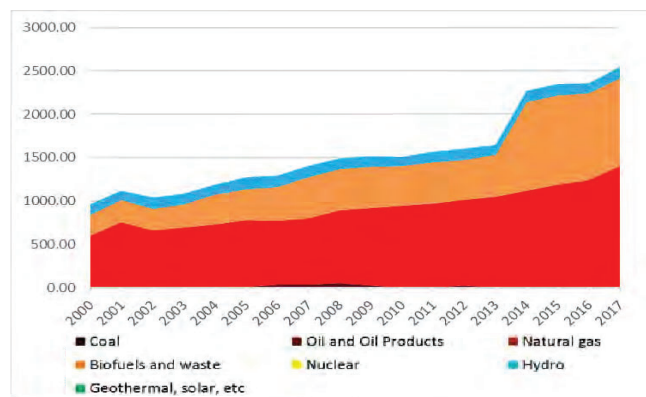


Figure 3.2. - Total Final Consumption (ktoe)

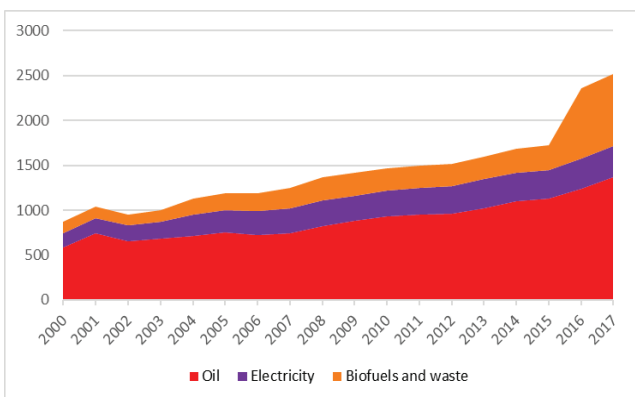


Figure 3.3. - Electricity Generation By Source (GWh)

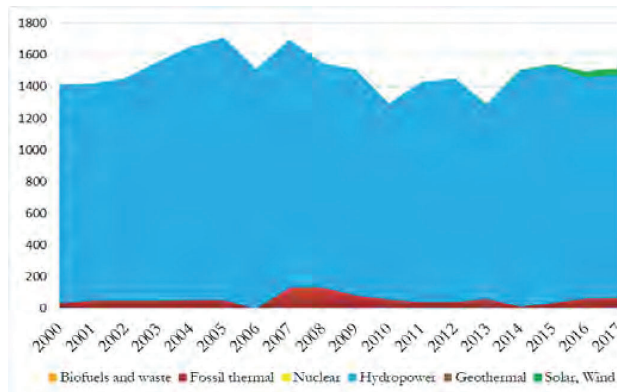


Figure 3.4. - Electricity Production and Consumption (GWh)

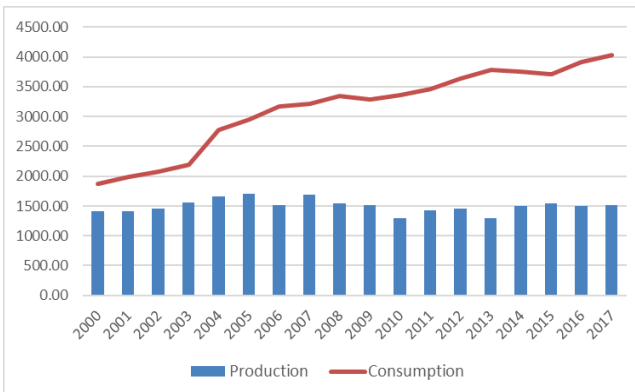


Figure 3.5. - Selected Indicators

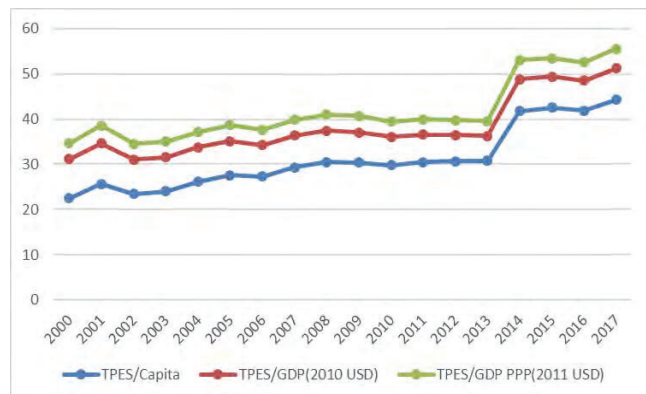
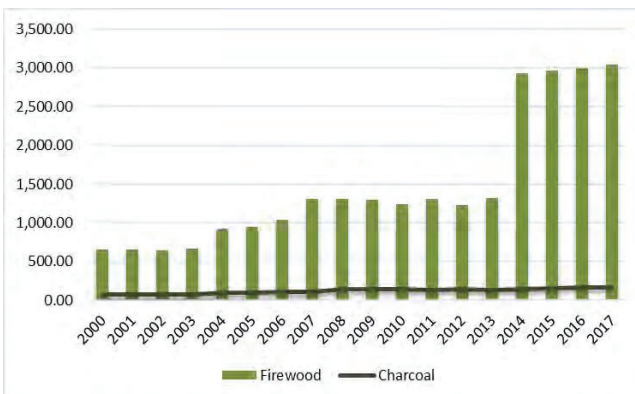


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Namibia

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude	Oil	Coal ²	Natural	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
	Oil ¹	Products		Gas						
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	0.00	0.00	121.73	3.15	1017.31	-	1142.19
Imports	0.00	1443.67	3.07	0.00	-	-	-	0.00	260.82	1707.56
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	-45.66	-	-	-	-	-	-	-	-45.66
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	0.00	1398.01	3.07	0.00	0.00	121.73	3.15	1017.31	260.82	2804.09
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	-2.04	0.00	0.00	0.00	0.00	0.00	252.42	-1.99	248.39
TRANSFORMATION	0.00	0.00	-3.07	0.00	0.00	-121.73	-3.15	-466.18	130.50	-463.63
Electricity Producers	0.00	0.00	-3.07	0.00	0.00	-121.73	-3.15	0.00	130.50	2.55
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-466.18	-	-466.18
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-42.73	-42.73
FINAL CONSUMPTION	0.00	1395.97	0.00	0.00	-	-	-	803.55	346.60	2546.12
TFC	0.00	120.25	0.00	0.00	-	-	-	0.00	53.49	173.74
Industry	-	799.11	0.00	0.00	-	-	-	0.00	0.00	799.11
Transport	-	4.92	0.00	0.00	-	-	-	650.15	233.14	888.21
Households	0.00	2.17	0.00	0.00	-	-	-	153.40	59.97	215.54
Com. & Public	0.00	402.78	0.00	0.00	-	-	-	0.00	0.00	402.78
Agriculture/Forestry	0.00	66.74	0.00	0.00	-	-	-	0.00	0.00	66.74
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Niger

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

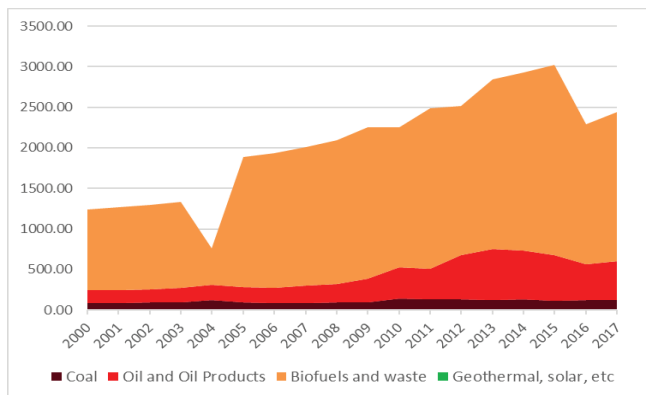


Figure 3.2. - Total Final Consumption (ktoe)

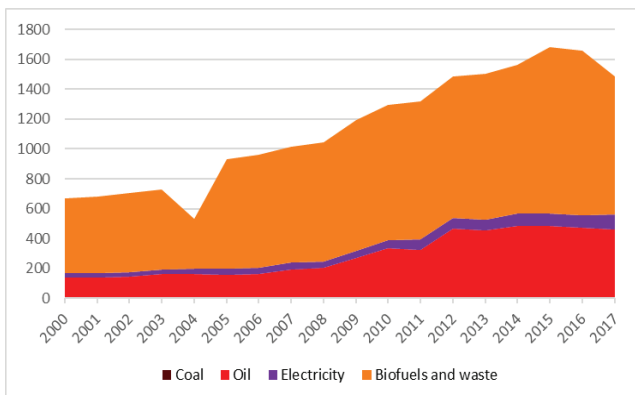


Figure 3.3. - Electricity Generation By Source (GWh)

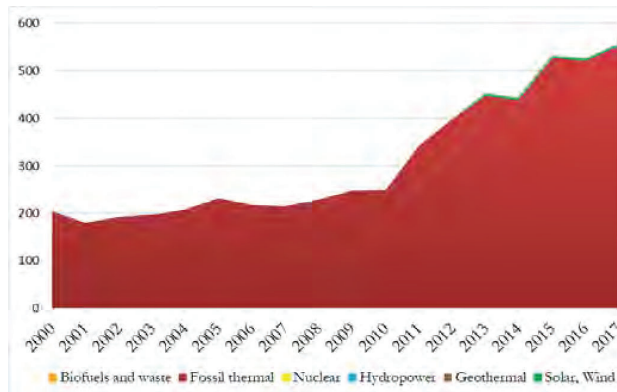


Figure 3.4. - Electricity Production and Consumption (GWh)

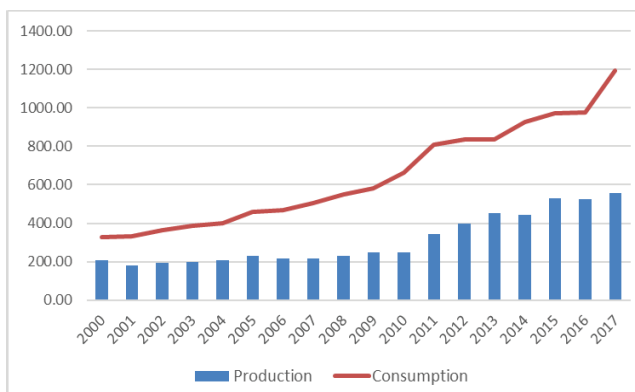


Figure 3.5. - Selected Indicators

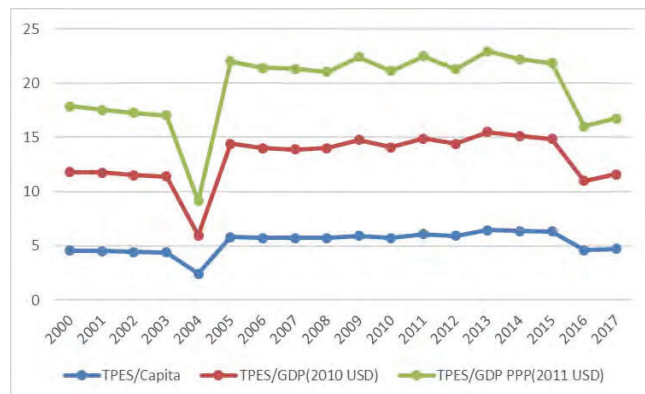
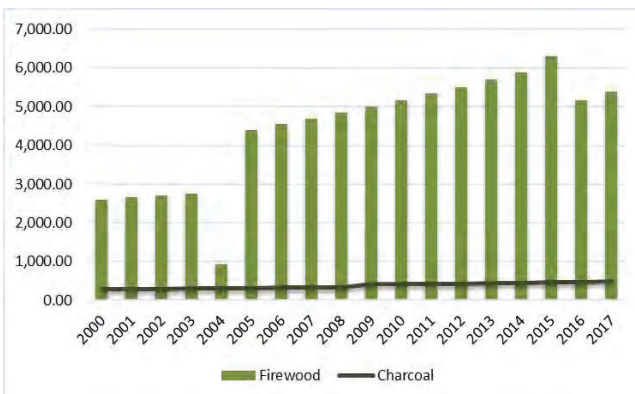


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Niger

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	840.50	-	119.04	0.00	0.00	0.00	0.00	1837.04	-	2796.58
Imports	0.00	144.98	0.00	0.00	0.00	-	-	0.00	72.67	217.65
Exports (-)	0.00	-527.21	0.00	0.00	0.00	-	-	0.00	0.00	-527.21
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	11.21	17.11	-0.13	0.00	0.00	-	-	-	-	28.19
TPES³	851.71	-365.12	118.91	0.00	0.00	0.00	0.00	1837.04	72.67	2515.21
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	7.47	78.99	0.19	0.00	0.00	0.00	0.00	79.56	12.27	178.49
TRANSFORMATION	-859.18	791.49	-115.95	0.00	0.00	0.00	0.00	-166.48	47.45	-302.67
Electricity Producers	0.00	-67.94	-113.43	0.00	0.00	0.00	0.00	0.00	47.45	-133.92
Petroleum Refineries	-859.18	859.43	-	-	-	-	-	-	-	0.25
Charcoal Plants	-	-	-	-	-	-	-	-166.48	-	-166.48
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	-2.52	0.00	-	-	-	0.00	-7.91	-2.52
Own Use	0.00	-19.28	0.00	0.00	-	-	-	0.00	-21.73	-27.19
Losses	0.00	0.00	-3.16	0.00	-	-	-	0.00	-21.73	-24.89
FINAL CONSUMPTION	0.00	486.08	0.00	0.00	-	-	-	1750.12	102.75	2338.95
TFC										
Industry	0.00	29.96	0.00	0.00	-	-	-	0.00	28.90	58.86
Transport	-	375.82	0.00	0.00	-	-	-	0.00	0.00	375.82
Households	-	22.70	0.00	0.00	-	-	-	1636.74	50.14	1709.58
Com. & Public	0.00	14.19	0.00	0.00	-	-	-	113.38	22.98	150.55
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.73	0.73
Others (Non Specified)	0.00	24.49	0.00	0.00	-	-	-	0.00	0.00	24.49
Non-Energy Use	0.00	18.92	0.00	0.00	-	-	-	-	-	18.92

Nigeria

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

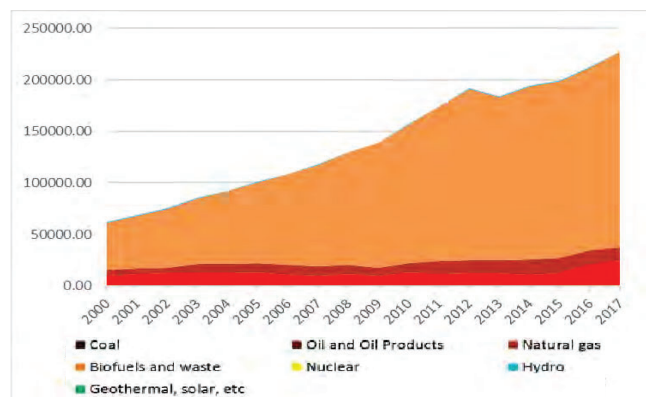


Figure 3.2. - Total Final Consumption (ktoe)

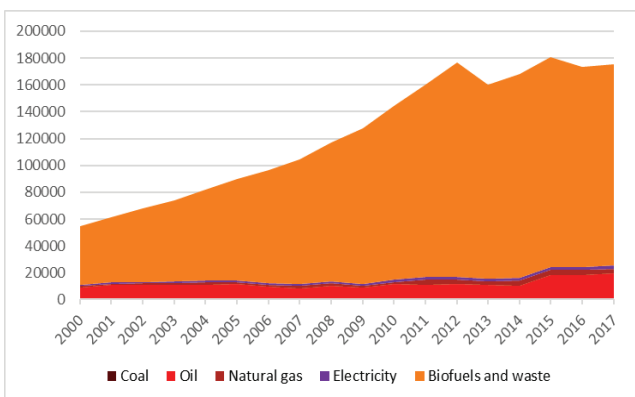


Figure 3.3. - Electricity Generation By Source (GWh)

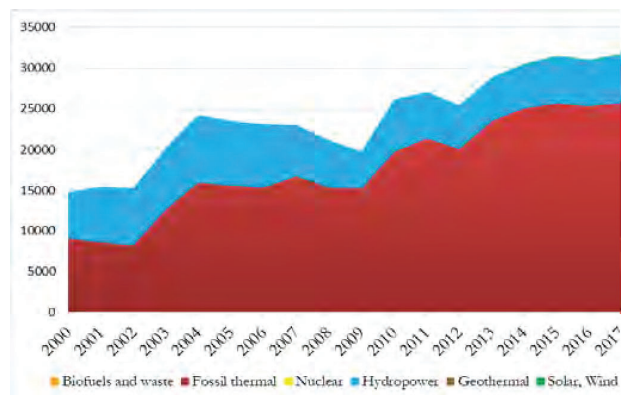


Figure 3.4. - Electricity Production and Consumption (GWh)

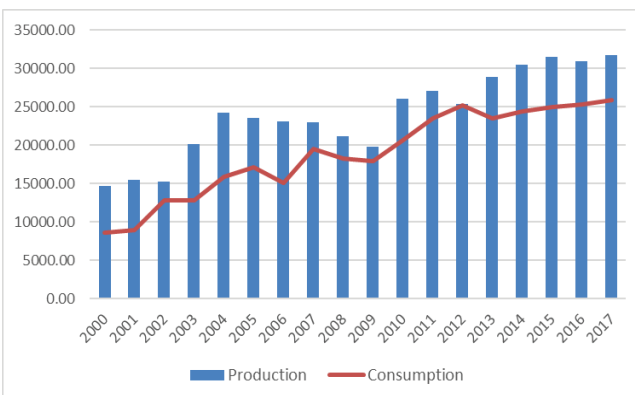


Figure 3.5. - Selected Indicators

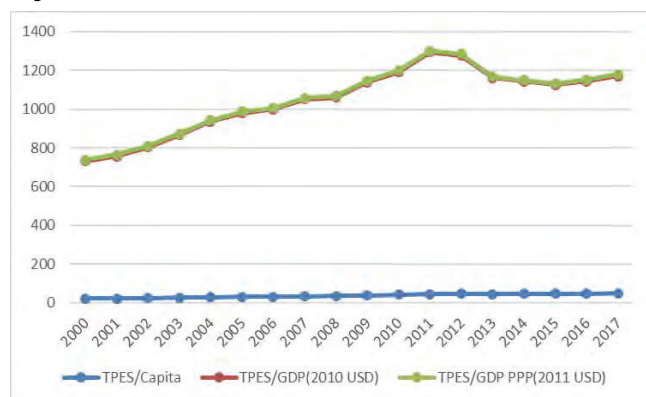
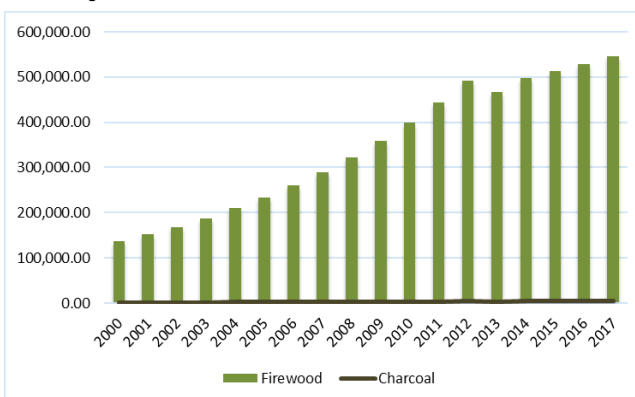


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Nigeria

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	99492.63	-	23.50	35539.50	0.00	510.18	7.44	189383.80	-	324957.05
	Imports	0.00	22147.61	0.00	0.00	-	-	-	0.00	0.00	22147.61
	Exports (-)	-96507.93	-88.33	0.00	-22239.84	-	-	-	0.00	0.00	-11836.10
	Int. Marine Bunkers (-)	-	-119.97	-	-	-	-	-	-	-	-119.97
	Int. Aviation Bunkers (-)	-	-584.84	-	-	-	-	-	-	-	-584.84
	ΔStock (+ draw, - build)	-55.10	0.00	0.00	0.00	-	-	-	-	-	-55.10
	TPES ³	2929.60	21354.47	23.50	13299.66	0.00	510.18	7.44	189383.80	0.00	227508.65
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	825.69	-4859.41	0.00	-11.29	0.00	0.00	0.00	-25050.98	-20.95	-29116.93
	Transformation	-3436.71	3719.14	0.00	-5201.77	0.00	-510.18	-7.44	-14059.11	2731.56	-16764.51
	Electricity Producers	0.00	0.00	0.00	-5201.77	0.00	-510.18	-7.44	0.00	2731.56	-2987.83
	Petroleum Refineries	-3436.71	3719.14	-	-	-	-	-	-	-	282.43
	Charcoal Plants	-	-	-	-	-	-	-	-14059.11	-	-14059.11
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	-4999.16	-	-	-	0.00	-93.31	-5092.47
	Losses	-318.59	0.00	0.00	0.00	-	-	-	0.00	-389.85	-708.44
	FINAL CONSUMPTION	TFC	0.00	20214.20	23.50	3087.44	-	-	-	150273.71	2227.45
Industry		0.00	874.31	23.50	2113.88	-	-	-	5340.99	363.47	8716.15
Transport		-	16507.49	0.00	0.00	-	-	-	0.00	0.00	16507.49
Households		-	1692.33	0.00	0.00	-	-	-	141701.55	1282.50	144676.38
Com. & Public		0.00	1140.07	0.00	0.00	-	-	-	3231.17	581.48	4952.72
Agriculture/Forestry		0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Others (Non Specified)		0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use		0.00	0.00	0.00	973.56	-	-	-	-	-	973.56

Rwanda

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

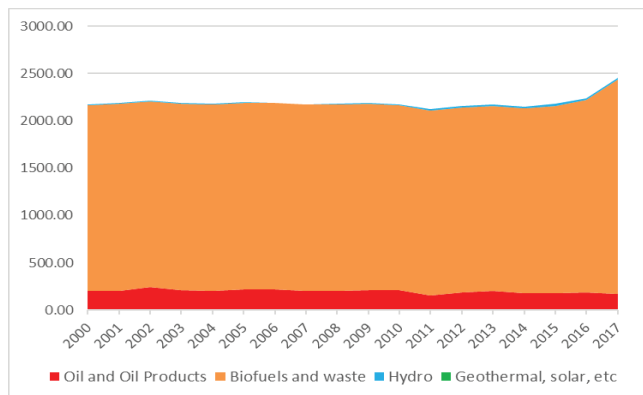


Figure 3.2. - Total Final Consumption (ktoe)

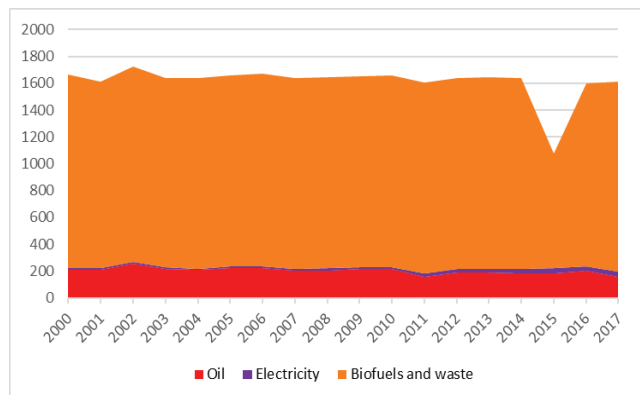


Figure 3.3. - Electricity Generation By Source (GWh)

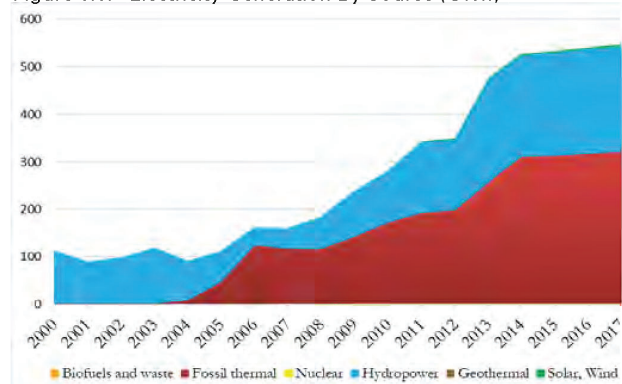


Figure 3.4. - Electricity Production and Consumption (GWh)

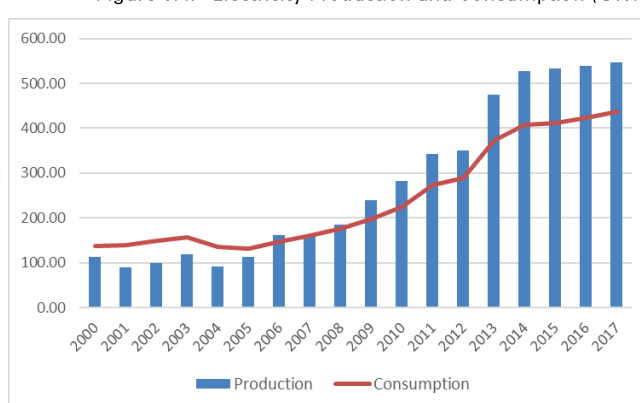


Figure 3.5. - Selected Indicators

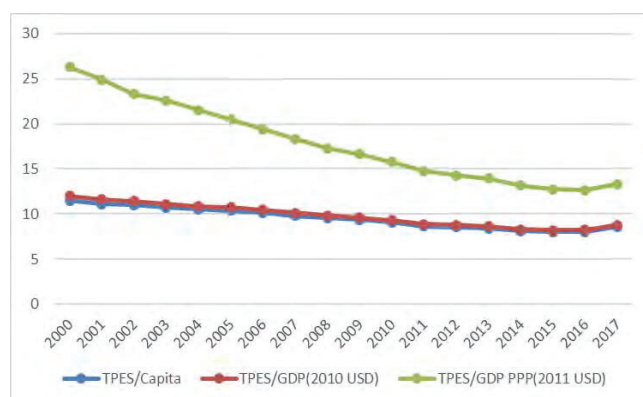
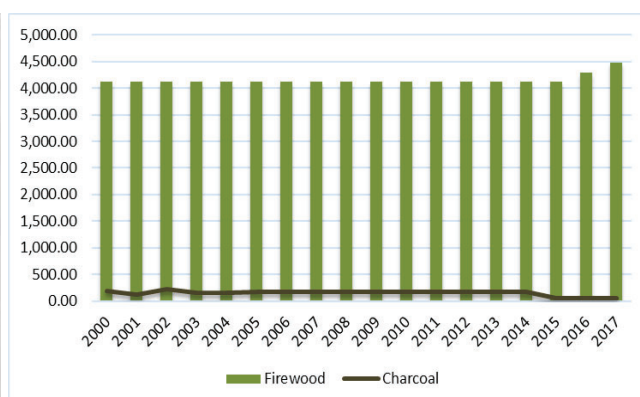


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Rwanda

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
		Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017											
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	19.09	0.27	2261.01	-	2280.37
	Imports	0.00	189.79	0.00	0.00	-	-	-	0.00	9.21	199.00
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	-16.38	-	-	-	-	-	-	-	-16.38
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES ³		0.00	173.41	0.00	0.00	0.00	19.09	0.27	2261.01	9.21	2462.99
Transfers		0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference		0.00	39.79	0.00	0.00	0.00	0.00	0.00	56.17	-0.3	95.66
TRANSFORMATION	Transformation	0.00	-53.63	0.00	0.00	0.00	-19.09	-0.27	-513.76	47.02	-539.73
	Electricity Producers	0.00	-53.63	0.00	0.00	0.00	-19.09	-0.27	-382.15	47.02	-408.12
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-131.61	-	-131.61
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use		0.00	0.00	0.00	0.00	-	-	-	0.00	-7.02	-7.02
Losses		0.00	0.00	0.00	0.00	-	-	-	0.00	-11.30	-11.30
FINAL CONSUMPTION	TFC	0.00	159.57	0.00	0.00	-	-	-	1803.42	37.61	2000.60
	Industry	0.00	21.26	0.00	0.00	-	-	-	0.00	12.10	33.36
	Transport	-	109.59	0.00	0.00	-	-	-	0.00	0.00	109.59
	Households	-	19.15	0.00	0.00	-	-	-	1530.63	22.56	1572.34
	Com. & Public	0.00	9.57	0.00	0.00	-	-	-	272.79	2.95	285.31
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Sao Tome and Principe

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

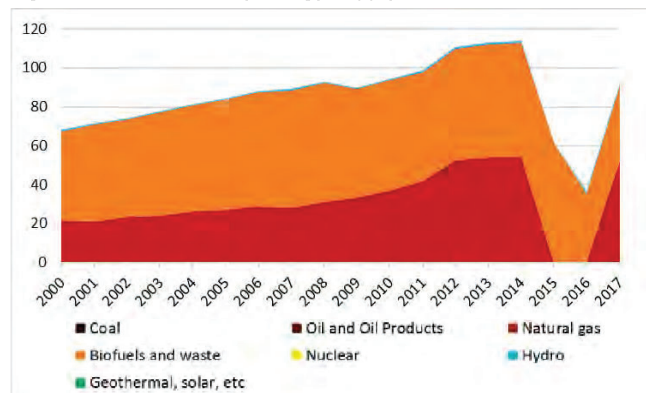


Figure 3.2. - Total Final Consumption (ktoe)

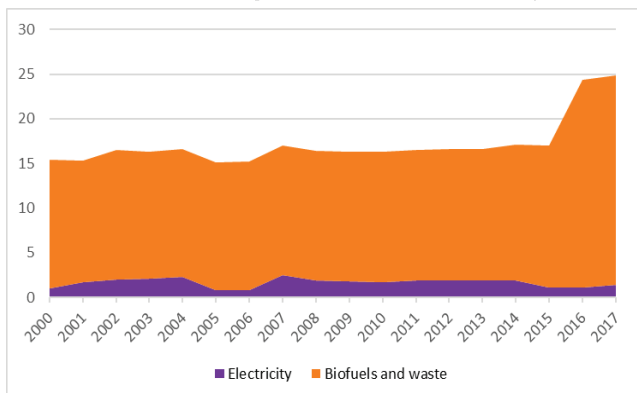


Figure 3.3. - Electricity Generation By Source (GWh)

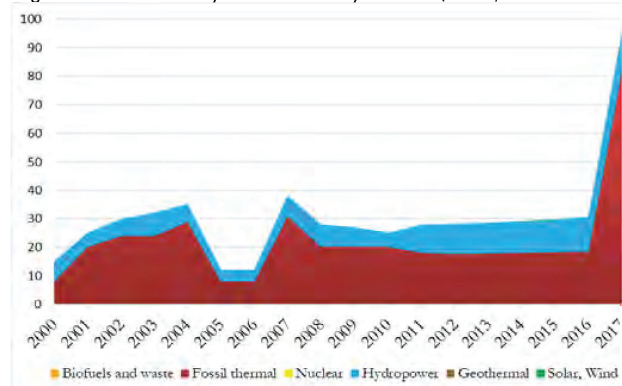


Figure 3.4. - Electricity Production and Consumption (GWh)

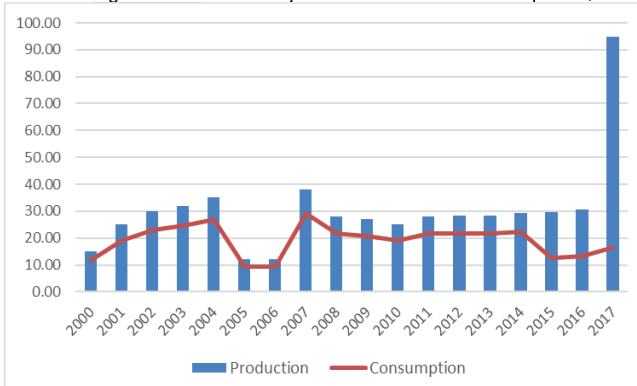


Figure 3.5. - Selected Indicators

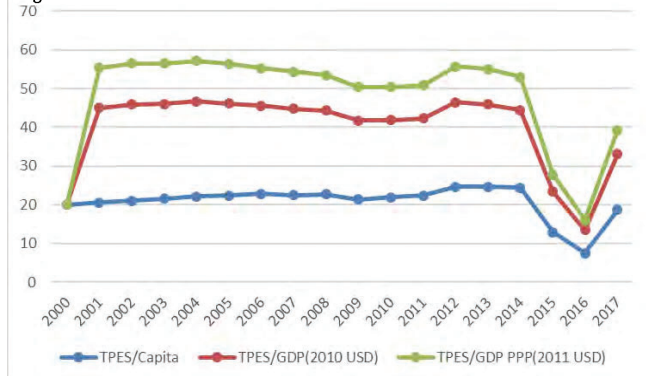
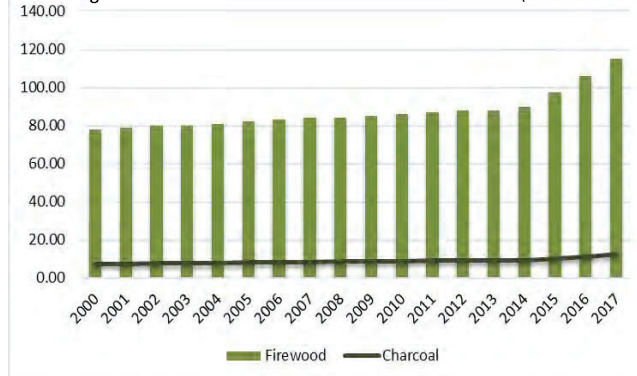


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Sao Tome and Principe

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	1.19	0.00	38.4	-	39.59
	Imports	0.00	60.68	0.00	0.00	-	-	-	0.00	0.00	60.68
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	-3.90	-	-	-	-	-	-	-	-3.90
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	-4.41	0.00	0.00	-	-	-	-	-	-4.41
	TPES ³	0.00	52.37	0.00	0.00	0.00	1.19	0.00	38.4	0.00	91.96
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	21.06	0.00	0.00	0.00	0.00	0.00	18.9	-2.54	37.42
	Transformation	0.00	-21.64	0.00	0.00	0.00	-1.19	0.00	-33.73	8.23	-48.33
	Electricity Producers	0.00	-21.64	0.00	0.00	0.00	-1.19	0.00	0.00	8.23	-14.60
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-33.73	-	-33.73
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-0.77	-0.77
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-3.42	-3.42
	TFC	0.00	51.79	0.00	0.00	-	-	-	23.57	1.50	76.86
	Industry	0.00	0.00	0.00	0.00	-	-	-	1.00	0.00	1.00
	Transport	-	35.72	0.00	0.00	-	-	-	0.00	0.00	35.72
	Households	0.00	5.21	0.00	0.00	-	-	-	18.27	1.09	24.57
	Com. & Public	0.00	0.23	0.00	0.00	-	-	-	4.30	0.41	4.94
	Agriculture/Forestry	0.00	0.03	0.00	0.00	-	-	-	0.00	0.00	0.03
	Others (Non Specified)	0.00	3.06	0.00	0.00	-	-	-	0.00	0.00	3.06
	Non-Energy Use	0.00	7.54	0.00	0.00	-	-	-	-	-	7.54

Senegal

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

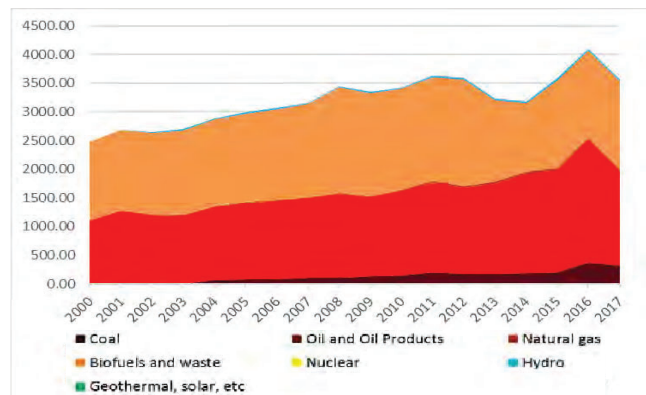


Figure 3.2. - Total Final Consumption (ktoe)

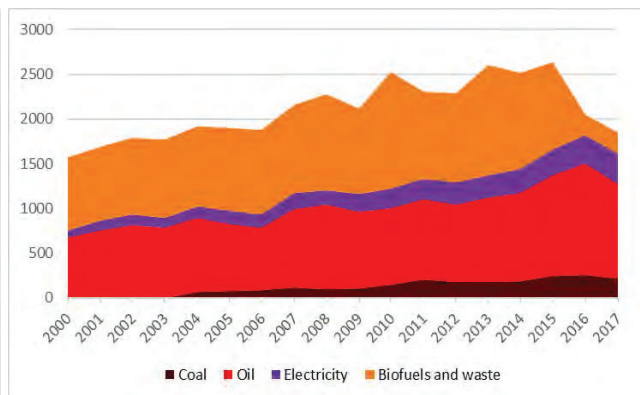


Figure 3.3. - Electricity Generation By Source (GWh)

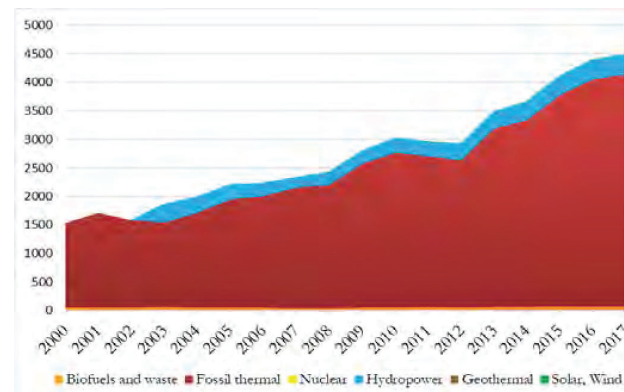


Figure 3.4. - Electricity Production and Consumption (GWh)

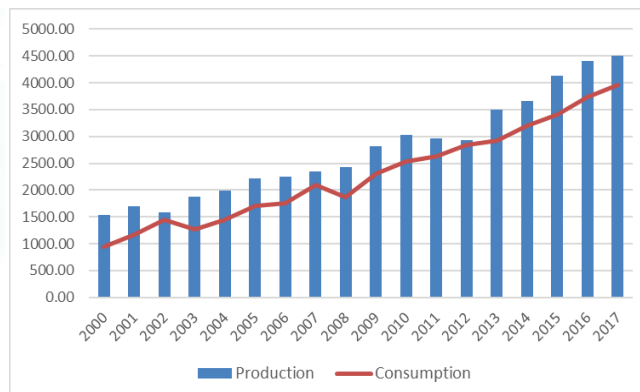


Figure 3.5. - Selected Indicators

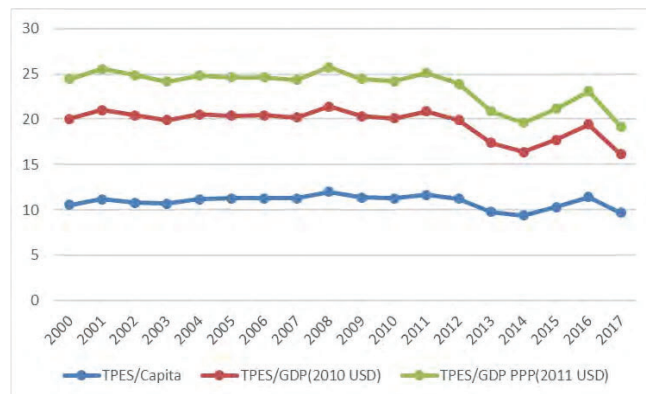
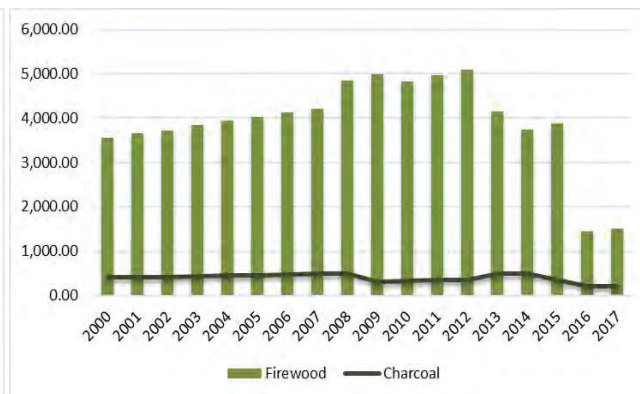


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Senegal

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude	Oil	Coal ²	Natural	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
	Oil ¹	Products		Gas						
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	20.21	0.00	30.69	0.53	542.53	-	593.96
Imports	1094.73	1414.73	313.18	0.00	-	-	-	0.00	26.23	2848.87
Exports (-)	0.00	-737.50	0.00	0.00	-	-	-	0.00	0.00	-737.50
Int. Marine Bunkers (-)	-	-115.05	-	-	-	-	-	-	-	-115.05
Int. Aviation Bunkers (-)	-	-148.71	-	-	-	-	-	-	-	-148.71
ΔStock (+ draw, - build)	77.51	71.24	0.00	0.00	-	-	-	-	-	148.75
TPES³	1172.24	484.71	313.18	20.21	0.00	30.69	0.53	542.53	26.23	2590.32
Transfers	0.00	-0.08	-	-	-	-	-	-	-	-0.08
Statistical Difference	-4.88	-58.68	-0.01	0.00	0.00	0.00	0.00	-83.83	6.64	-140.76
TRANSFORMATION	-1167.36	643.29	-93.49	-20.21	0.00	-30.69	-0.53	-182.02	387.77	-463.24
Electricity Producers	0.00	-579.18	0.00	-20.21	0.00	-30.69	-0.53	-29.01	387.77	-271.85
Petroleum Refineries	-1167.36	1222.47	-	-	-	-	-	-	-	55.11
Charcoal Plants	-	-	-	-	-	-	-	-153.01	-	-153.01
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	-93.49	-	-	-	-	-	-	-93.49
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-5.59	-5.59
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-74.81	-74.81
FINAL CONSUMPTION	0.00	1069.24	219.68	0.00	-	-	-	276.68	340.24	1905.84
Industry	0.00	116.59	219.68	0.00	-	-	-	8.94	98.04	443.25
Transport	-	852.89	0.00	0.00	-	-	-	0.00	0.00	852.89
Households	-	96.03	0.00	0.00	-	-	-	192.52	103.83	392.38
Com. & Public	0.00	3.73	0.00	0.00	-	-	-	75.22	86.09	165.04
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	9.20	9.20
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	43.08	43.08
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Seychelles

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

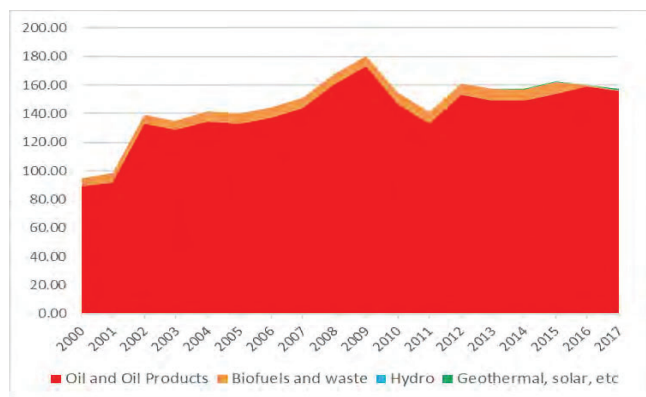


Figure 3.2. - Total Final Consumption (ktoe)

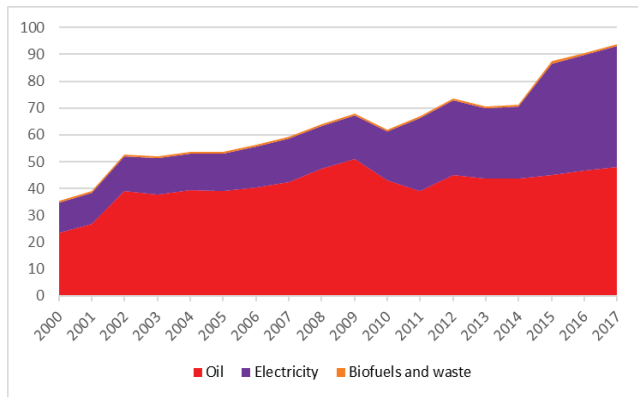


Figure 3.3. - Electricity Generation By Source (GWh)

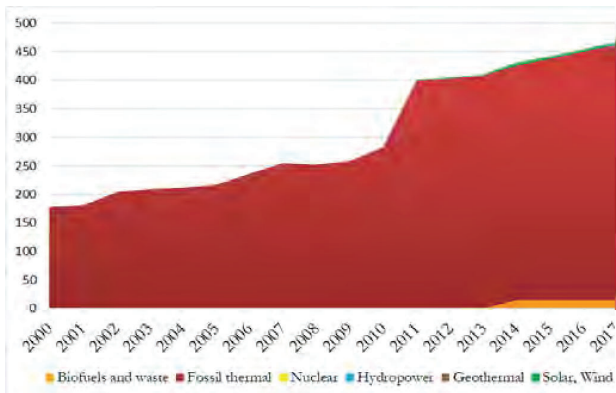


Figure 3.4. - Electricity Production and Consumption (GWh)

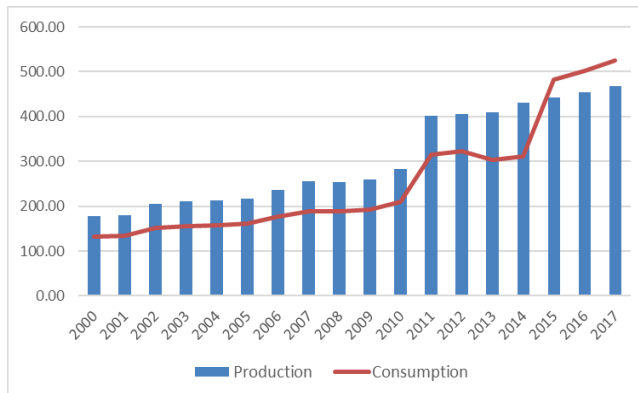


Figure 3.5. - Selected Indicators

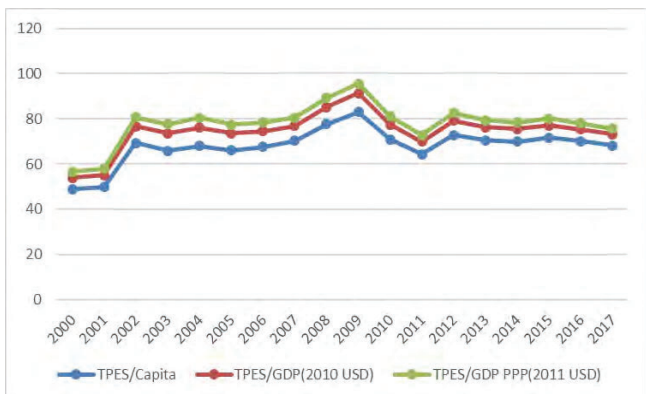
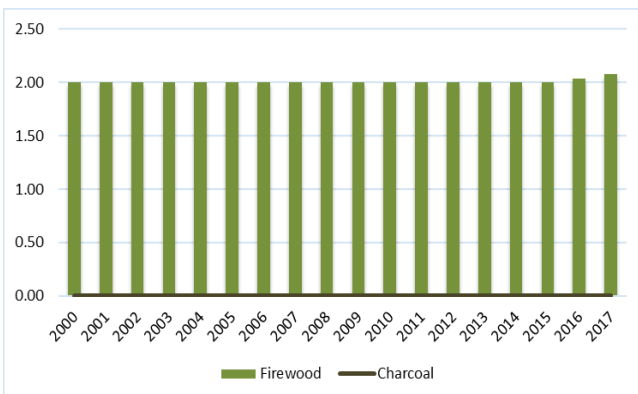


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Seychelles

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude	Oil	Coal ²	Natural	Nuclear	Hy-	Wind/	Biofuels	Electricity	Total
	Oil ¹	Products		Gas		dro	Geother./ Solar	/ Waste		
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	0.00	0.00	0.00	0.79	0.67	-	1.46
Imports	0.00	422.81	0.00	0.00	-	-	-	0.00	0.00	422.81
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	-214.71	-	-	-	-	-	-	-	-214.71
Int. Aviation Bunkers (-)	-	-46.58	-	-	-	-	-	-	-	-46.58
ΔStock (+ draw, - build)	0.00	-5.69	0.00	0.00	-	-	-	-	-	-5.69
TPES³	0.00	155.83	0.00	0.00	0.00	0.00	0.79	-	0.00	157.29
Transfers	0.00	3.46	-	-	-	-	-	0.67	-	3.46
Statistical Difference	0.00	-0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.28
TRANSFORMATION	0.00	-84.47	0.00	0.00	0.00	0.00	-0.79	0.00	35.23	-50.03
Electricity Producers	0.00	-84.47	0.00	0.00	0.00	0.00	-0.79	0.00	35.23	-50.03
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	0.00	-	0.00
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-1.03	-1.03
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-2.75	-2.75
FINAL CONSUMPTION	0.00	74.53	0.00	0.00	-	-	-	0.67	31.46	106.66
TFC										
Industry	0.00	8.27	0.00	0.00	-	-	-	0.00	6.28	14.55
Transport	-	42.29	0.00	0.00	-	-	-	0.00	0.00	42.29
Households	-	5.24	0.00	0.00	-	-	-	0.67	9.61	15.52
Com. & Public	0.00	0.00	0.00	0.00	-	-	-	0.00	15.45	15.45
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Others (Non Specified)	0.00	18.73	0.00	0.00	-	-	-	0.00	0.12	18.85
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Sierra Leone

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

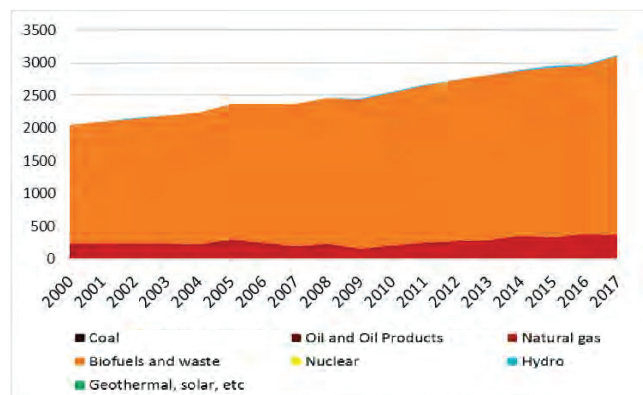


Figure 3.2. - Total Final Consumption (ktoe)

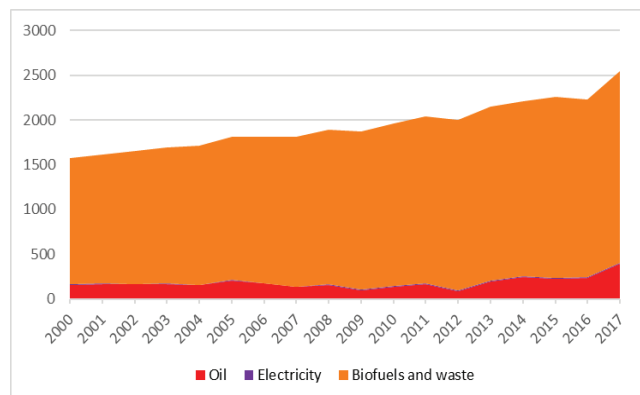


Figure 3.3. - Electricity Generation By Source (GWh)

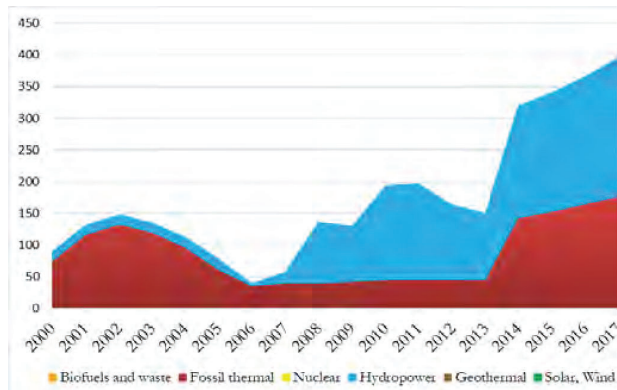


Figure 3.4. - Electricity Production and Consumption (GWh)

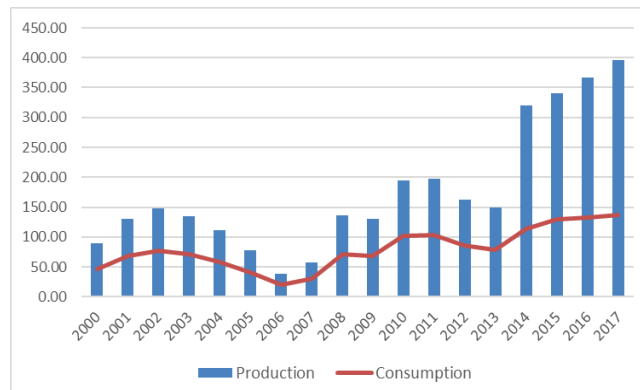


Figure 3.5. - Selected Indicators

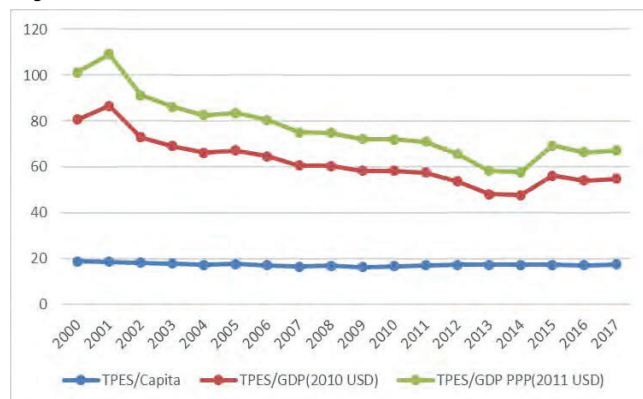
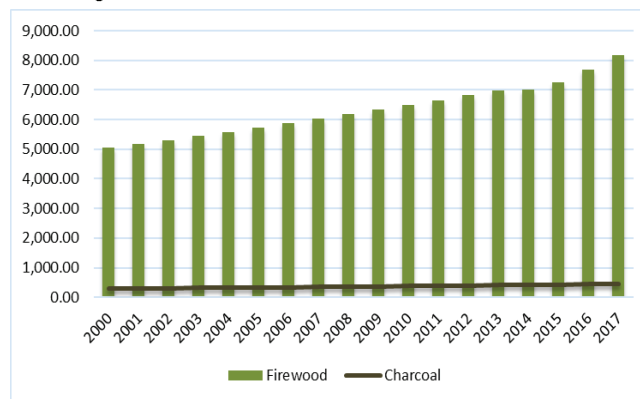


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Sierra Leone

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	0.00	0.00	18.87	0.00	2730.94	-	2749.81
Imports	0.00	382.11	0.00	0.00	-	-	-	0.00	0.00	382.11
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	-9.02	0.00	0.00	-	-	-	-	-	-9.02
TPES³	0.00	373.09	0.00	0.00	0.00	18.87	0.00	2730.94	0.00	3122.9
Transfers	0.00	0.00	0-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	40.54	0.00	0.00	0.00	0.00	0.00	627.15	-10.71	656.98
TRANSFORMATION	0.00	-19.45	0.00	0.00	0.00	-18.87	0.00	-1211.26	34.11	-1215.47
Electricity Producers	0.00	-19.45	0.00	0.00	0.00	-18.87	0.00	0.00	34.11	-4.21
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-1211.26	-	-1211.26
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.000	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-11.65	-11.65
FINAL CONSUMPTION	0.00	394.18	0.00	0.00	-	-	-	2146.83	11.75	2552.76
TFC										
Industry	0.00	137.28	0.00	0.00	-	-	-	0.00	3.66	140.94
Transport	-	250.63	0.00	0.00	-	-	-	0.00	0.00	250.63
Households	-	2.16	0.00	0.00	-	-	-	1737.9	5.48	1745.54
Com. & Public	0.00	0.01	0.00	0.00	-	-	-	408.93	2.61	411.55
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Others (Non Specified)	0.00	4.10	0.00	0.00	-	-	-	0.00	0.00	4.10
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Somalia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

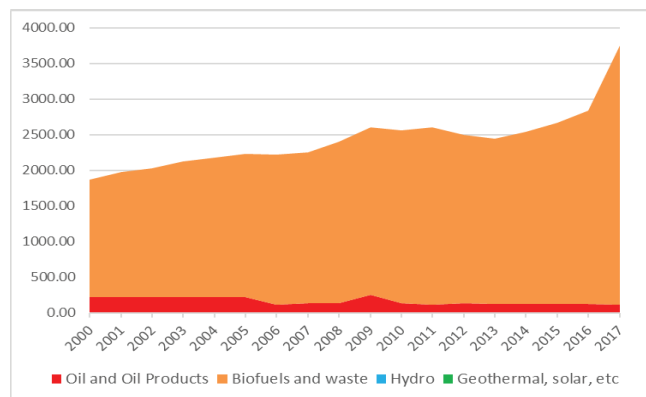


Figure 3.2. - Total Final Consumption (ktoe)

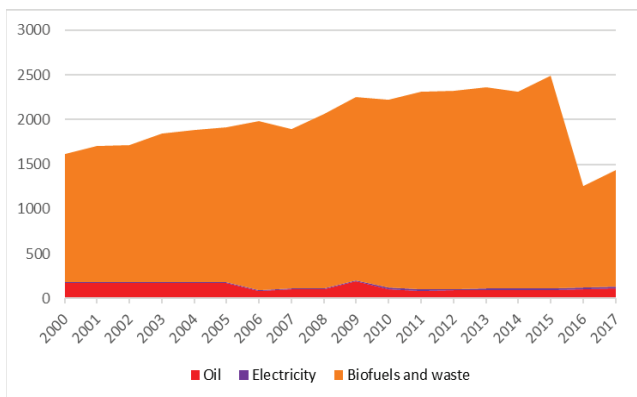


Figure 3.3. - Electricity Generation By Source (GWh)

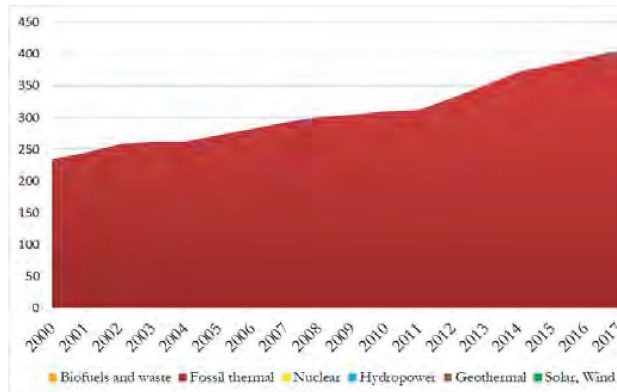


Figure 3.4. - Electricity Production and Consumption (GWh)

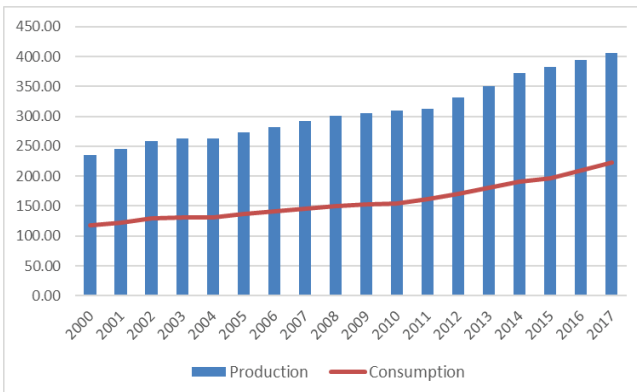


Figure 3.5. - Selected Indicators

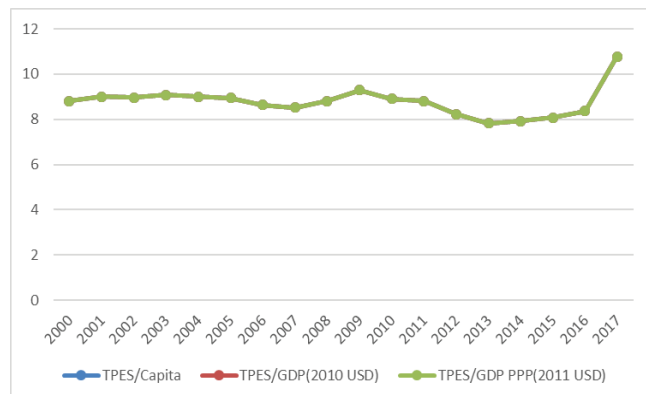
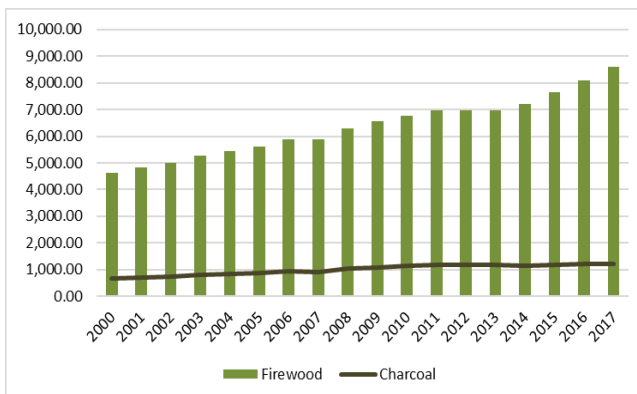


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Somalia

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	0.00	3643.93	-	3643.93
	Imports	0.00	135.76	0.00	0.00	-	-	0.00	0.00	135.76
	Exports (-)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	-22.96	-	-	-	-	-	-	-22.96
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	0.00
	TPES³	0.00	112.80	0.00	0.00	0.00	0.00	3643.93	0.00	3756.73
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	25.07	0.00	0.00	0.00	0.00	1780.10	-4.67	1800.50
	Transformation	0.00	-20.28	0.00	0.00	0.00	0.00	-3358.64	34.94	-3343.98
	Electricity Producers	0.00	-20.28	0.00	0.00	0.00	0.00	0.00	34.94	14.66
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-3358.64	-	-3358.64
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	0.00	-2.65	-2.65
	Losses	0.00	0.00	0.00	0.00	-	-	0.00	-8.47	0.00
FINAL CONSUMPTION	TFC	0.00	117.59	0.00	0.00	-	-	2065.39	19.15	2202.13
	Industry	0.00	53.28	0.00	0.00	-	-	0.00	5.56	58.84
	Transport	-	31.09	0.00	0.00	-	-	0.00	0.00	31.09
	Households	-	20.48	0.00	0.00	-	-	1823.3	10.95	1854.73
	Com. & Public	0.00	4.94	0.00	0.00	-	-	242.09	2.64	249.67
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	7.80	0.00	0.00	-	-	-	-	7.80

South Africa

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

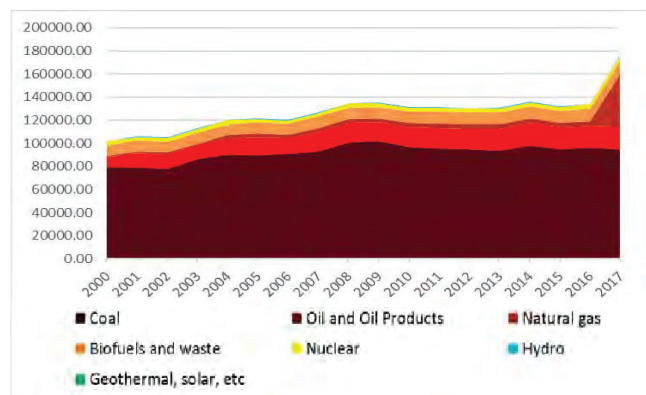


Figure 3.2. - Total Final Consumption (ktoe)

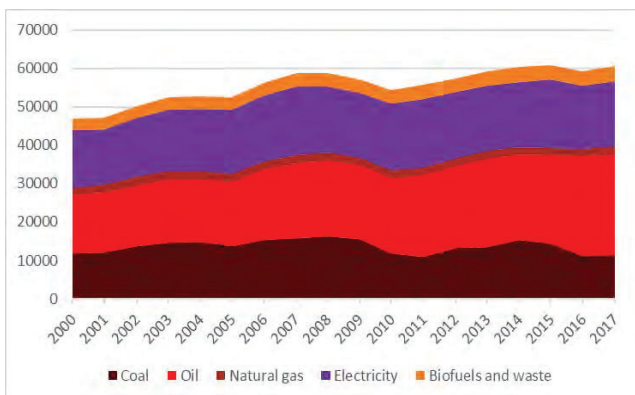


Figure 3.3. - Electricity Generation By Source (GWh)

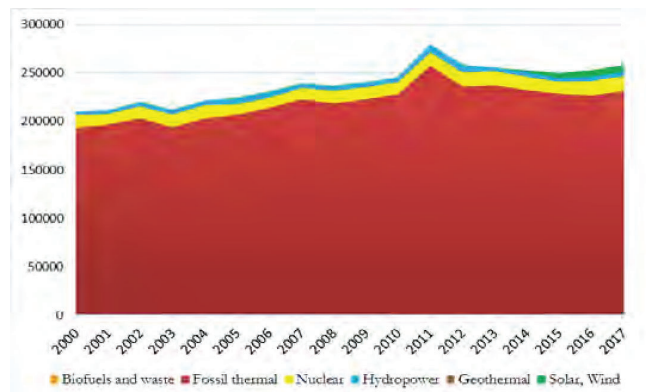


Figure 3.4. - Electricity Production and Consumption (GWh)

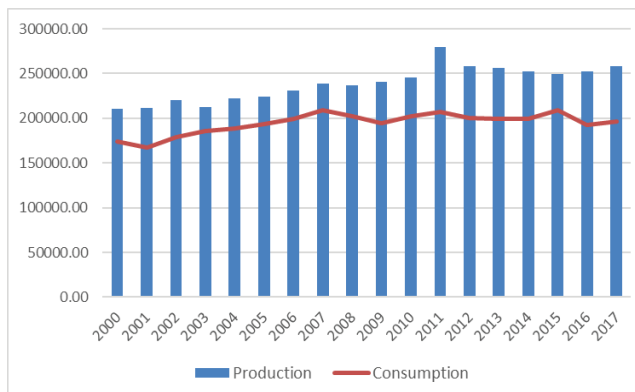


Figure 3.5. - Selected Indicators

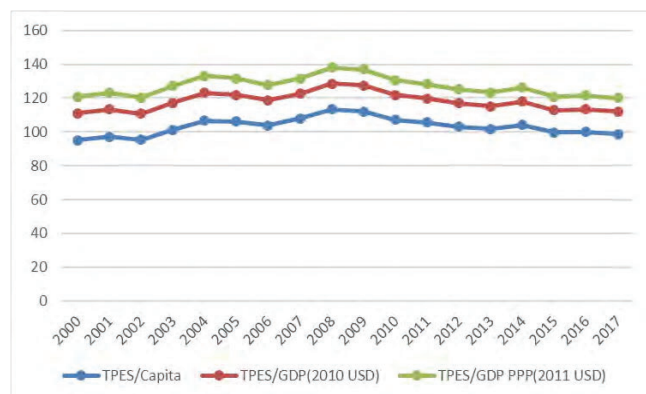
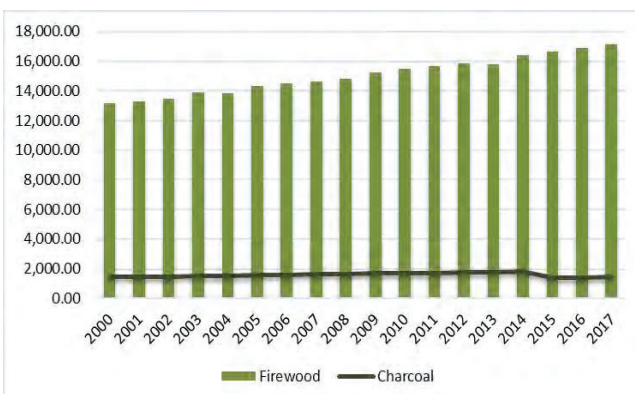


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



South Africa

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	210.71	-	131353.75	919.78	3964.87	359.75	601.39	11566.28	-	148976.53
	Imports	22133.95	5381.79	0.00	3626.82	-	-	-	0.00	0.00	31142.56
	Exports (-)	0.00	-4173.36	-36250.30	0.00	-	-	-	0.00	-503.44	-40927.1
	Int. Marine Bunkers (-)	-	-4502.49	-	-	-	-	-	-	-	-4502.49
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	22344.66	-3294.06	95103.45	4546.60	3964.87	359.75	601.39	11566.28	-503.44	134689.5
TRANSFORMATION	Transfers	0.00	5838.32	-	-	-	-	-	-	-	5838.32
	Statistical Difference	-343.14	2555.47	-77.11	-11.62	0.00	0.00	0.00	2046.04	37.35	4206.99
	Transformation	-22001.52	21714.17	-71195.62	-2702.83	-3964.87	-359.75	-601.39	-4074.31	22214.69	-60971.43
	Electricity Producers	0.00	-46.12	-59436.08	-2702.83	-3964.87	-359.75	-601.39	-133.75	22214.69	-45030.1
	Petroleum Refineries	-22001.52	21760.29	-	-	-	-	-	-	-	-241.23
	Charcoal Plants	-	-	-	-	-	-	-	-3940.56	-	-3940.56
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	-1498.49
	Coal-to-Liquids	0.00	-	-1498.49	-	-	-	-	-	-	-1144.58
	Blast Furnaces	-	-	-1144.58	-	-	-	-	-	-	-9116.47
	Other Transformation	0.00	0.00	-9116.47	0.00	-	-	-	0.00	-	0.00
	Own Use	0.00	0.00	-11277.42	0.00	-	-	-	0.00	-2853.4	-14130.82
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-1993.64	-1993.64
FINAL CONSUMPTION	TFC	0.00	26813.90	12553.30	1832.15	-	-	-	9538.01	16901.56	67638.92
	Industry	0.00	2273.74	7391.03	1830.45	-	-	-	1535.49	10083.16	23113.87
	Transport	-	19164.45	0.00	0.17	-	-	-	0.00	310.72	19475.34
	Households	-	640.46	2662.25	0.00	-	-	-	7270.94	3425.1	13998.75
	Com. & Public	0.00	150.11	1288.18	1.53	-	-	-	731.58	2460.33	4631.73
	Agriculture/Forestry	0.00	1160.83	3.58	0.00	-	-	-	0.00	622.25	1786.66
	Others (Non Specified)	0.00	846.03	0.00	0.00	-	-	-	0.00	0.00	846.03
	Non-Energy Use	0.00	2578.28	1208.26	0.00	-	-	-	-	-	3786.54

South Sudan

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

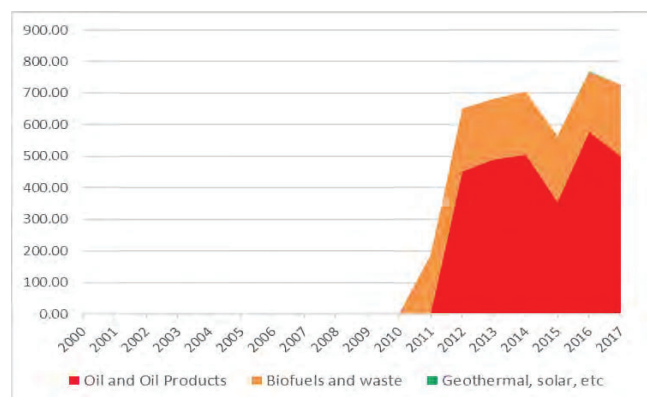


Figure 3.2. - Total Final Consumption (ktoe)

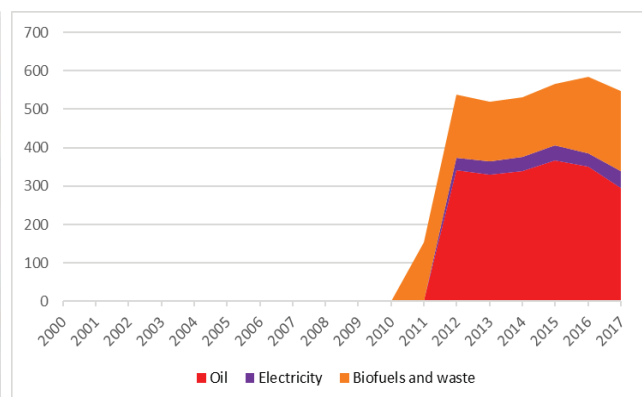


Figure 3.3. - Electricity Generation By Source (GWh)

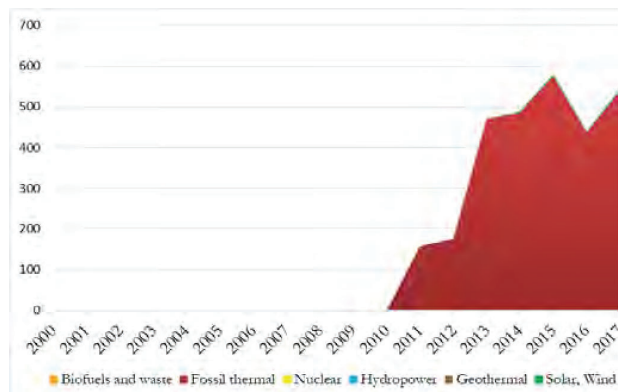


Figure 3.4. - Electricity Production and Consumption (GWh)

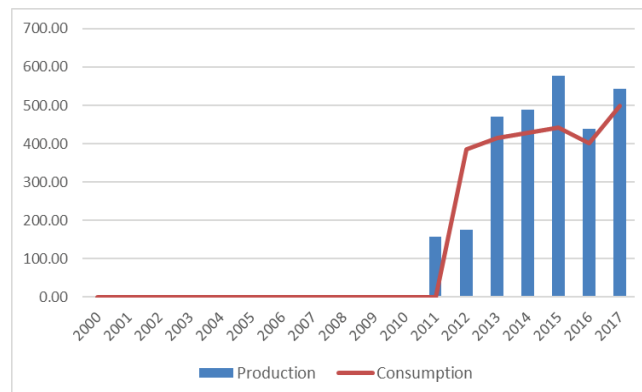


Figure 3.5. - Selected Indicators

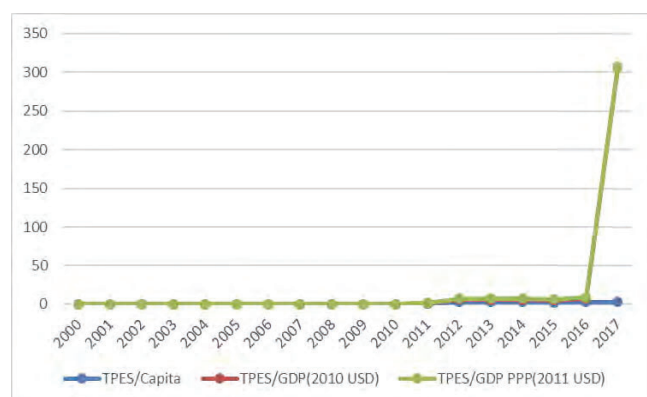
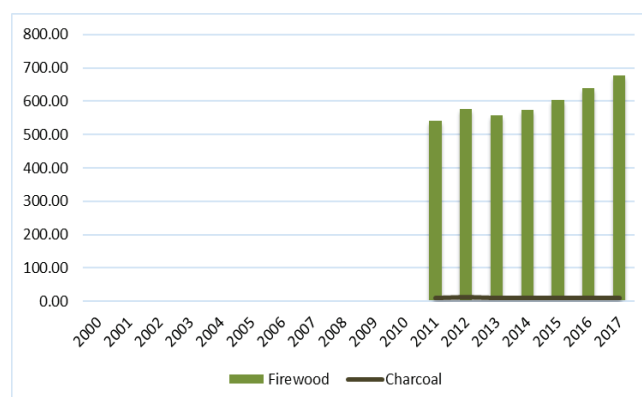


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



South Sudan

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude	Oil	Coal ²	Natural	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
	Oil ¹	Products		Gas						
2017										
PRIMARY SUPPLY										
Production	6023.57	-	0.00	0.00	0.00	0.00	0.26	226.38	-	6250.21
Imports	0.00	498.08	0.00	0.00	-	-	-	0.00	0.00	498.08
Exports (-)	-5957.92	0.00	0.00	0.00	-	-	-	0.00	0.00	-5957.92
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	63.60	-	-	-	-	-	-	-	-63.60
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	65.65	434.48	0.00	0.00	0.00	0.00	0.26	226.38	0.00	726.77
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.37	1.16	0.00	0.00	0.00	0.00	0.00	13.84	-0.42	14.94
TRANSFORMATION	0.00	-135.23	0.00	0.00	0.00	0.00	-0.26	-30.16	46.62	-119.03
Electricity Producers	0.00	-135.23	0.00	0.00	0.00	0.00	-0.26	0.00	46.62	-88.87
Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-30.16	-	-30.16
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	-65.65	0.00	0.00	0.00	-	-	-	0.00	-1.31	-66.96
Losses	-0.37	-0.11	0.00	0.00	-	-	-	0.00	-2.04	-2.52
FINAL CONSUMPTION	0.00	300.30	0.00	0.00	-	-	-	210.06	42.84	553.20
TFC										
Industry	0.00	16.76	0.00	0.00	-	-	-	0.00	16.97	33.73
Transport	-	255.28	0.00	0.00	-	-	-	0.00	0.00	255.28
Households	-	3.19	0.00	0.00	-	-	-	169.8	18.60	191.59
Com. & Public	0.00	3.42	0.00	0.00	-	-	-	40.26	1.61	45.29
Agriculture/Forestry	0.00	21.65	0.00	0.00	-	-	-	0.00	5.66	27.31
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Sudan

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

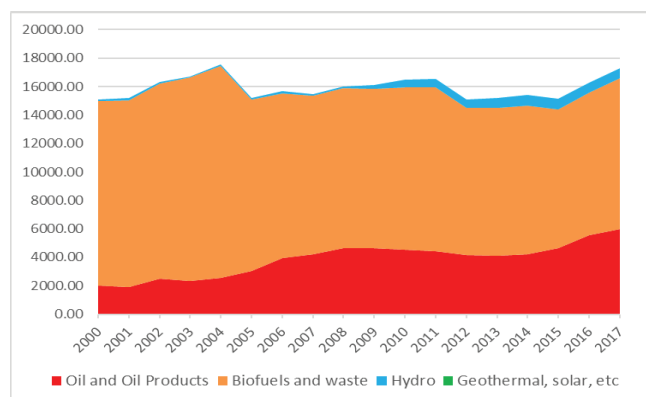


Figure 3.2. - Total Final Consumption (ktoe)

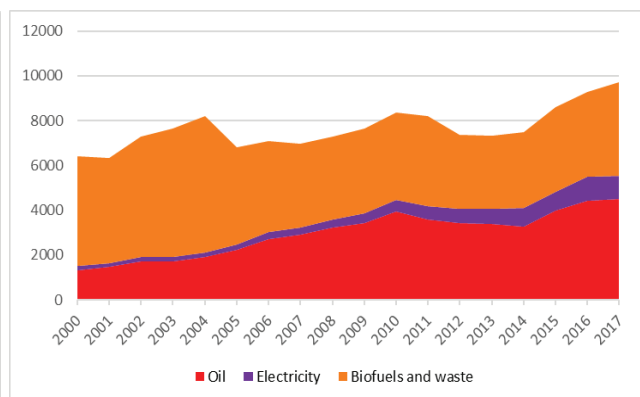


Figure 3.3. - Electricity Generation By Source (GWh)

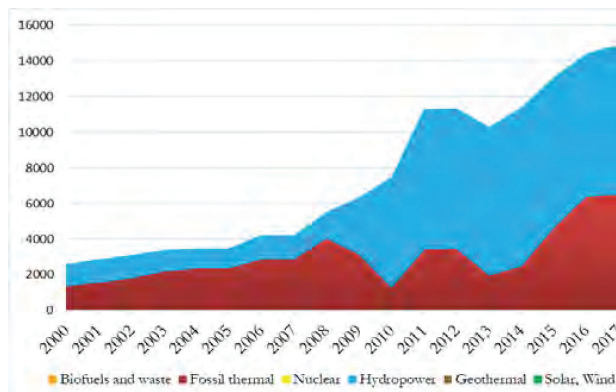


Figure 3.4. - Electricity Production and Consumption (GWh)

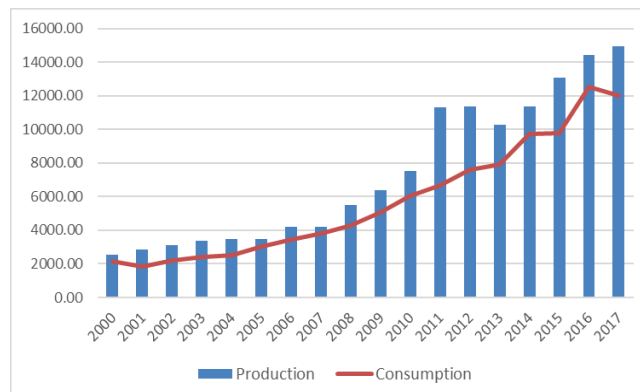


Figure 3.5. - Selected Indicators

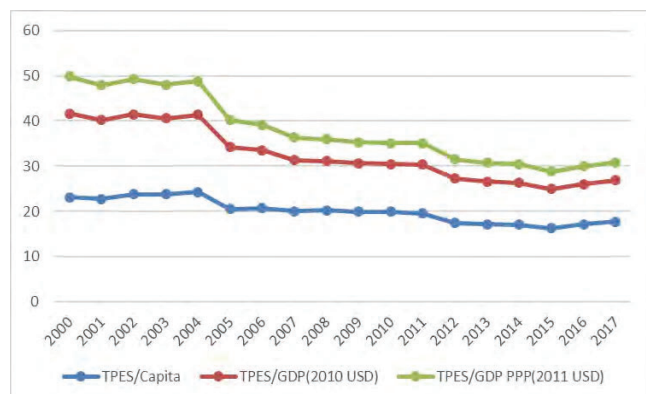
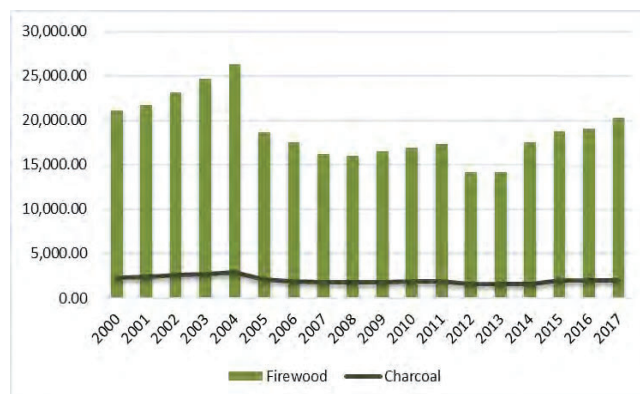


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Sudan

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	4592.86	-	0.00	0.00	0.00	718.49	0.83	10617.51	-	15929.69
Imports	409.78	1014.67	0.00	0.00	-	-	-	0.00	0.00	1424.45
Exports (-)	0.00	-53.62	0.00	0.00	-	-	-	0.00	0.00	-53.62
Int. Marine Bunkers (-)	-	-23.52	-	-	-	-	-	-	-	-23.52
Int. Aviation Bunkers (-)	-	-296.99	-	-	-	-	-	-	-	-296.99
ΔStock (+ draw, - build)	326.86	0.00	0.00	0.00	-	-	-	-	-	326.86
TPES³	5329.50	640.54	0.00	0.00	0.00	718.49	0.83	10617.51	0.00	17306.87
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	54.36	555.32	0.00	0.00	0.00	0.00	0.00	2258.15	-85.91	2781.92
TRANSFORMATION	-5383.86	3509.05	0.00	0.00	0.00	-718.49	-0.83	-6533.87	1283.27	-7844.73
Electricity Producers	-1031.01	-852.29	0.00	0.00	0.00	-718.49	-0.83	0.00	1283.27	-1319.35
Petroleum Refineries	-4352.85	4361.34	-	-	-	-	-	-	-	8.48
Charcoal Plants	-	-	-	-	-	-	-	-6533.87	-	-6233.87
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-4.64	-4.64
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-160.19	-160.19
FINAL CONSUMPTION	0.00	4704.91	0.00	0.00	-	-	-	6341.79	1032.53	12079.23
Industry	0.00	237.36	0.00	0.00	-	-	-	764.31	172.26	1173.93
Transport	-	3587.64	0.00	0.00	-	-	-	0.00	0.00	3587.64
Households	-	215.70	0.00	0.00	-	-	-	5105.80	632.20	5953.70
Com. & Public	0.00	156.58	0.00	0.00	-	-	-	471.68	152.93	781.19
Agriculture/Forestry	0.00	53.15	0.00	0.00	-	-	-	0.00	75.14	128.29
Others (Non Specified)	0.00	196.80	0.00	0.00	-	-	-	0.00	0.00	196.80
Non-Energy Use	0.00	257.68	0.00	0.00	-	-	-	-	-	257.68

Tanzania

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

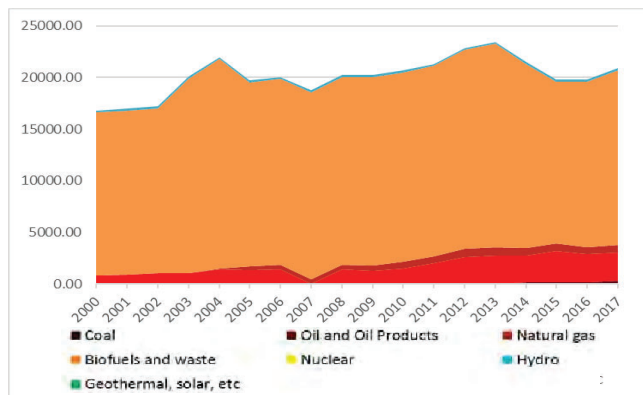


Figure 3.2. - Total Final Consumption (ktoe)

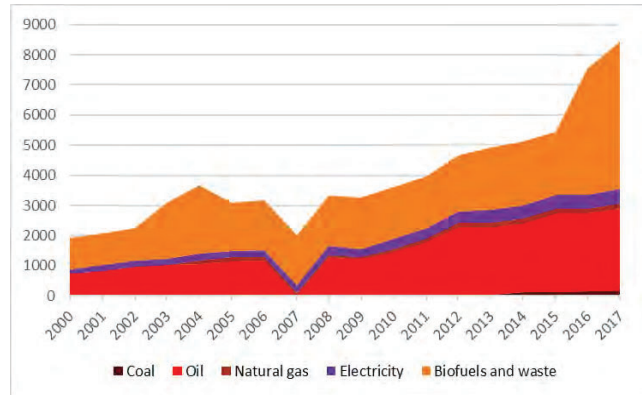


Figure 3.3. - Electricity Generation By Source (GWh)

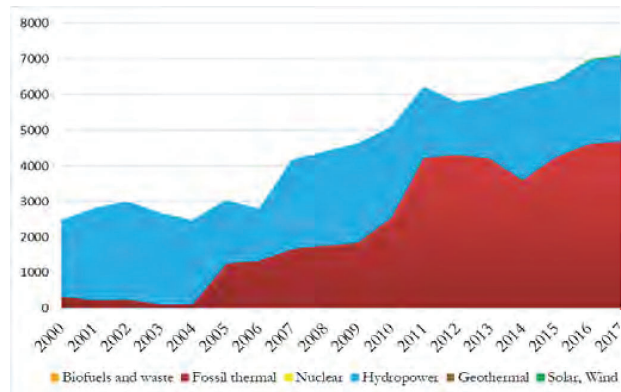


Figure 3.4. - Electricity Production and Consumption (GWh)

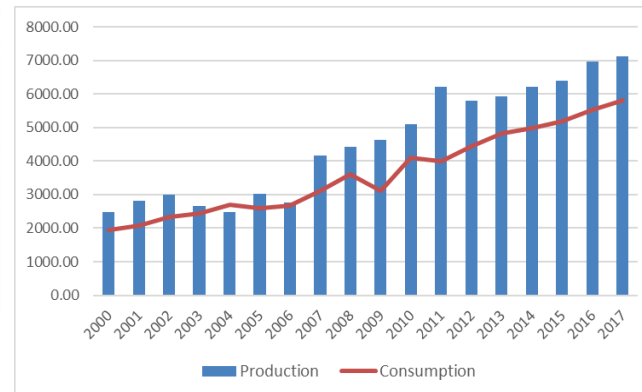


Figure 3.5. - Selected Indicators

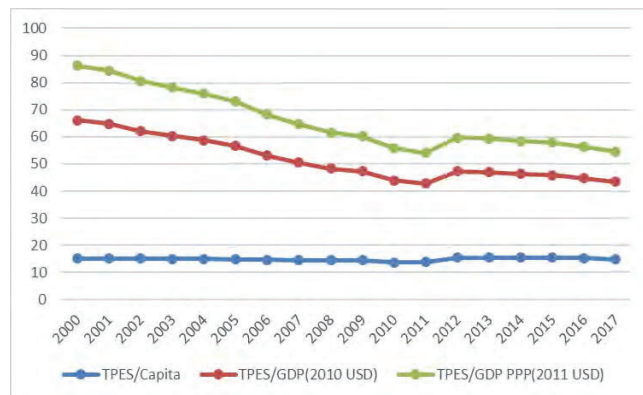
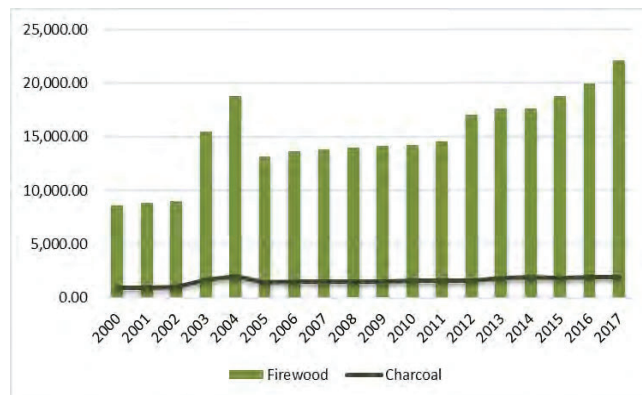


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Tanzania

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017		Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
PRIMARY SUPPLY	Production	0.00	-	287.63	695.23	0.00	204.5	2.28	16947.56	-	18137.2
	Imports	0.00	3024.65	0.00	0.00	-	-	-	0.00	9.48	3034.13
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	-68.35	-	-	-	-	-	-	-	-68.35
	Int. Aviation Bunkers (-)	-	-170.44	-	-	-	-	-	-	-	-170.44
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	2785.86	287.63	695.23	0.00	204.5	2.28	16947.56	9.48	20932.54
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	146.64	0.00	-543.25	0.00	0.00	0.00	2751.19	-27.26	2327.32
	Transformation	0.00	-152.12	0.00	0.00	0.00	-204.5	2.28	-5288.82	611.7	-5036.02
	Electricity Producers	0.00	-152.12	0.00	0.00	0.00	-204.5	-2.28	-11.46	611.7	241.34
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-5277.36	-	-5277.36
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-2.25	-2.25
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-96.35	-96.35
	TFC	0.00	2780.38	287.63	151.98	-	-	-	14409.93	495.32	18125.24
	Industry	0.00	103.51	287.63	151.98	-	-	-	3028.76	134.11	3705.99
	Transport	-	2432.5	0.00	0.00	-	-	-	0.00	0.00	2432.5
	Households	-	169.75	0.00	0.00	-	-	-	10455.2	218.27	10843.22
	Com. & Public	0.00	24.68	0.00	0.00	-	-	-	925.97	114.02	1064.67
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	16.1	16.1
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	12.82	12.82
	Non-Energy Use	0.00	49.94	0.00	0.00	-	-	-	-	-	49.94

Togo

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

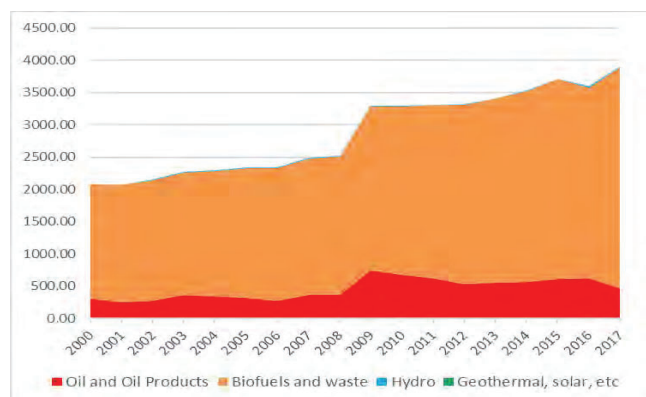


Figure 3.2. - Total Final Consumption (ktoe)

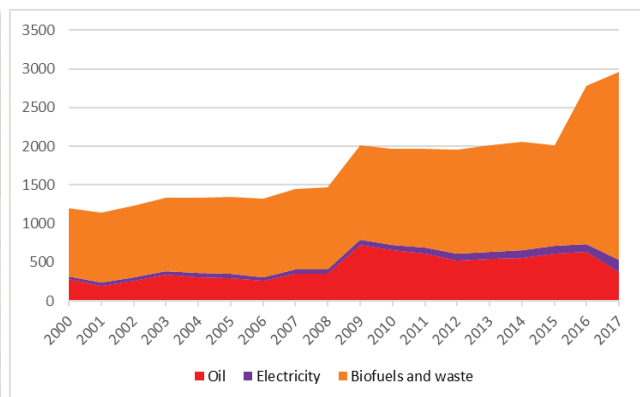


Figure 3.3. - Electricity Generation By Source (GWh)

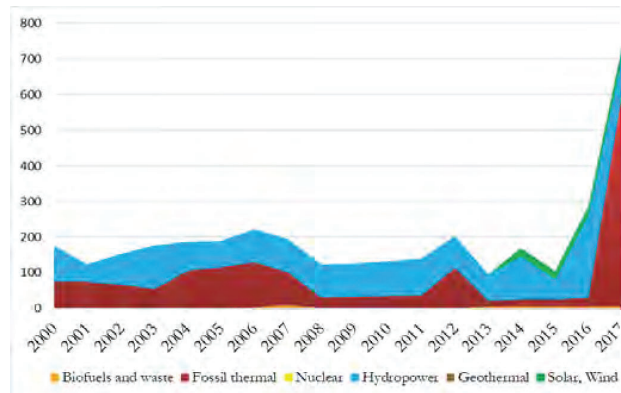


Figure 3.4. - Electricity Production and Consumption (GWh)

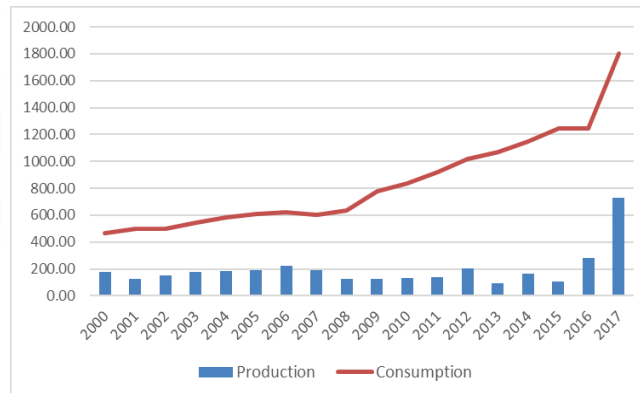


Figure 3.5. - Selected Indicators

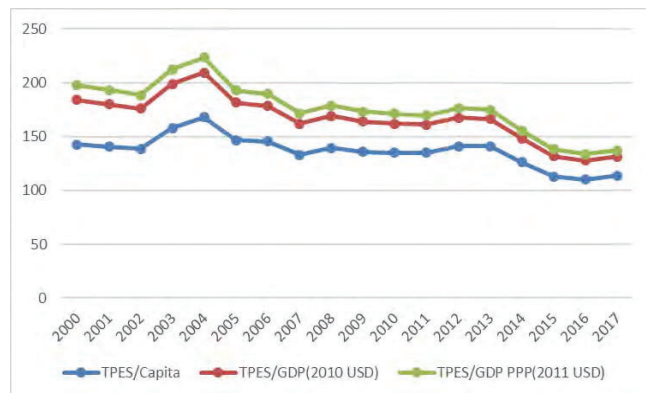
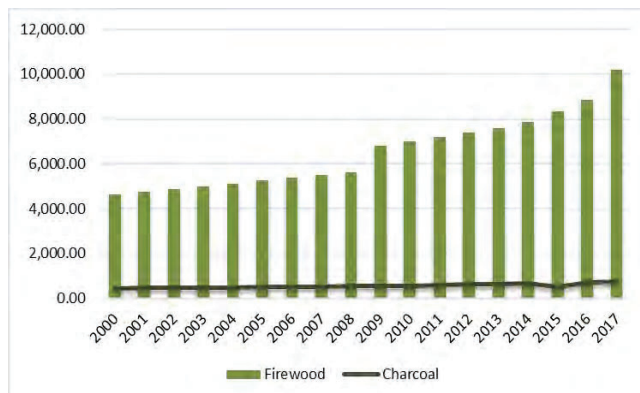


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Togo

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	0.00	0.00	0.00	8.86	2.18	3421.23	-	3432.27
Imports	0.00	436.48	0.00	31.84	-	-	-	0.00	72.74	541.06
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	29.65	0.00	0.00	-	-	-	-	-	29.65
TPES³	0.00	466.13	0.00	31.84	0.00	8.86	2.18	3421.23	72.74	4002.98
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	-20.78	0.00	0.00	0.00	0.00	0.00	1221.19	-2.15	1198.26
TRANSFORMATION	0.00	-62.78	0.00	-31.84	0.00	-8.86	-2.18	-2723.27	62.12	-2766.81
Electricity Producers	0.00	-62.78	0.00	-31.84	0.00	-8.86	-2.18	0.00	62.12	-43.54
Petroleum Refineries	0.00	-	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-2723.27	-	-2723.27
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-4.30	-4.30
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-14.70	-14.70
FINAL CONSUMPTION	0.00	382.57	0.00	0.00	-	-	-	1919.15	113.71	2415.43
Industry	0.00	8.74	0.00	0.00	-	-	-	0.00	54.17	62.91
Transport	-	351.72	0.00	0.00	-	-	-	0.00	0.00	351.72
Households	-	19.88	0.00	0.00	-	-	-	1346.07	50.64	1416.59
Com. & Public	0.00	2.03	0.00	0.00	-	-	-	573.08	8.86	583.97
Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.04	0.04
Non-Energy Use	0.00	0.20	0.00	0.00	-	-	-	-	-	0.20

Tunisia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

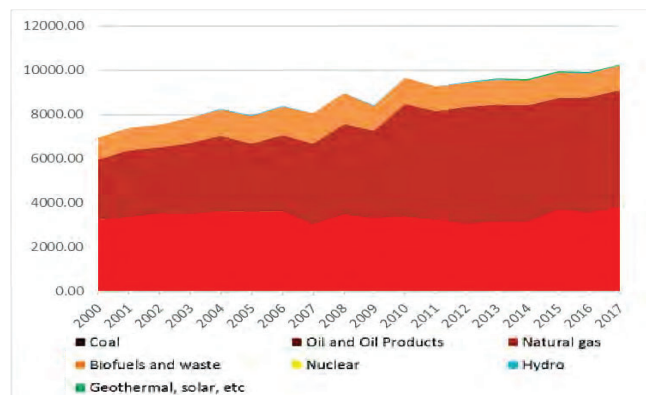


Figure 3.2. - Total Final Consumption (ktoe)

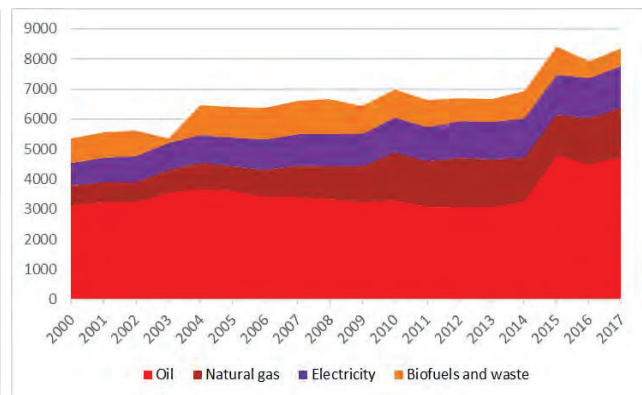


Figure 3.3. - Electricity Generation By Source (GWh)

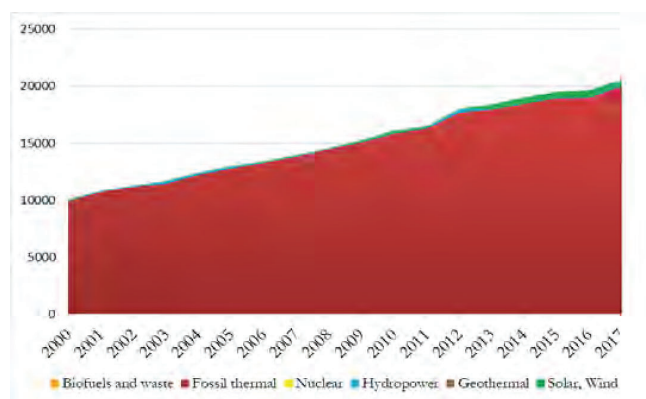


Figure 3.4. - Electricity Production and Consumption (GWh)

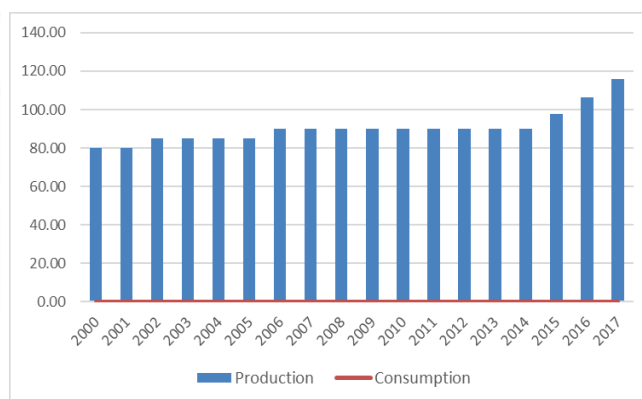


Figure 3.5. - Selected Indicators

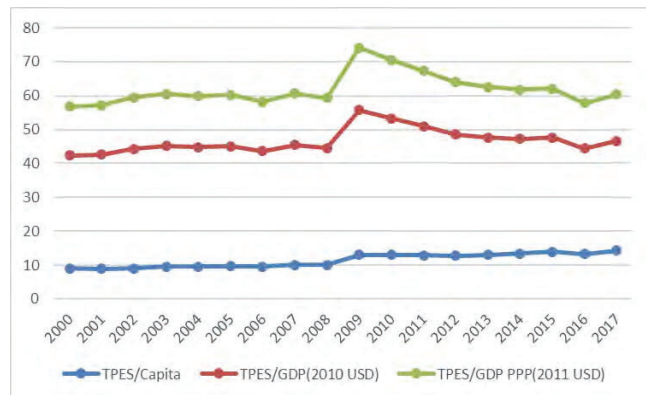
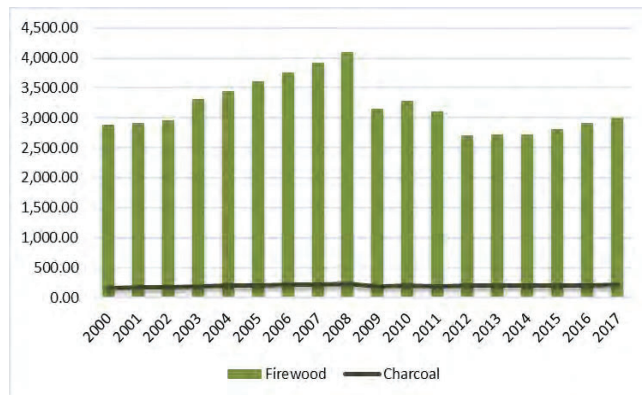


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Tunisia

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	1949.95	-	0.00	2106.69	0.00	1.50	50.02	1082.78	-	5190.94
	Imports	593.02	3311.11	0.00	3206.64	-	-	-	0.00	38.65	7149.42
	Exports (-)	-1558.78	-310.18	0.00	0.00	-	-	-	0.00	-41.57	-1910.53
	Int. Marine Bunkers (-)	-	-7.60	-	-	-	-	-	-	-	-7.60
	Int. Aviation Bunkers (-)	-	-267.51	-	-	-	-	-	-	-	-267.51
	ΔStock (+ draw, - build)	73.78	23.97	0.00	0.00	-	-	-	-	-	97.75
	TPES ³	1057.97	2749.79	0.00	5313.33	0.00	1.50	50.02	1082.78	-2.92	10252.47
TRANSFORMATION	Transfers	-131.73	139.49	-	-	-	-	-	-	-	7.76
	Statistical Difference	-69.18	403.44	0.00	-5.79	0.00	0.00	0.00	335.80	-6.76	657.49
	Transformation	-851.71	788.99	0.00	-3643.28	0.00	-1.50	-50.02	-543.91	1770.35	-2531.08
	Electricity Producers	0.00	-17.98	0.00	-3643.28	0.00	-1.50	-50.02	0.00	1770.35	-1942.43
	Petroleum Refineries	-851.71	806.97	-	-	-	-	-	-	-	-44.74
	Charcoal Plants	-	-	-	-	-	-	-	-543.91	-	-543.91
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	-5.35	-29.97	0.00	-144.49	-	-	-	0.00	-73.65	-253.46
	Losses	0.00	0.00	0.00	-54.55	-	-	-	0.00	-301.55	356.10
	TFC	0.00	4051.74	0.00	1465.21	-	-	-	874.67	1385.46	7777.08
	Industry	0.00	292.01	0.00	837.03	-	-	-	0.00	463.34	1592.38
	Transport	-	2355.25	0.00	219.08	-	-	-	0.00	8.07	2582.4
	Households	-	597.85	0.00	220.55	-	-	-	862.36	426.48	2107.24
	Com. & Public	0.00	103.61	0.00	165.96	-	-	-	12.31	388.08	669.96
	Agriculture/Forestry	0.00	397.86	0.00	22.59	-	-	-	0.00	99.49	519.94
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	305.16	0.00	0.00	-	-	-	-	-	305.16

Uganda

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

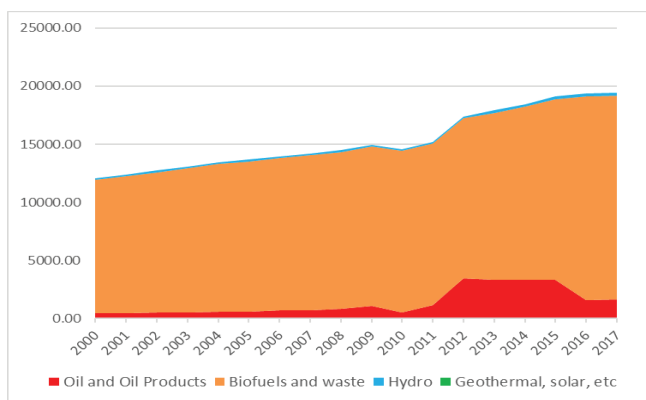


Figure 3.2. - Total Final Consumption (ktoe)

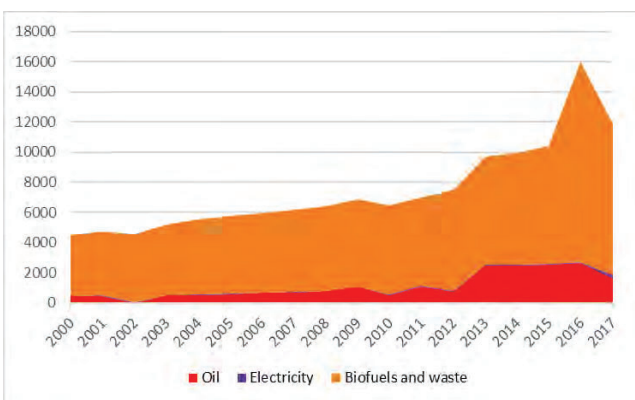


Figure 3.3. - Electricity Generation By Source (GWh)

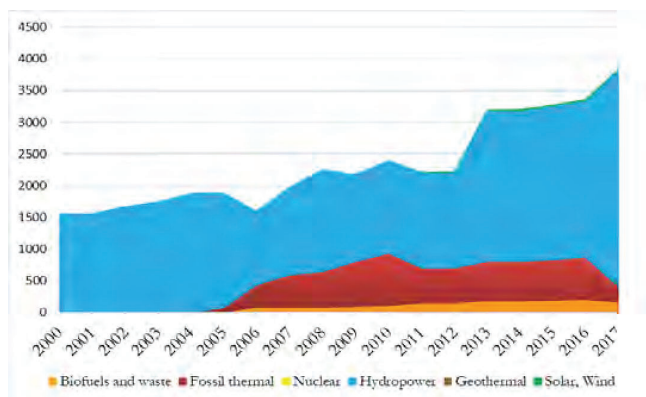


Figure 3.4. - Electricity Production and Consumption (GWh)

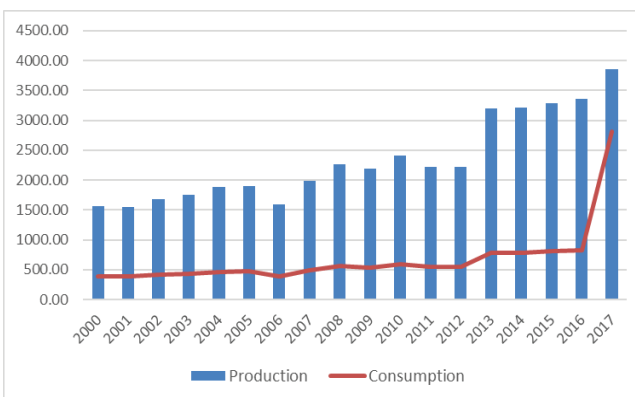


Figure 3.5. - Selected Indicators

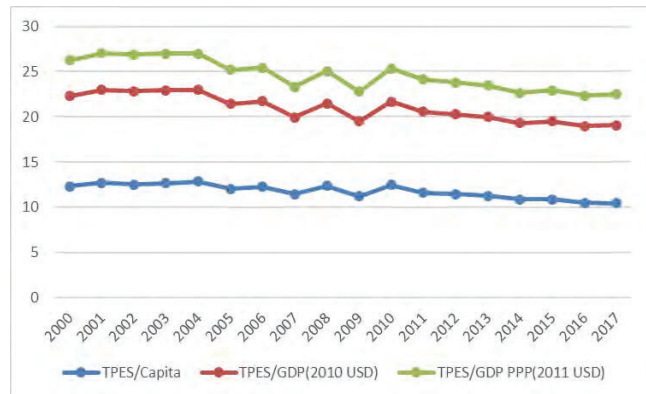
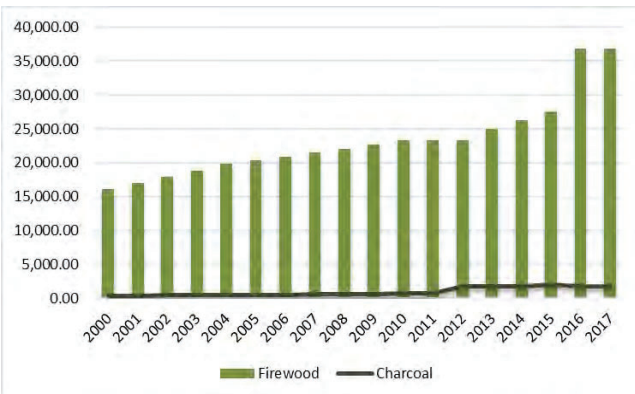


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Uganda

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)											
2017	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total	
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	295.85	1.98	15164.37	-	15462.2
	Imports	0.00	1652.69	0.00	0.00	-	-	-	2340.69	2.31	3995.69
	Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	-27.23	-27.23
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
	TPES ³	0.00	1652.69	0.00	0.00	0.00	295.85	1.98	17505.06	-24.92	19430.66
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	-39.86	0.00	0.00	0.00	0.00	0.00	2697.48	-1.06	2656.56
	Transformation	0.00	0.00	0.00	0.00	0.00	-295.85	-1.98	-8164.71	331.52	-8131.02
	Electricity Producers	0.00	0.00	0.00	0.00	0.00	-295.85	-1.98	-1490.4	331.52	-1456.71
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	-	-6674.31	-	-6674.31
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
FINAL CONSUMPTION	Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
	Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-63.53	-63.53
	TFC	0.00	1612.83	0.00	0.00	-	-	-	12037.83	242.01	13892.67
	Industry	0.00	351.45	0.00	0.00	-	-	-	2292.92	155.27	2799.64
	Transport	-	1142.94	0.00	0.00	-	-	-	0.00	0.00	1142.94
	Households	-	50.38	0.00	0.00	-	-	-	8741.76	55.48	8847.62
	Com. & Public	0.00	0.00	0.00	0.00	-	-	-	401.26	30.96	432.22
	Agriculture/Forestry	0.00	68.06	0.00	0.00	-	-	-	0.00	0.00	68.06
	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	-	601.89	0.30	602.19
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Western Sahara

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

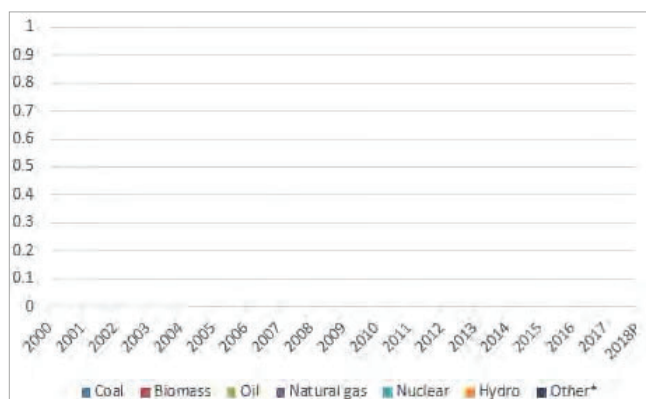


Figure 3.2. - Total Final Consumption (ktoe)

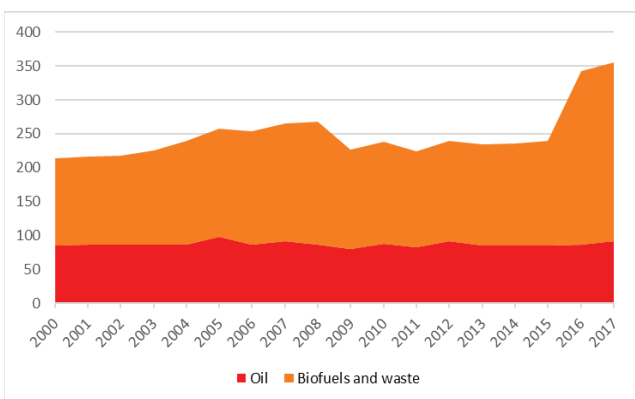


Figure 3.3. - Electricity Generation By Source (GWh)

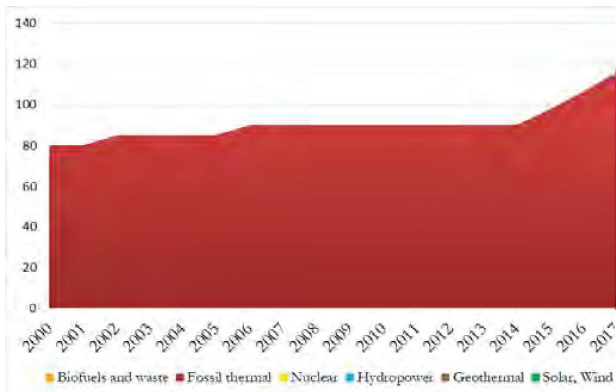


Figure 3.4. - Electricity Production and Consumption (GWh)

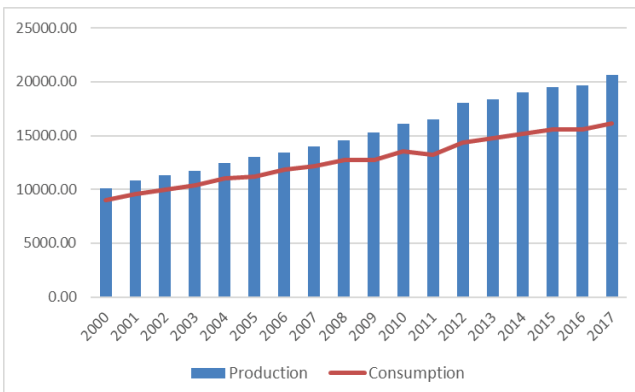


Figure 3.5. - Selected Indicators

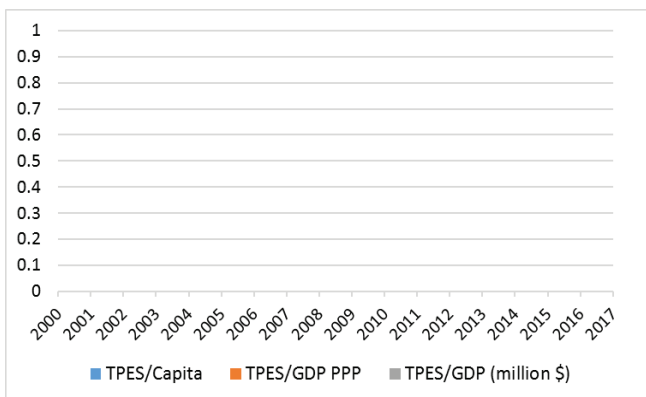
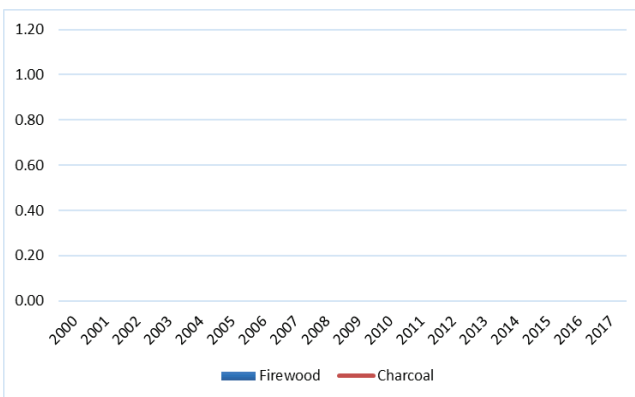


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Western Sahara

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY	Production	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
	Imports	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Exports (-)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	0.00
	ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	0.00
	TPES³	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRANSFORMATION	Transfers	0.00	0.00	-	-	-	-	-	-	0.00
	Statistical Difference	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Transformation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Electricity Producers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Petroleum Refineries	0.00	0.00	-	-	-	-	-	-	0.00
	Charcoal Plants	-	-	-	-	-	-	0.00	-	0.00
	Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	0.00
	Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	0.00
	Blast Furnaces	-	-	0.00	-	-	-	-	-	0.00
	Other Transformation	0.00	0.00	0.00	0.00	-	-	0.00	-	0.00
	Own Use	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	Losses	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	TFC	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Industry	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Transport	-	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Households	-	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Com. & Public	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Agriculture/Forestry	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
FINAL CONSUMPTION	Others (Non Specified)	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00
	Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00

Zambia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

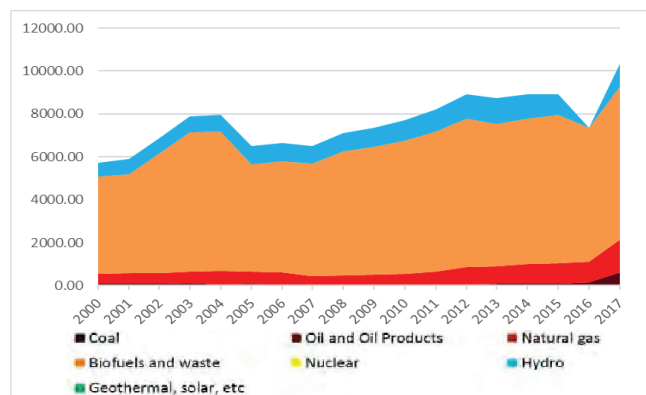


Figure 3.2. - Total Final Consumption (ktoe)

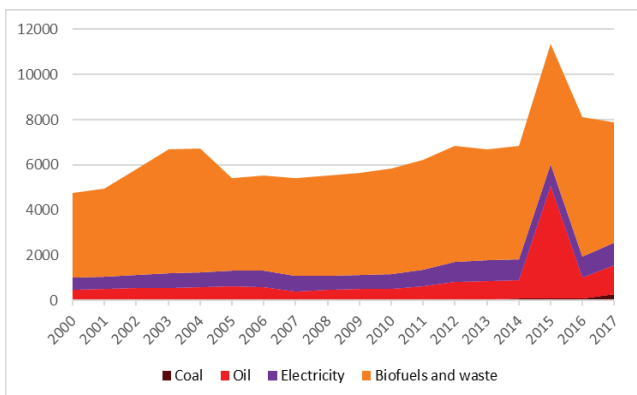


Figure 3.3. - Electricity Generation By Source (GWh)

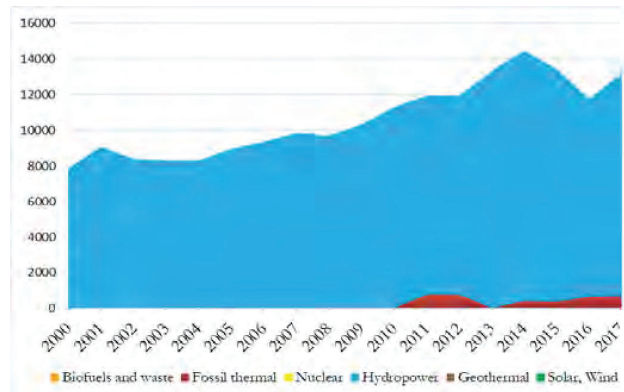


Figure 3.4. - Electricity Production and Consumption (GWh)

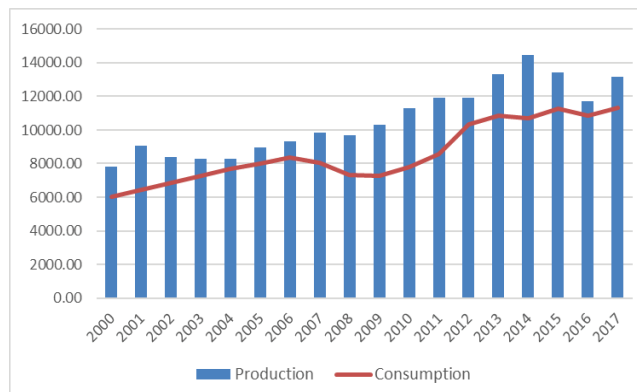


Figure 3.5. - Selected Indicators

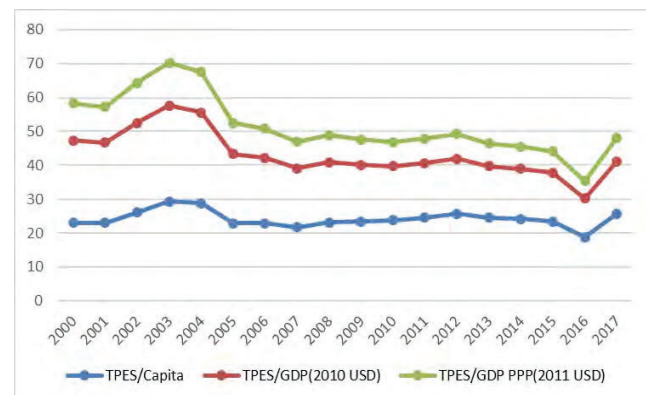
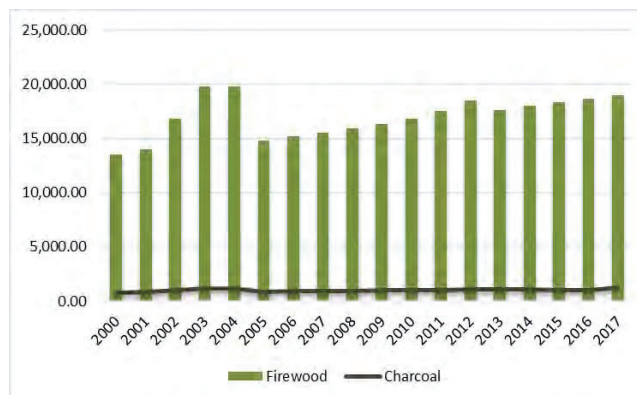


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Zambia

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude Oil ¹	Oil Products	Coal ²	Natural Gas	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
2017										
PRIMARY SUPPLY										
Production	0.00	-	382.62	0.00	0.00	1073.45	0.26	7109.08	-	8565.41
Imports	485.62	945.26	151.22	0.00	-	-	-	0.00	114.91	1697.01
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	93.83	0.00	96.52	0.00	-	-	-	-	-	190.35
TPES³	579.45	945.26	630.36	0.00	0.00	1073.45	0.26	7109.08	114.91	10452.77
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference							0			
	-0.44	-50.57	-24.53	0.00	0.00	0.00	0.00	2432.24	-44.83	2311.87
Transformation	-579.01	411.6	-317.26	0.00	0.00	1073.45	-0.26	-3431.00	1132.48	-3856.90
TRANSFORMATION										
Electricity Producers	0.00	-138.26	-317.26	0.00	0.00	1073.45	-0.26	0.00	1132.48	-396.75
Petroleum Refineries	-579.01	549.86	-	-	-	-	-	-	-	-29.15
Charcoal Plants	-	-	-	-	-	-	-	-3431.00	-	-3431
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	0.00	-	-	-	-	-	-	0.00
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	0.00
Own Use	0.00	0.00	0.00	0.00	-	-	-	0.00	-29.75	-29.75
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-198.97	-198.97
FINAL CONSUMPTION	0.00	1306.29	288.57	0.00	-	-	-	6110.32	973.84	8679.02
TFC										
Industry	0.00	331.24	151.65	0.00	-	-	-	683.21	584.21	1750.31
Transport	-	444.63	0.00	0.00	-	-	-	0.00	2.45	447.08
Households	-	19.16	0.00	0.00	-	-	-	4576.09	297.48	4892.73
Com. & Public	0.00	319.06	0.00	0.00	-	-	-	851.02	62.43	1232.51
Agriculture/Forestry	0.00	25.86	136.92	0.00	-	-	-	0.00	27.27	190.05
Others (Non Specified)	0.00	166.34	0.00	0.00	-	-	-	0.00	0.00	166.34
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

Zimbabwe

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

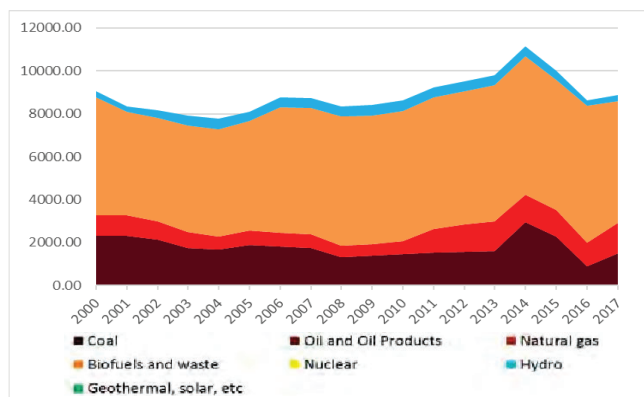


Figure 3.2. - Total Final Consumption (ktoe)

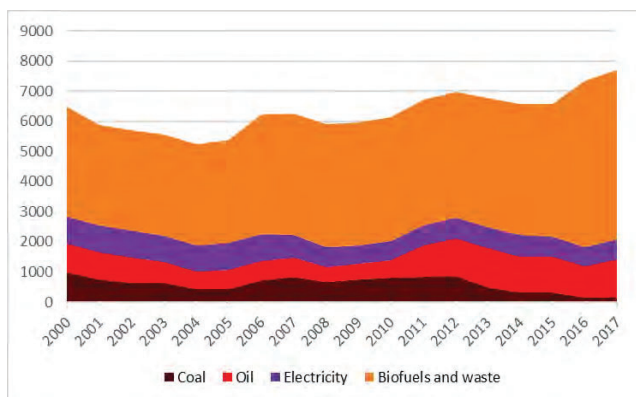


Figure 3.3. - Electricity Generation By Source (GWh)

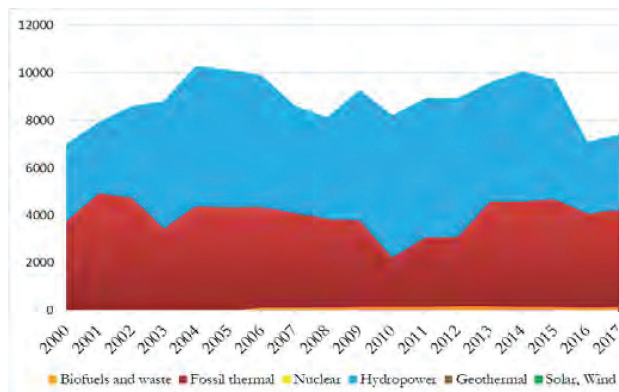


Figure 3.4. - Electricity Production and Consumption (GWh)

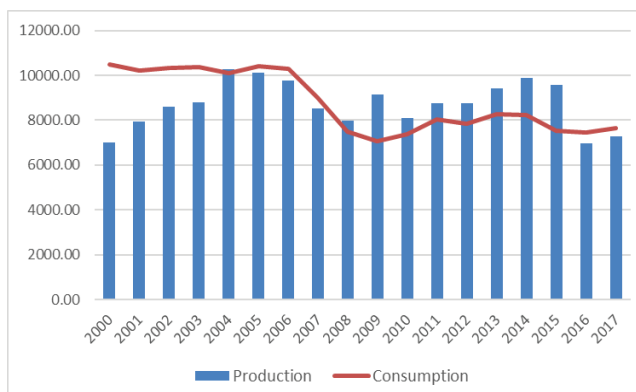


Figure 3.5. - Selected Indicators

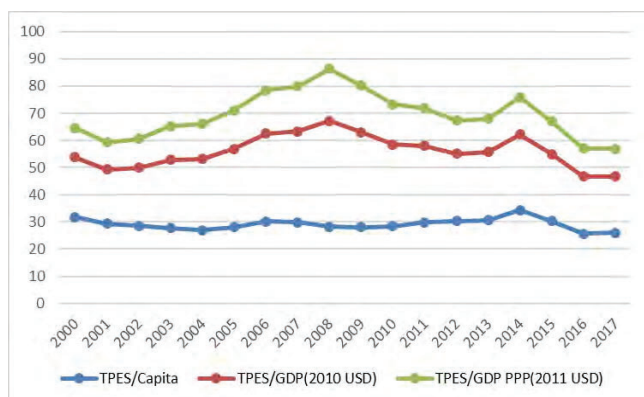
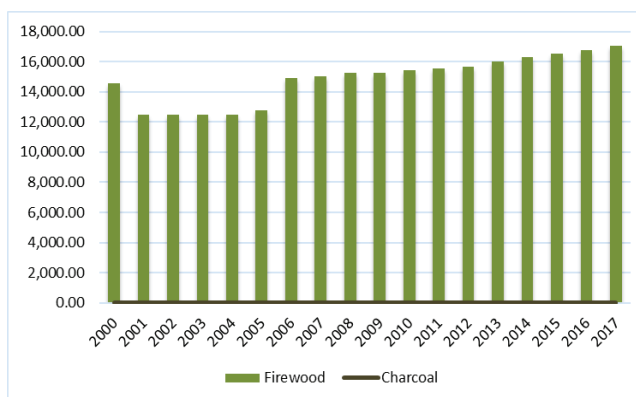


Figure 3.6. - Firewood and Charcoal Production (1000 tonnes)



Zimbabwe

Energy Balance

Thousand Tonnes of Oil Equivalent (ktoe)										
	Crude	Oil	Coal ²	Natural	Nuclear	Hydro	Wind/ Geother./ Solar	Biofuels / Waste	Electricity	Total
	Oil ¹	Products		Gas						
2017										
PRIMARY SUPPLY										
Production	0.00	-	1495.89	0.00	0.00	272.71	0.45	5695.23	-	7464.28
Imports	0.00	1387.68	19.92	0.00	-	-	-	0.00	162.93	1570.53
Exports (-)	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00
Int. Marine Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
Int. Aviation Bunkers (-)	-	0.00	-	-	-	-	-	-	-	0.00
ΔStock (+ draw, - build)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
TPES³	0.00	1387.68	1515.81	0.00	0.00	272.71	0.45	5695.23	162.93	9034.81
Transfers	0.00	0.00	-	-	-	-	-	-	-	0.00
Statistical Difference	0.00	-47.88	-32.61	0.00	0.00	0.00	0.00	-40.92	11.89	-109.52
TRANSFORMATION	0.00	-16.55	-1331.53	0.00	0.00	-272.71	-0.45	-30.90	637.14	-1015.00
Electricity Producers	0.00	-16.55	-1118.43	0.00	0.00	-272.71	-0.45	0.00	637.14	-771.00
Petroleum Refineries	0.00	-	-	-	-	-	-	-	-	0.00
Charcoal Plants	-	-	-	-	-	-	-	-30.90	-	-30.90
Gas-to-Liquids	0.00	-	-	0.00	-	-	-	-	-	0.00
Coal-to-Liquids	0.00	-	-213.10	-	-	-	-	-	-	-213.10
Blast Furnaces	-	-	0.00	-	-	-	-	-	-	0.00
Other Transformation	0.00	0.00	0.00	0.00	-	-	-	0.00	-	-43.92
Own Use	0.00	-16.55	-13.7	0.00	-	-	-	0.00	-13.67	0.00
Losses	0.00	0.00	0.00	0.00	-	-	-	0.00	-140.52	-140.52
FINAL CONSUMPTION	0.00	1306.70	137.97	0.00	-	-	-	5623.41	657.77	7725.85
Industry	0.00	56.71	129.80	0.00	-	-	-	0.00	235.89	422.40
Transport	-	933.81	2.55	0.00	-	-	-	0.00	0.00	936.36
Households	-	57.05	0.00	0.00	-	-	-	4544.22	255.88	4857.15
Com. & Public	0.00	0.00	1.53	0.00	-	-	-	1079.19	118.27	1198.99
Agriculture/Forestry	0.00	139.87	0.00	0.00	-	-	-	0.00	47.73	187.60
Others (Non Specified)	0.00	119.26	4.09	0.00	-	-	-	0.00	0.00	123.35
Non-Energy Use	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00

TIME SERIES

SELECTED INDICATORS

TPES/Capita

Country	2010	2011	2012	2014	2015	2017
Algeria	66.20	44.59	46.23	52.06	55.37	61.27
Angola	16.95	16.98	17.40	17.86	17.59	19.11
Benin	16.10	15.88	15.76	15.02	16.37	18.26
Botswana	43.79	41.22	48.05	50.29	52.77	57.48
Burkina Faso	13.44	13.59	13.61	13.64	13.69	13.49
Burundi	8.64	8.65	8.64	8.35	7.77	10.81
Cameroon	15.83	15.02	14.74	14.20	14.21	15.07
Cape Verde	13.61	14.08	13.10	12.51	14.81	16.28
Central African Republic	8.69	8.36	8.64	8.99	13.07	9.80
Chad	10.46	10.37	11.62	10.99	10.80	12.62
Comoros	9.46	9.23	9.01	8.61	8.65	7.04
Congo	19.66	21.94	22.68	23.08	26.31	24.73
DR Congo	12.82	12.10	12.09	15.85	16.46	18.26
Côte d'Ivoire	14.01	19.79	20.92	21.02	19.94	18.49
Djibouti	31.53	31.38	33.66	32.21	33.16	18.06
Egypt	33.33	37.68	37.37	34.68	35.21	40.10
Equatorial Guinea	17.73	26.35	20.98	20.99	28.27	26.09
Eritrea	8.60	9.11	9.03	9.14	8.74	8.26
Eswatini	36.29	35.17	36.55	39.61	40.66	51.37
Ethiopia	15.47	15.53	15.65	16.03	17.14	19.01
Gabon	80.87	80.56	78.08	62.81	72.36	73.87
Gambia	13.90	13.79	13.66	13.63	13.99	12.94
Ghana	14.15	15.25	14.71	14.43	15.09	13.64
Guinea	14.08	14.07	14.11	15.23	15.39	23.58
Guinea-Bissau	16.50	13.98	13.66	13.20	13.13	12.21
Kenya	14.23	14.15	14.63	16.34	17.04	17.37
Lesotho	18.77	19.44	17.96	19.40	19.49	21.72
Liberia	15.75	14.67	15.93	15.53	15.55	14.54

Country	2010	2011	2012	2014	2015	2017
Libya	131.22	89.47	110.99	115.96	111.44	157.29
Madagascar	10.55	10.57	10.23	10.94	11.61	12.88
Malawi	7.18	7.02	7.08	6.88	6.76	7.17
Mali	10.40	10.52	9.98	10.69	11.88	11.34
Mauritania	18.83	18.10	19.61	19.35	18.83	18.56
Mauritius	56.82	55.50	55.98	71.10	75.36	79.29
Morocco	16.74	15.63	16.73	24.15	20.45	20.50
Mozambique	12.97	14.46	16.04	15.86	16.72	14.98
Namibia	29.83	30.49	30.66	41.79	42.52	44.32
Niger	5.73	6.09	5.93	6.37	6.32	4.73
Nigeria	41.48	44.86	48.06	46.05	46.01	49.90
Rwanda	9.07	8.65	8.56	8.13	8.02	8.57
Sao Tome & Principe	21.85	22.32	24.60	24.33	12.90	18.59
Senegal	11.29	11.65	11.22	9.39	10.30	9.68
Seychelles	70.91	64.30	72.88	69.97	71.67	68.30
Sierra Leone	16.70	16.97	17.15	17.27	17.23	17.46
Somalia	8.91	8.81	8.22	7.93	8.08	10.78
South Africa	107.18	105.58	103.16	104.21	99.68	98.84
South Sudan	0.00	0.80	2.69	2.79	2.20	2.79
Sudan	19.96	19.58	17.46	17.02	16.27	17.75
Tanzania	13.76	13.94	15.48	15.44	15.52	14.90
Togo	135.02	135.27	141.24	126.25	113.07	113.79
Tunisia	12.98	12.90	12.81	13.38	13.90	14.28
Uganda	12.49	11.59	11.48	10.88	10.89	10.43
Zambia	23.78	24.55	25.78	24.23	23.46	25.68
Zimbabwe	28.49	29.92	30.31	34.34	30.35	26.09

TPES/GDP 2010 USD

Country	2010	2011	2012	2014	2015	2017
Algeria	14.77	9.86	10.08	11.08	11.59	12.73
Angola	4.72	4.74	4.64	4.65	4.69	5.60
Benin	21.25	20.93	20.38	18.01	19.77	21.19
Botswana	6.81	6.13	6.92	6.39	6.93	7.31
Burkina Faso	23.35	22.83	22.13	21.32	21.21	19.67
Burundi	36.89	36.67	36.19	34.04	34.04	50.49
Cameroon	193.46	181.53	181.05	181.54	184.71	189.78
Cape Verde	0.26	0.26	0.23	0.20	0.23	0.24
Central African Republic	17.82	16.56	16.36	26.76	37.43	26.18
Chad	11.73	12.01	12.80	11.44	11.31	15.46
Comoros	7.19	6.90	6.69	6.29	6.40	5.19
Congo	3.90	4.18	4.14	3.73	4.08	3.80
DR Congo	68.94	65.06	64.72	82.13	85.89	107.97
Côte d'Ivoire	11.56	17.49	17.11	15.26	13.64	11.44
Djibouti	23.47					
Egypt	12.60	14.30	14.18	13.09	13.02	14.23
Equatorial Guinea	1.03	1.50	1.15	1.30	2.01	2.30
Eritrea	12.88	12.73				
Eswatini	8.71	8.31	8.30	8.41	8.67	10.62
Ethiopia	45.30	42.07	40.14	35.67	35.51	34.68
Gabon	9.15	8.83	8.44	6.63	7.61	8.03
Gambia	26.19	27.97	27.06	27.62	27.60	25.82
Ghana	10.90	10.55	9.54	8.87	9.29	7.85
Guinea	20.93	20.26	19.60	20.55	20.51	26.40
Guinea-Bissau	29.60	23.81	24.31	23.75	22.86	19.88
Kenya	14.95	14.39	14.62	15.42	15.59	15.01
Lesotho	15.86	15.43	13.53	14.11	13.90	15.60
Liberia	30.68	27.27	28.22	26.49	27.20	26.53

Country	2010	2011	2012	2014	2015	2017
Libya	10.88	19.71	11.03	17.76	18.89	22.20
Madagascar	25.57	25.95	25.06	26.77	28.31	30.49
Malawi	15.01	14.40	14.66	13.56	13.32	13.98
Mali	14.65	14.80	14.59	15.12	16.33	14.84
Mauritania	7.53	7.35	7.99	7.37	6.67	6.17
Mauritius	16.35	15.29	14.60	16.61	17.39	17.48
Morocco	54.11	49.22	51.62	71.45	59.25	56.56
Mozambique	3.28	3.57	3.94	3.84	3.99	3.60
Namibia	6.22	6.04	5.77	7.08	6.88	6.91
Niger	8.36	8.79	8.47	8.76	8.52	6.87
Nigeria	1149.79	1248.54	1228.35	1097.04	1078.55	1120.09
Rwanda	0.25	0.23	0.23	0.20	0.20	0.22
Sao Tome & Principe	19.96	19.98	21.80	20.06	10.44	14.44
Senegal	8.83	9.23	8.69	7.02	7.44	6.50
Seychelles	6.67	5.65	6.37	5.62	5.53	4.90
Sierra Leone	41.55	40.65	36.47	30.42	39.07	37.39
Somalia						
South Africa	14.63	14.16	13.75	13.74	13.19	13.21
South Sudan	0.00	0.52	3.37	3.12	2.80	304.28
Sudan	10.50	10.76	9.77	9.32	8.70	9.12
Tanzania	30.24	28.84	31.77	30.90	30.43	28.50
Togo	27.08	25.88	26.56	21.95	19.00	17.61
Tunisia	40.29	38.03	35.77	33.90	33.67	32.27
Uganda	9.19	8.98	8.83	8.44	8.64	8.65
Zambia	15.97	16.09	16.20	14.74	14.30	15.48
Zimbabwe	30.04	28.06	24.78	27.85	24.59	20.65

TPES/GDP PPP 2011 USD

Country	2010	2011	2012	2014	2015	2017
Algeria	5.12	3.42	3.50	3.84	4.02	4.42
Angola	2.67	2.68	2.62	2.62	2.65	3.16
Benin	8.85	8.72	8.49	7.50	8.24	8.83
Botswana	3.31	2.98	3.36	3.11	3.37	3.56
Burkina Faso	9.44	9.23	8.95	8.62	8.57	7.95
Burundi	11.78	11.71	11.55	10.87	10.87	16.12
Cameroon	109.97	103.18	102.91	103.19	104.99	107.87
Cape Verde	0.11	0.12	0.10	0.09	0.10	0.11
Central African Republic	8.85	8.23	8.12	13.29	18.59	13.00
Chad	5.46	5.60	5.96	5.33	5.26	7.20
Comoros	3.90	3.74	3.63	3.41	3.47	2.81
Congo	1.97	2.12	2.10	1.89	2.06	1.92
DR Congo	36.38	34.34	34.16	43.35	45.33	56.99
Côte d'Ivoire	5.24	7.93	7.76	6.92	6.18	5.19
Djibouti						
Egypt	3.33	3.77	3.74	3.46	3.44	3.76
Equatorial Guinea	0.52	0.76	0.58	0.66	1.02	1.17
Eritrea	4.38	4.33				
Eswatini	4.40	4.20	4.20	4.26	4.39	5.37
Ethiopia	14.40	13.37	12.76	11.34	11.29	11.02
Gabon	5.22	5.03	4.81	3.78	4.34	4.58
Gambia	8.96	9.57	9.26	9.45	9.44	8.83
Ghana	4.67	4.53	4.09	3.81	3.98	3.37
Guinea	8.45	8.17	7.91	8.29	8.28	10.65
Guinea-Bissau	11.53	9.28	9.47	9.26	8.91	7.75
Kenya	5.84	5.62	5.71	6.02	6.09	5.87
Lesotho	7.76	7.55	6.62	6.90	6.80	7.63
Liberia	14.30	12.71	13.16	12.35	12.68	12.37

Country	2010	2011	2012	2014	2015	2017
Libya	4.45	8.06	4.51	7.26	7.73	9.08
Madagascar	7.62	7.73	7.46	7.97	8.43	9.08
Malawi	6.67	6.40	6.51	6.02	5.92	6.21
Mali	5.54	5.60	5.52	5.72	6.18	5.62
Mauritania	5.50	5.20	5.48	5.12	5.06	5.02
Mauritius	3.56	3.35	3.27	3.88	3.98	3.90
Morocco	2.55	2.30	2.42	3.35	2.75	2.69
Mozambique	13.73	14.69	15.62	14.19	14.44	12.73
Namibia	3.44	3.40	3.31	4.17	4.07	4.39
Niger	7.05	7.62	6.89	7.08	7.00	5.14
Nigeria	8.16	8.60	9.08	8.10	8.09	9.33
Rwanda	6.49	5.89	5.49	4.86	4.52	4.53
Sao Tome & Principe	8.54	8.54	9.32	8.58	4.47	6.17
Senegal	4.07	4.25	4.01	3.23	3.43	2.99
Seychelles	3.54	3.00	3.38	2.98	2.93	2.60
Sierra Leone	13.82	13.52	12.13	10.12	12.99	12.44
Somalia						
South Africa	8.95	8.67	8.42	8.41	8.07	8.09
South Sudan	0.00	0.22	1.39	1.28	1.15	
Sudan	4.61	4.72	4.29	4.09	3.82	4.00
Tanzania	11.87	11.32	12.47	12.13	11.95	11.19
Togo	9.04	8.64	8.86	7.32	6.34	5.88
Tunisia	17.31	16.34	15.37	14.56	14.46	13.86
Uganda	3.65	3.56	3.50	3.35	3.43	3.43
Zambia	7.12	7.18	7.23	6.58	6.38	6.91
Zimbabwe	14.78	13.80	12.19	13.70	12.10	10.16

Electricity generation by Source

Hydropower

	2010	2011	2012	2014	2015	2017
Algeria	171.00	173.00	125.83	254.00	145.00	56.30
Angola	3703.00	4007.00	4287.49	5041.00	5192.00	5991.68
Benin	0.00	0.00	0.00	0.00	0.00	1.22
Botswana	0.00	0.00	0.00	0.00	0.00	0.00
Burkina Faso	117.54	81.95	96.65	64.00	93.46	124.09
Burundi	230.00	150.00	178.70	179.00	181.36	185.49
Cameroon	4260.00	4217.00	4470.02	4562.00	4359.00	4787.04
Cape Verde	0.00	0.00	0.00	0.00	0.00	0.00
Central African Republic	135.00	139.00	148.73	138.83	140.56	144.12
Chad	0.00	0.00	0.00	0.00	0.00	0.00
Comoros	5.00	5.00	5.00	5.00	5.22	5.70
Congo, Rep.	426.00	791.00	826.60	952.00	925.00	1011.98
Côte d'Ivoire	1602.00	1774.00	1788.59	1913.00	1352.00	1537.03
Djibouti	0.00	0.00	0.00	0.00	0.00	0.00
DR Congo	7591.00	7235.00	7585.76	8820.00	8916.00	9769.94
Egypt	13045.70	13046.00	12935.00	13822.00	13432.00	13674.53
Equatorial Guinea	14.00	14.02	14.02	443.00	466.91	438.17
Eritrea	0.00	0.00	0.00	0.00	0.00	0.00
Eswatini	288.10	211.64	272.30	212.00	216.26	225.10
Ethiopia	3524.00	4931.00	6241.00	9013.00	9674.00	10825.07
Gabon	906.90	839.80	908.00	794.50	862.40	1012.60
Gambia, The	0.00	0.00	0.00	0.00	0.00	0.00
Ghana	6925.00	7561.00	8070.00	8387.00	5845.00	5616.13
Guinea	519.00	519.00	541.84	654.00	688.09	1212.05
Guinea-Bissau	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	3393.00	3451.00	2402.14	3310.00	3787.00	3462.11
Lesotho	46.90	46.78	28.51	35.05	37.15	74.16
Liberia	0.00	0.00	0.00	0.00	0.00	0.00

	2010	2011	2012	2014	2015	2017
Libya	0.00	0.00	0.00	0.00	0.00	0.00
Madagascar	72.06	75.67	79.71	86.59	86.94	143.11
Malawi	1733.00	1733.00	2163.79	2618.00	2658.81	2747.76
Mali	695.00	723.59	766.14	701.39	743.57	837.92
Morocco	3433.00	2005.00	1816.00	2033.00	2281.00	1184.70
Mauritania	95.02	95.65	108.10	183.00	184.36	216.94
Mauritius	101.00	97.93	98.42	91.00	122.00	117.47
Mozambique	16640.00	16567.35	16567.35	16169.15	16398.20	14060.82
Namibia	1235.00	1385.67	1413.38	1485.00	1502.00	1415.71
Niger	0.00	0.00	0.00	0.00	0.00	0.00
Nigeria	6310.00	5650.00	5306.69	5346.00	5718.00	5933.38
Rwanda	110.00	149.00	149.80	214.46	216.81	222.01
Sao Tome & Principe	5.00	10.00	10.51	11.00	11.08	12.84
Senegal	253.40	257.24	290.32	323.00	342.00	356.92
Seychelles	0.00	0.00	0.00	0.00	0.00	0.00
Sierra Leone	149.00	153.00	118.00	178.23	188.67	219.40
Somalia	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	5090.62	7858.33	7858.33	4082.00	3720.00	4183.93
South Sudan	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	6202.00	7884.00	7884.00	8913.00	8420.00	8356.06
Tanzania	2548.00	1983.26	1471.68	2590.00	2108.00	2378.36
Togo	98.00	103.00	88.90	120.00	56.00	103.00
Tunisia	50.00	54.00	196.30	56.00	60.93	17.46
Uganda	1485.00	1513.73	1513.73	2393.00	2433.09	3440.73
Western Sahara	0.00	0.00	0.00	0.00	0.00	0.00
Zambia	11273.00	11133.87	11133.87	14042.00	13035.00	12484.20
Zimbabwe	6001.00	5843.83	5843.83	5431.00	4990.00	3171.61

Geothermal

	2010	2011	2012	2014	2015	2017
Algeria	0.00	0.00	0.00	0.00	0.00	0.00
Angola	0.00	0.00	0.00	0.00	0.00	0.00
Benin	0.00	0.00	0.00	0.00	0.00	0.00
Botswana	0.00	0.00	0.00	0.00	0.00	0.00
Burkina Faso	0.00	0.00	0.00	0.00	0.00	0.00
Burundi	0.00	0.00	0.00	0.00	0.00	0.00
Cameroon	0.00	0.00	0.00	0.00	0.00	0.00
Cape Verde	0.00	0.00	0.00	0.00	0.00	0.00
Central African Republic	0.00	0.00	0.00	0.00	0.00	0.00
Chad	0.00	0.00	0.00	0.00	0.00	0.00
Comoros	0.00	0.00	0.00	0.00	0.00	0.00
Congo, Rep.	0.00	0.00	0.00	0.00	0.00	0.00
Côte d'Ivoire	0.00	0.00	0.00	0.00	0.00	0.00
Djibouti	0.00	0.00	0.00	0.00	0.00	0.00
DR Congo	0.00	0.00	0.00	0.00	0.00	0.00
Egypt	0.00	0.00	0.00	0.00	0.00	0.00
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Eritrea	0.00	0.00	0.00	0.00	0.00	0.00
Eswatini	0.00	0.00	0.00	0.00	0.00	0.00
Ethiopia	24.00	18.00	7.98	0.00	0.00	0.00
Gabon	0.00	0.00	0.00	0.00	0.00	0.00
Gambia, The	0.00	0.00	0.00	0.00	0.00	0.00
Ghana	0.00	0.00	0.00	0.00	0.00	0.00
Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Guinea-Bissau	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	1453.00	1518.00	2611.18	4059.00	4479.00	4280.59
Lesotho	537.97	537.69	537.35	582.28	580.83	579.14
Liberia	0.00	0.00	0.00	0.00	0.00	0.00

	2010	2011	2012	2014	2015	2017
Libya	0.00	0.00	0.00	0.00	0.00	0.00
Madagascar	3196.63	3196.63	3174.79	3348.20	2595.82	3995.22
Malawi	0.00	0.53	0.53	1.00	1.00	1.00
Mali	0.00	0.00	0.00	0.00	0.00	0.00
Morocco	0.00	0.00	0.00	0.00	0.00	0.00
Mauritania	0.00	0.00	0.00	0.00	0.00	0.00
Mauritius	0.00	0.00	0.00	0.00	0.00	0.00
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00
Namibia	0.00	0.00	0.00	0.00	0.00	0.00
Niger	0.00	0.00	0.00	0.00	0.00	0.00
Nigeria	0.00	0.00	0.00	0.00	0.00	0.00
Rwanda	0.00	0.00	0.00	0.00	0.00	0.00
Sao Tome & Principe	0.00	0.00	0.00	0.00	0.00	0.00
Senegal	0.00	0.00	0.00	0.00	0.00	0.00
Seychelles	0.00	0.00	0.00	0.00	0.00	0.00
Sierra Leone	0.00	0.00	0.00	0.00	0.00	0.00
Somalia	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	0.00	0.00	0.00	0.00	0.00	0.00
South Sudan	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	0.00	0.00	0.00	0.00	0.00	0.00
Tanzania	0.00	0.00	0.00	0.00	0.00	0.00
Togo	0.00	0.00	0.00	0.00	0.00	0.00
Tunisia	0.00	0.00	0.00	0.00	0.00	0.00
Uganda	0.00	0.00	0.00	0.00	0.00	0.00
Western Sahara	0.00	0.00	0.00	0.00	0.00	0.00
Zambia	0.00	0.00	0.00	0.00	0.00	0.00
Zimbabwe	0.00	0.00	0.00	0.00	0.00	0.00

Solar, Wind

	2010	2011	2012	2014	2015	2017
Algeria	0.00	77.53	82.78	285.00	77.00	579.09
Angola	0.00	2.83	3.25	4.00	5.00	5.14
Benin	0.00	0.00	0.00	7.00	5.00	5.06
Botswana	0.00	4.73	7.53	11.00	2.00	2.04
Burkina Faso	0.00	0.00	0.00	5.00	0.13	725.42
Burundi	0.00	0.88	0.88	1.00	1.00	1.01
Cameroon	7.00	7.00	7.00	34.40	37.30	82.95
Cape Verde	59.00	59.00	60.18	68.00	70.71	77.02
Central African Republic	0.00	1.00	1.10	7.32	7.39	7.65
Chad	0.00	0.00	0.00	0.00	0.00	0.00
Comoros	0.00	0.04	0.04	0.04	0.04	0.04
Congo, Rep.	0.00	0.00	0.00	0.00	0.00	0.00
Côte d'Ivoire	0.00	0.00	0.00	0.00	0.00	0.00
Djibouti	0.00	2.45	2.45	3.00	3.02	0.24
DR Congo	0.00	2.83	3.11	7.30	7.39	7.68
Egypt	1704.18	1576.65	1621.38	1691.00	2226.00	2250.95
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Eritrea	2.00	4.12	4.12	9.00	2.00	2.05
Eswatini	0.00	0.00	0.00	0.00	0.00	0.00
Ethiopia	0.00	126.14	294.34	498.00	759.00	831.33
Gabon	0.00	3.50	3.53	5.64	2.00	2.02
Gambia, The	2.00	2.00	2.00	6.00	6.06	6.24
Ghana	0.00	0.00	0.00	4.00	3.00	27.91
Guinea	0.00	4.29	4.29	7.30	7.40	7.70
Guinea-Bissau	0.00	0.00	0.00	3.00	3.01	3.04
Kenya	18.00	21.00	34.69	39.00	58.00	65.28
Lesotho	71.09	72.39	73.72	76.44	77.85	77.47
Liberia	0.00	0.00	0.00	1.30	1.30	1.31

	2010	2011	2012	2014	2015	2017
Libya	0.00	8.76	8.76	9.00	8.00	8.26
Madagascar	861.49	861.49	855.61	902.34	1107.90	589.99
Malawi	0.00	2.83	3.11	12.86	13.13	14.02
Mali	0.00	0.06	0.06	7.00	7.03	7.21
Morocco	0.00	0.00	0.00	25.00	25.90	29.25
Mauritania	2.50	6.83	6.83	28.00	29.00	48.59
Mauritius	658.80	692.20	728.00	1924.00	2524.00	7183.90
Mozambique	0.00	2.46	4.69	1.20	1.21	1.54
Namibia	0.00	0.00	0.00	7.00	7.06	36.64
Niger	0.00	0.00	0.00	4.00	4.00	5.06
Nigeria	0.00	0.00	0.00	74.00	77.65	86.54
Rwanda	0.00	1.31	2.63	2.98	3.10	3.16
Sao Tome & Principe	0.00	0.02	0.04	0.14	0.14	0.14
Senegal	3.06	3.31	3.98	4.00	4.00	6.17
Seychelles	0.00	0.70	1.05	4.00	4.02	4.09
Sierra Leone	0.00	0.00	0.00	0.00	0.00	0.00
Somalia	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	110.23	123.34	131.40	1946.00	4873.00	6896.38
South Sudan	0.00	0.09	0.09	2.00	2.00	3.00
Sudan	0.00	5.26	7.01	9.00	9.18	9.71
Tanzania	0.00	10.51	11.56	7.00	21.00	26.48
Togo	0.00	0.00	0.00	23.00	23.35	25.30
Tunisia	139.00	109.00	112.98	501.00	489.00	581.76
Uganda	0.00	17.52	19.27	26.00	27.45	23.04
Western Sahara	0.00	0.00	0.00	0.00	0.00	0.00
Zambia	0.00	1.71	1.97	3.00	3.02	3.07
Zimbabwe	0.00	4.47	4.47	5.00	5.06	5.23

Fossil Thermal

	2010	2011	2012	2014	2015	2017
Algeria	42663.00	51062.41	56776.00	63988.00	68576.00	75381.97
Angola	1745.00	1644.00	1709.76	4439.00	4572.00	4623.76
Benin	150.00	153.00	160.00	239.00	323.00	324.56
Botswana	430.00	693.79	2249.57	2312.00	2966.00	2720.42
Burkina Faso	447.83	530.27	381.89	722.00	1709.92	1447.88
Burundi	11.00	2.00	4.38	4.00	4.12	73.84
Cameroon	280.00	280.00	290.40	315.00	322.37	407.99
Cape Verde	1580.00	1537.00	1574.33	1518.00	3581.00	3798.48
Central African Republic	25.00	25.00	26.50	1.00	1.00	1.02
Chad	100.00	203.00	235.00	286.00	289.88	298.62
Comoros	32.00	54.60	57.33	60.00	62.32	67.79
Congo, Rep.	355.00	502.00	522.26	788.00	805.51	817.04
Côte d'Ivoire	4278.00	4261.00	7015.66	6303.00	7254.00	8956.52
Djibouti	325.00	325.00	345.06	352.00	360.86	569.40
DR Congo	9.00	21.00	9.07	11.00	16.00	14.22
Egypt	132045.00	132045.00	142468.00	156206.00	170549.00	180692.15
Equatorial Guinea	39.00	35.95	39.95	35.00	33.11	27.99
Eritrea	309.00	335.00	382.64	386.00	404.00	432.00
Eswatini	260.00	315.36	315.36	315.00	322.45	339.67
Ethiopia	31.00	11.00	12.00	3.00	4.00	4.35
Gabon	855.10	1010.40	1023.80	2408.89	2502.52	2168.23
Gambia, The	203.00	203.00	236.43	304.00	309.77	322.33
Ghana	3171.00	3639.00	3953.00	4572.00	5643.00	8424.00
Guinea	450.00	450.00	598.49	521.00	544.18	594.79
Guinea-Bissau	67.00	101.45	74.59	136.00	143.91	163.59
Kenya	2287.00	2569.00	3274.28	1714.00	1205.00	2426.37
Lesotho	128.97	133.52	113.02	118.83	120.81	233.82
Liberia	29.51	38.85	39.85	104.00	107.72	117.05

	2010	2011	2012	2014	2015	2017
Libya	32753.00	28648.66	31173.77	37731.00	37503.00	37404.51
Madagascar	367.00	396.22	457.37	682.64	692.89	628.93
Malawi	210.00	6.00	6.60	8.00	8.12	8.36
Mali	944.00	952.87	863.99	1320.35	1424.66	1561.88
Morocco	316.43	317.51	355.54	479.00	498.32	540.29
Mauritania	2035.00	1736.10	1757.33	2341.00	2316.00	2420.46
Mauritius	19545.00	22308.00	23811.80	25185.00	25108.00	26874.93
Mozambique	18.00	20.00	20.67	1568.71	2706.00	2930.11
Namibia	58.00	38.61	40.93	13.00	34.00	65.37
Niger	250.00	342.32	399.21	439.00	527.00	551.80
Nigeria	19747.00	21384.00	20084.17	25044.00	25708.00	25748.11
Rwanda	170.00	190.00	195.70	308.00	311.44	319.59
Sao Tome & Principe	20.00	18.00	17.70	18.00	18.34	81.85
Senegal	2724.00	2651.00	2585.59	3273.00	3706.00	4075.91
Seychelles	283.00	400.00	404.00	412.00	423.30	448.03
Sierra Leone	45.00	45.00	45.00	142.00	152.18	177.26
Somalia	310.00	312.36	331.10	372.00	382.90	406.32
South Africa	227552.38	257857.43	235765.62	232451.00	228566.00	231630.02
South Sudan	0.00	157.68	175.20	486.00	576.00	539.14
Sudan	1297.00	3416.40	3460.20	2463.00	4627.00	6558.63
Tanzania	2532.00	4204.80	4292.58	3589.00	4244.00	4684.62
Togo	32.00	34.00	111.10	20.00	20.00	594.10
Tunisia	15906.52	16331.85	17746.47	18458.16	18904.00	19989.94
Uganda	821.00	546.62	546.62	613.00	634.86	241.99
Western Sahara	90.00	90.00	90.00	90.00	97.86	115.96
Zambia	31.00	780.60	780.60	410.00	404.00	683.53
Zimbabwe	2089.00	2916.99	2916.99	4451.00	4590.00	4101.33

Biofuels and Waste

	2010	2011	2012	2014	2015	2017
Algeria	0.00	0.00	0.00	0.00	0.00	0.00
Angola	0.00	0.00	0.00	0.00	0.00	0.00
Benin	1.00	1.00	1.00	1.00	1.01	1.03
Botswana	0.00	0.00	0.00	0.00	0.00	0.00
Burkina Faso	0.00	0.00	0.00	0.00	0.00	0.00
Burundi	0.00	0.00	0.00	0.00	0.00	0.00
Cameroon	0.00	0.00	0.00	0.00	0.00	0.00
Cape Verde	59.00	61.00	62.22	72.00	3.00	4.10
Central African Republic	0.00	0.00	0.00	0.00	0.00	0.00
Chad	0.00	0.00	0.00	0.00	0.00	0.00
Comoros	0.00	0.00	0.00	0.00	0.00	0.00
Congo, Rep.	0.00	0.00	0.00	0.00	0.00	0.00
Côte d'Ivoire	63.00	64.00	64.00	70.00	105.00	185.71
Djibouti	0.00	0.00	0.00	0.00	0.00	0.00
DR Congo	0.00	0.00	0.00	9.00	21.00	22.67
Egypt	0.00	0.00	0.00	0.00	0.00	0.00
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Eritrea	0.00	0.00	0.00	0.00	0.00	0.00
Eswatini	178.00	259.00	285.00	320.00	347.22	358.20
Ethiopia	0.00	0.00	0.00	0.00	0.00	0.00
Gabon	9.00	9.00	9.93	10.00	10.79	13.00
Gambia, The	0.00	0.00	0.00	0.00	0.00	0.00
Ghana	0.00	0.00	0.00	0.00	0.00	0.00
Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Guinea-Bissau	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	316.00	316.00	217.36	136.00	122.00	126.01
Lesotho	0.00	0.00	0.00	0.00	0.00	0.00
Liberia	0.00	0.00	0.00	0.00	0.00	0.00

	2010	2011	2012	2014	2015	2017
Libya	0.00	0.00	0.00	0.00	0.00	0.00
Madagascar	6.13	5.62	6.13	6.27	6.34	261.07
Malawi	0.00	0.00	0.00	0.00	0.00	0.00
Mali	52.00	52.00	52.00	52.00	54.70	60.58
Morocco	0.00	0.00	0.00	0.00	0.00	0.00
Mauritania	550.40	664.87	673.51	477.00	530.00	541.15
Mauritius	0.00	0.00	3.00	3.00	3.00	3.05
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00
Namibia	0.00	0.00	0.00	0.00	0.00	0.00
Niger	0.00	0.00	0.00	0.00	0.00	0.00
Nigeria	0.00	0.00	0.00	0.00	0.00	0.00
Rwanda	2.00	2.00	2.00	2.00	2.00	2.05
Sao Tome & Principe	0.00	0.00	0.00	0.00	0.00	0.00
Senegal	52.00	53.00	52.00	62.00	73.00	66.27
Seychelles	0.00	0.00	0.00	14.00	14.13	14.74
Sierra Leone	0.00	0.00	0.00	0.00	0.00	0.00
Somalia	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	281.00	280.32	280.32	303.00	259.00	332.05
South Sudan	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	0.00	0.00	0.00	0.00	0.00	0.00
Tanzania	18.00	25.00	19.00	22.00	21.00	24.63
Togo	2.00	2.00	2.00	5.00	5.14	5.44
Tunisia	0.00	0.00	0.00	0.00	21.00	21.52
Uganda	100.00	144.54	144.54	175.00	187.47	149.77
Western Sahara	0.00	0.00	0.00	0.00	0.00	0.00
Zambia	0.00	0.00	0.00	0.00	0.00	0.00
Zimbabwe	130.00	148.00	158.00	144.00	129.00	131.75

Total Final Consumption by Fuel (ktoe)

Coal

	2010	2011	2012	2013	2014	2015	2016	2017
Algeria	56.71	42.40	37.81	29.63	38.45	15.33	15.48	27.59
Angola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benin	0.00	0.00	0.00	0.00	35.76	20.95	61.31	62.14
Botswana	27.59	172.17	186.48	184.74	53.13	41.89	108.31	47.67
Burkina Faso	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burundi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cameroon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cape Verde	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central African Republic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Comoros	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Congo, Rep.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Côte d'Ivoire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Djibouti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DR Congo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Egypt	202.82	202.82	204.36	188.38	188.38	199.67	211.37	223.55
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eritrea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eswatini	24.42	24.42	9.37	29.63	24.60	26.09	26.28	27.08
Ethiopia	25.54	86.85	173.70	148.67	206.91	209.98	225.81	272.37
Gabon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gambia, The	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ghana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Guinea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Guinea-Bissau	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	136.92	195.67	175.24	173.19	272.31	289.16	284.57	291.28
Lesotho	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liberia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	2010	2011	2012	2013	2014	2015	2016	2017
Libya	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Madagascar	6.13	5.62	6.13	6.27	6.27	6.34	6.42	261.07
Malawi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.80
Mali	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morocco	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mauritania	12.77	12.31	13.08	14.30	15.84	18.39	16.86	17.06
Mauritius	11.75	11.24	6.13	17.37	13.28	13.84	13.79	13.99
Mozambique	2.55	11.17	26.84	13.28	823.05	91.51	92.52	6.15
Namibia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Niger	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Nigeria	19.48	16.41	24.59	22.54	23.57	24.07	23.57	24.14
Rwanda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sao Tome & Principe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Senegal	146.70	205.22	178.30	178.88	187.56	250.40	262.66	219.75
Seychelles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sierra Leone	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Somalia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	11912.31	10932.08	13233.35	13526.39	15438.66	14397.35	11135.90	11345.05
South Sudan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanzania	0.00	1.53	40.36	41.27	125.68	131.30	141.01	150.74
Togo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tunisia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uganda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Western Sahara	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zambia	0.51	0.51	45.98	49.02	81.23	83.79	86.34	288.57
Zimbabwe	821.68	837.86	875.67	492.78	329.77	329.77	130.79	138.17

Oil

	2010	2011	2012	2014	2015	2017
Algeria	13145.41	13564.63	14250.34	16384.36	18111.74	17525.16
Angola	3612.04	3983.09	4067.13	4896.35	5046.40	3895.20
Benin	1447.28	1488.28	1557.97	633.44	2053.46	2039.16
Botswana	834.34	848.69	855.86	939.91	1034.18	1253.05
Burkina Faso	383.34	407.81	433.84	492.96	781.19	1145.14
Burundi	59.55	66.95	70.70	64.25	64.95	71.87
Cameroon	70.97	95.77	88.43	65.46	103.52	100.35
Cape Verde	1102.88	1144.91	1194.11	1349.90	1251.69	1699.56
Central African Republic	56.57	51.28	61.37	41.05	41.03	43.86
Chad	169.89	138.44	417.46	420.33	401.14	372.93
Comoros	33.04	28.12	28.55	26.84	27.88	63.29
Congo, Rep.	523.77	586.29	594.49	746.19	757.57	500.91
Côte d'Ivoire	930.68	855.86	1282.25	1480.08	1552.51	2122.56
Djibouti	266.02	268.44	301.98	279.99	294.00	138.08
DR Congo	589.37	742.09	733.89	1503.65	884.19	674.90
Egypt	26838.16	27327.08	27596.65	26905.81	29139.25	24927.09
Equatorial Guinea	85.67	85.67	85.67	85.67	85.67	94.48
Eritrea	68.67	72.77	76.87	80.97	84.34	210.85
Eswatini	193.48	229.06	198.12	282.37	286.63	297.75
Ethiopia	1765.02	1857.27	2098.14	2575.78	3001.01	3758.07
Gabon	599.62	669.31	706.21	759.51	745.86	790.56
Gambia, The	118.80	121.54	124.50	142.52	151.09	154.77
Ghana	2387.19	2663.93	3141.57	3228.70	3678.06	2932.47
Guinea	344.37	355.31	374.43	760.94	804.43	7160.73
Guinea-Bissau	99.59	37.92	33.07	35.11	38.19	44.19
Kenya	2685.46	2544.01	2439.46	3054.45	3810.24	4727.67
Lesotho	128.97	133.52	113.02	118.83	120.81	233.82
Liberia	137.46	142.20	150.45	142.81	142.20	145.61

	2010	2011	2012	2014	2015	2017
Libya	8683.66	5507.24	7643.30	7826.77	6857.64	17323.64
Madagascar	367.00	396.22	457.37	682.64	692.89	628.93
Malawi	334.23	347.59	386.75	380.80	383.61	422.36
Mali	575.28	676.51	679.19	571.84	942.45	1073.87
Morocco	586.11	676.30	698.60	802.41	782.12	631.65
Mauritania	455.09	453.04	460.22	475.59	499.08	727.07
Mauritius	8076.87	8554.51	8762.58	9001.40	11241.01	11963.60
Mozambique	708.26	810.76	773.86	935.81	1224.55	2006.19
Namibia	928.63	948.11	959.38	1096.73	1129.60	1369.94
Niger	333.12	322.87	468.42	485.84	483.79	461.06
Nigeria	11566.94	10723.38	11439.84	10088.91	17921.79	19615.40
Rwanda	212.44	158.41	192.14	179.68	184.31	155.43
Sao Tome & Principe	0.00	0.00	0.00	0.00	0.00	0.00
Senegal	853.81	903.01	865.09	982.96	1118.46	1051.77
Seychelles	43.09	39.14	45.04	43.85	45.16	48.07
Sierra Leone	138.15	168.96	88.36	243.72	220.31	389.59
Somalia	107.32	85.84	91.19	93.13	94.83	115.67
South Africa	19544.38	21352.45	21438.55	22074.04	22915.56	26364.81
South Sudan	0.00	0.00	340.29	339.27	367.11	295.19
Sudan	3948.24	3599.74	3413.19	3285.07	3980.29	4506.52
Tanzania	1430.88	1771.17	2244.71	2273.41	2614.04	2726.09
Togo	651.89	606.79	523.97	555.58	607.38	372.17
Tunisia	3298.40	3068.80	3058.55	3252.27	4774.26	4708.65
Uganda	493.63	1063.09	757.19	2477.28	2503.97	1572.24
Western Sahara	88.28	82.19	91.33	85.04	85.77	91.76
Zambia	519.67	630.36	781.04	832.29	4977.42	1282.25
Zimbabwe	577.07	1031.13	1247.40	1176.68	1188.95	1276.03

Natural Gas

	2010	2011	2012	2014	2015	2017
Algeria	9782.77	10514.47	11957.49	16586.26	17996.52	19591.11
Angola	662.56	680.71	689.79	247.42	698.86	1186.25
Benin	0.00	0.00	0.00	0.00	0.00	0.00
Botswana	0.00	0.00	0.00	0.00	0.00	0.04
Burkina Faso	0.00	0.00	0.00	0.00	0.00	0.00
Burundi	0.00	0.00	0.00	0.00	0.00	0.00
Cameroon	0.00	0.00	0.00	0.00	0.00	0.00
Cape Verde	0.00	0.00	0.00	0.00	0.00	0.00
Central African Republic	0.00	0.00	0.00	0.00	0.00	0.00
Chad	0.00	0.00	0.00	0.00	0.00	0.00
Comoros	0.00	0.00	0.00	0.00	0.00	0.00
Congo, Rep.	0.00	0.00	0.00	0.00	0.00	0.00
Côte d'Ivoire	205.14	201.01	137.80	282.98	277.85	66.64
Djibouti	0.00	0.00	0.00	0.00	0.00	0.00
DR Congo	0.00	0.00	0.00	0.00	0.00	0.00
Egypt	11856.99	12726.43	12718.69	19504.55	20956.14	17788.69
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Eritrea	0.00	0.00	0.00	0.00	0.00	0.00
Eswatini	0.00	0.00	0.00	0.00	0.00	0.00
Ethiopia	0.00	0.00	0.00	0.00	0.00	0.00
Gabon	2.08	2.22	2.36	2.63	2.72	3.00
Gambia, The	0.00	0.00	0.00	0.00	0.00	0.00
Ghana	0.00	0.00	0.00	0.00	0.00	28.80
Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Guinea-Bissau	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	0.00	0.00	0.00	0.00	0.00	0.00
Lesotho	0.00	0.00	0.00	0.00	0.00	0.00
Liberia	0.00	0.00	0.00	0.00	0.00	0.00

	2010	2011	2012	2014	2015	2017
Libya	1931.45	774.47	268.93	258.07	250.76	230.78
Madagascar	0.00	0.00	0.00	0.00	0.00	0.00
Malawi	0.00	0.00	0.00	0.00	0.00	0.00
Mali	0.00	0.00	0.00	0.00	0.00	0.00
Morocco	0.00	0.00	0.00	0.00	0.00	0.00
Mauritania	0.00	0.00	0.00	0.00	0.00	0.00
Mauritius	49.25	55.46	75.00	93.99	73.97	81.39
Mozambique	70.01	81.11	79.38	92.35	152.63	115.86
Namibia	0.00	0.00	0.00	0.00	0.00	0.00
Niger	0.00	0.00	0.00	0.00	0.00	0.00
Nigeria	1345.92	3855.07	3443.90	4199.36	4181.62	3430.50
Rwanda	0.00	0.00	0.00	0.00	0.00	0.00
Sao Tome & Principe	0.00	0.00	0.00	0.00	0.00	0.00
Senegal	0.00	0.00	0.00	0.00	0.00	0.00
Seychelles	0.00	0.00	0.00	0.00	0.00	0.00
Sierra Leone	0.00	0.00	0.00	0.00	0.00	0.00
Somalia	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	1926.87	1918.37	1894.91	1887.65	1936.49	2035.73
South Sudan	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	0.00	0.00	0.00	0.00	0.00	0.00
Tanzania	110.92	116.08	144.45	161.65	153.15	168.82
Togo	0.00	0.00	0.00	0.00	0.00	0.00
Tunisia	1595.83	1525.75	1640.92	1453.12	1359.07	1665.46
Uganda	0.00	0.00	0.00	0.00	0.00	0.00
Western Sahara	0.00	0.00	0.00	0.00	0.00	0.00
Zambia	0.00	0.00	0.00	0.00	0.00	0.00
Zimbabwe	0.00	0.00	0.00	0.00	0.00	0.00

Electricity

	2010	2011	2012	2014	2015	2017
Algeria	2877.90	3084.01	3506.19	3933.88	4123.56	4847.47
Angola	402.92	419.17	460.19	703.18	720.91	503.17
Benin	67.58	72.40	75.41	84.69	96.97	97.97
Botswana	267.24	268.10	274.98	296.56	305.49	309.89
Burkina Faso	66.97	78.08	103.67	118.40	97.61	220.14
Burundi	14.65	10.50	12.35	12.43	12.79	15.29
Cameroon	16.07	16.94	86.69	87.54	19.46	31.32
Cape Verde	418.14	410.15	427.26	471.63	521.98	575.62
Central African Republic	6.41	6.25	6.82	6.55	5.40	5.71
Chad	5.33	10.82	12.53	15.25	15.28	16.39
Comoros	1.42	2.28	2.39	2.49	2.58	2.86
Congo, Rep.	42.99	52.11	68.10	68.62	69.40	133.68
Côte d'Ivoire	354.00	329.84	354.00	499.40	517.18	576.02
Djibouti	24.83	24.82	33.81	41.25	41.26	50.00
DR Congo	538.52	577.64	633.53	679.19	634.19	621.13
Egypt	10761.74	11873.17	12059.93	12306.10	12592.61	14485.99
Equatorial Guinea	24.33	24.32	27.29	55.71	57.46	47.25
Eritrea	22.01	23.30	24.51	24.33	26.80	30.37
Eswatini	14.54	11.00	14.19	10.77	17.88	19.34
Ethiopia	329.92	375.75	453.65	561.39	626.61	782.85
Gabon	124.42	130.87	138.61	171.02	180.16	182.56
Gambia, The	8.28	8.28	103.87	105.99	12.70	13.37
Ghana	612.55	685.81	477.21	843.34	808.18	1039.90
Guinea	16.38	16.46	149.56	149.87	20.91	23.27
Guinea-Bissau	2.88	4.36	3.21	5.98	6.30	6.53
Kenya	529.49	550.82	570.68	661.05	677.33	726.86
Lesotho	46.90	46.78	28.51	35.05	37.15	74.16
Liberia	1.64	2.16	2.21	5.84	6.04	6.51

	2010	2011	2012	2014	2015	2017
Libya	1702.15	1359.24	1117.28	936.37	1003.95	1252.13
Madagascar	72.06	75.67	79.71	86.59	86.94	143.11
Malawi	232.22	207.84	259.40	314.60	313.55	332.89
Mali	122.49	125.02	129.63	193.06	207.57	247.81
Morocco	27.84	27.93	30.81	37.18	38.66	40.35
Mauritania	211.18	214.45	220.29	233.02	241.98	260.78
Mauritius	2031.73	2193.04	2504.21	2476.87	2584.27	2790.43
Mozambique	845.49	872.06	940.76	1008.08	976.57	1241.95
Namibia	288.39	298.11	312.55	322.18	319.46	346.59
Niger	56.92	69.56	71.71	79.79	83.58	102.76
Nigeria	1776.44	2016.08	2163.28	2101.38	2148.34	2227.44
Rwanda	19.35	23.52	24.84	35.05	35.40	37.61
Sao Tome & Principe	1.65	1.85	1.87	1.92	1.07	1.42
Senegal	218.23	225.45	244.88	275.58	292.80	340.27
Seychelles	18.07	27.11	27.76	26.78	41.50	45.09
Sierra Leone	8.75	8.93	7.35	9.79	11.15	11.75
Somalia	13.33	13.90	14.71	16.47	16.93	19.16
South Africa	17423.99	17819.52	17206.62	17102.75	17963.34	16901.55
South Sudan	0.00	0.00	33.10	36.89	38.03	42.85
Sudan	518.14	575.24	654.43	834.91	839.20	1032.53
Tanzania	351.85	343.51	381.86	427.86	446.66	498.76
Togo	71.97	79.19	87.79	98.88	106.97	154.94
Tunisia	1165.18	1138.35	1236.97	1306.10	1338.93	1385.46
Uganda	51.20	46.92	46.92	67.70	69.48	242.00
Western Sahara	0.00	0.00	0.00	0.00	0.00	0.00
Zambia	669.73	736.97	887.27	921.67	969.16	973.84
Zimbabwe	633.53	691.57	673.34	708.34	648.41	657.77

Biofuels and Waste

	2010	2011	2012	2014	2015	2017
Algeria	2.01	2.01	2.01	2.01	2.05	2.08
Angola	1077.72	1118.18	1154.96	1254.28	1162.69	921.63
Benin	566.61	580.66	594.71	806.55	848.02	1840.45
Botswana	1358.67	1376.19	1375.49	1435.07	1148.90	1193.32
Burkina Faso	3633.95	3803.62	3889.22	4061.33	3906.20	4254.80
Burundi	1481.99	1532.15	1582.31	1832.69	1353.19	1584.36
Cameroon	30.13	30.89	31.65	32.32	34.81	32.95
Cape Verde	902.44	921.37	942.41	1003.41	1012.70	1049.83
Central African Republic	994.72	976.49	973.70	878.52	899.87	937.70
Chad	2160.48	2213.23	2270.68	2368.16	2376.56	1353.10
Comoros	51.50	52.90	54.30	55.16	57.22	42.35
Congo, Rep.	961.62	1082.33	1069.83	1104.46	1128.65	1566.35
Côte d'Ivoire	1738.97	5332.41	5489.73	5379.62	5621.18	4252.71
Djibouti	155.30	157.88	160.50	165.87	172.29	180.71
DR Congo	17936.98	17305.29	17910.97	16276.35	16906.63	17434.90
Egypt	146.39	146.76	147.13	148.12	160.76	0.00
Equatorial Guinea	102.12	104.76	107.49	110.70	119.65	131.48
Eritrea	269.45	285.18	279.28	289.12	311.47	226.98
Eswatini	316.60	325.00	333.63	351.58	364.77	388.98
Ethiopia	25646.20	26669.82	27629.50	29441.94	30814.80	25534.96
Gabon	160.01	159.65	159.27	173.43	219.00	185.41
Gambia, The	339.25	346.56	354.03	362.16	381.55	365.30
Ghana	1781.73	1807.35	1961.00	1827.88	1794.68	2763.16
Guinea	2309.63	2360.34	2412.15	3894.91	4173.12	2863.80
Guinea-Bissau	373.75	378.57	383.42	388.80	390.51	361.40
Kenya	7579.63	7784.43	8072.10	8709.04	6981.62	10127.99
Lesotho	609.06	610.08	611.06	658.73	658.68	656.60
Liberia	952.15	985.03	1019.04	1057.28	1102.09	1046.72

	2010	2011	2012	2014	2015	2017
Libya	39.61	42.17	40.33	12.77	13.66	15.25
Madagascar	4058.13	4058.13	4030.40	4250.54	3703.72	4585.21
Malawi	1662.63	1684.48	1706.67	1752.14	1775.42	1556.90
Mali	1929.06	1962.84	2033.46	2165.07	2245.85	2426.83
Morocco	539.90	554.37	569.24	588.31	602.70	539.98
Mauritania	6.40	6.40	6.40	6.32	6.22	5.40
Mauritius	29.94	35.56	29.94	31.81	33.29	21.76
Mozambique	3057.61	3249.74	4346.87	4467.46	4677.63	1909.36
Namibia	245.47	249.62	246.18	261.74	278.90	803.44
Niger	904.42	924.06	942.66	995.55	1110.39	922.49
Nigeria	129358.86	143699.13	159549.23	151957.88	156354.44	149831.98
Rwanda	1424.41	1424.41	1424.41	1426.61	854.15	1421.09
Sao Tome & Principe	14.62	14.66	14.70	15.22	15.97	23.46
Senegal	1303.61	977.62	1002.25	1071.84	972.19	236.73
Seychelles	0.67	0.67	0.67	0.67	0.67	0.69
Sierra Leone	1814.91	1859.93	1906.05	1954.47	2028.19	2144.67
Somalia	2097.88	2214.37	2214.37	2204.42	2382.75	1301.28
South Africa	3578.19	3624.47	3674.96	3794.86	3668.89	3856.28
South Sudan	0.00	154.52	165.32	154.25	160.53	210.05
Sudan	3912.66	4011.53	3283.69	3357.31	3787.79	4175.53
Tanzania	1712.26	1735.77	1846.09	2124.97	2088.69	4884.46
Togo	1246.01	1279.24	1344.44	1404.18	1298.31	2436.28
Tunisia	913.76	906.45	768.39	927.80	947.28	604.07
Uganda	5902.48	5900.13	6715.74	7413.66	7817.30	10098.40
Western Sahara	149.87	142.51	148.40	151.11	154.09	263.69
Zambia	4663.68	4862.43	5135.13	5005.71	5343.02	5346.12
Zimbabwe	4116.63	4151.15	4186.41	4353.53	4405.29	5623.63

APPENDICES

GLOSSARY

Coal/peat

Coal/peat includes all coal primary (including hard coal and lignite) and derived fuels (including patent fuel, coke oven coke, gas coke, BKB, gas works gas, coke oven gas, blast furnace gas and other recovered gases). Peat is also included in this category.

Hard coal

Hard coal comprises anthracite coking coal and other bituminous coal

Steam coal

Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

Crude oil

Crude oil comprises crude oil, natural gas liquids, refinery feedstock and additives as well as other hydrocarbons.

Oil products

Oil products comprise refinery gas liquids, refinery feedstock and additives as well as other hydrocarbons.

Oil products

Oil products comprises refinery gas, ethane, LPG, aviation gasoline, motor gasoline, jet fuels, kerosene, gas/diesel oil, fuel oil, naphtha, white spirit, lubricants, bitumen, paraffin waxes, petroleum coke and other oil products.

Natural gas

Natural gas includes both “associated” and “non-associated” gas.

Nuclear

Nuclear shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33%

Hydro

Hydro shows the energy content of the electricity produced in hydro power plants hydro output excludes output from pumped storage plants.

Biofuels and waste

Biofuels and waste comprises solid biofuels liquid biofuels, biogases, industrial waste and municipal waste. Biofuels are defined as any plant matter used directly as fuel or converted into fuels (e.g., charcoal) or electricity and/or heat. Included here are wood, vegetal waste (including wood waste and crops used for energy production), ethanol, animal materials/wastes and sulphite lyes. Municipal waste comprises wastes produced by residential, commercial and public services that are collected by local authorities for disposal in a central location for the production of heat and/or power.

Other

Other includes geothermal, solar, wind, tide/wave/ocean energy, electricity and heat. Unless the actual efficiency of the geothermal process is known, the quantity of geothermal energy entering electricity generation is inferred from the electricity production at geothermal plants assuming an average thermal efficiency of 10%. For solar, wind and tide/Wave/ocean energy, the quantities entering electricity generation are equal to the electrical energy generated. Direct use of geothermal and solar heat is also included here. Electricity is accounted for at the same heat value as electricity in final consumption (i.e., 1GWh = 0.000086 Mtoe). Heat includes heat that is produced for sale and is accounted for in the transformation sector.

Production

Production is the production of primary energy, i.e., hard coal, lignite, peat, crude oil, NGLs, natural gas, biofuels and waste, nuclear, hydro, geothermal, solar and the heat from heat pumps that is extracted from the ambient environment production is calculated after removal of impurities (e.g., sulphur from natural gas).

Imports and exports

Imports and exports comprise amounts having crossed the national territorial boundaries of the country, whether or not customs clearance has taken place.

Oil and natural gas

Quantities of crude oil and oil products imported or exported under processing agreements (i.e., refining on account) are included. Quantities of oil in transit are excluded. Crude oil, NGL and natural gas are reported as coming from the country of origin; refinery feedstock and oil products are reported as coming from the country of last consignment. Re-exports of oil imported for processing within bonded areas are shown as exports of product from the processing country to the final destination.

Coal/peat

Imports and exports comprise the amount of fuels obtained from or supplied to other countries, whether or not there is an economic or customs union between the relevant countries. Coal in transit is not included.

Electricity

Amounts are considered as imported or exported when they have crossed the national territorial boundaries of the country.

International marine bunkers

International marine bunkers cover those quantities delivered to ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters. Consumption by ships engaged in domestic navigation is excluded. The domestic/International split is determined on the basis of port of departure and port of arrival, and not by the flag or nationality of the ship. Consumption by fishing vessels and by military forces is also excluded.

International aviation bunkers

International aviation bunkers covers deliveries of aviation fuels to aircraft for international aviation. Fuels used by airlines for their road vehicles are excluded. The domestic/International split should be determined ON THE BASIS OF DEPARTURE AND LANDING LOCATIONS AND NOT BY THE NATIONALITY OF THE AIRLINE; For many countries this incorrectly excludes fuel used by domestically owned carriers for their international departures.

Stock changes

Stock changes reflects the difference between opening stock levels on the first day of the year and closing levels on the last day of the year of stocks on national territory held by producers, importers, energy transformation industries and large consumers. A stock build is shown as a negative number, and a stock draw as a positive number.

Total primary energy supply (TPES)

Total primary energy supply (TPES) is made up of production + imports – exports – international marine bunkers – international aviation bunkers ± stock changes. For the world total, international marine bunkers and international aviation bunkers are not subtracted from TPES.

Transfers

Transfers includes both inter-product transfers, products transferred and recycled products.

Statistical differences

Statistical differences include the sum of the unexplained statistical differences for individual fuels, as they appear in the basic energy statistics. It also includes the statistical differences that arise because of the variety of conversion factors in the coal/peat and oil columns.

Electricity plants

Electricity plants refer to plants which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs cannot be distinguished on a unit basis) then the whole plant is designated as a CHP plant. Both main activity producers and auto producer plants are included here.

Combined heat and power plants

Combined heat and power plants refers to plants which are designed to produce both heat and electricity. Sometimes referred to as cogeneration power stations. If possible, fuel inputs and electricity/heat outputs are on a unit basis rather than on a plant basis. However, if data are not available on a unit basis, the convention for defining a CHP plant noted above is adopted. Both main activity producers and auto producer plants are included here.

Blast furnaces

Blast furnaces contain inputs to and outputs of fuels from blast furnaces.

Gas works

Gas works is treated similarly to electricity generation, with the quantity produced appearing as a positive figure in the coal/peat column or the natural gas column after blending with natural gas, inputs as negative entries in the coal/peat and oil products columns, and conversion losses appearing in the total column.

Coke ovens

Coke ovens contain losses in transformation of coal from primary to secondary fuel and from secondary to tertiary fuels (hard coal to coke and patent fuel, lignite to BKB, etc.).

Oil refineries

Oil refineries show the use of primary energy for the manufacture of finished oil products and the corresponding output. Thus, the total reflects transformation losses. In certain cases the data in the total column are positive numbers. This can be due to either problem in the primary refinery balance or to the fact that the IEA uses regional net calorific values for oil products.

Petrochemical plants

Petrochemical plants covers backflows returned from the petrochemical industry. Note that backflows from oil products that are used for non-energy purposes (i.e white spirit and lubricants) are not included here, but in non-energy use.

Liquefaction plants

Liquefaction plants include diverse liquefaction processes, such as coal liquefaction plants and gas-to-liquid plants.

Other transformation

Other transformation covers non-specified transformation not shown elsewhere, such as the transformation of primary solid biofuels into charcoal.

Energy industry own use

Energy industry own use contains the primary and secondary energy consumed by transformation industries for heating, pumping, traction and lighting purposes (ISIC 05, 06, 19 and 35, Group 091 and Classes 0892 and 0721).

Losses

Losses include losses in energy distribution, transmission and transport.

Total final consumption (TFC)

Total final consumption (TFC) is the sum of consumption by the different end-use sectors; Backflows from the petrochemical industry are not included in final consumption.

Industry

Industry consumption is specified in the following subsectors (energy used for transport by industry is not included here but reported under transport):

Iron and steel industry [ISIC Group 241 and Class 2431];

Chemical and petrochemical industry [ISIC Divisions 20 and 21] excluding petrochemical feedstock;

Non-ferrous metals basic industries [ISIC Group 242 and class 2432];

Non-metallic minerals such as glass, ceramic, cement, etc. [ISIC Division 23];

Transport equipment [ISIC Divisions 29 and 30];

Machinery comprises fabricated metal product, machinery and equipment other than transport equipment [ISIC Divisions 25 to 28] Mining (excluding fuels) and quarrying [ISIC Divisions 07 and 08 and Group 099];

Food and tobacco [ISIC Divisions 10 and 12];

Paper, pulp and printing [ISIC Divisions 17 and 18];

Wood and wood products (other than pulp and paper) [ISIC Division 16];

Construction [ISIC Divisions 41 and 43];

Textile and leather [ISIC Divisions 13 to 15];

Non-specified (any manufacturing industry not included above) [ISIC Divisions 22, 31 and 32].

Transport

Transport includes all fuels used for transport [ISIC Divisions 39 to 51]. It includes transport in industry and covers domestic aviation, road, rail, pipeline transport, domestic navigation and non-specified transport. Fuel used for ocean, coastal and inland fishing (included under fishing and military consumption (included in other non-specified) are excluded from transport.

Please note that international marine and international aviation bunkers are also included here for world total.

Other

Other covers residential, commercial and public services [ISIC Divisions 33, 36-39, 45-47, 52, 53, 56, 58-66, 68-75, 77-82, 84 (excluding Class 8422) 85-88, 90-99], agriculture/forestry [ISIC Divisions 01 and 02], fishing [ISIC Division 03] and non-specified consumption.

Non-energy use

Non-energy use covers those fuels that are used as raw materials in the different sectors and are not consumed as a fuel or transformed into another fuel. Non-energy use also includes petrochemical feedstock. Non-energy use is shown separately in final consumption under the heading non-energy use.

CONVERSION FACTORS

Conversion Factors for Energy

	TJ	Gcal	Mtoe	MBtu	GWh
TJ	1	238.8	2.388×10^{-5}	947.8	0.2778
Gcal	4.1868×10^{-3}	1	10^{-7}	3.968	1.163×10^{-3}
Mtoe	4.1868×10^4	10^7	1	3.968×10^7	11630
MBtu	1.0551×10^{-3}	0.252	2.52×10^{-8}	1	2.931×10^{-4}
GWh	3.6	860	8.6×10^{-5}	3412	1

Conversion Factors for Mass

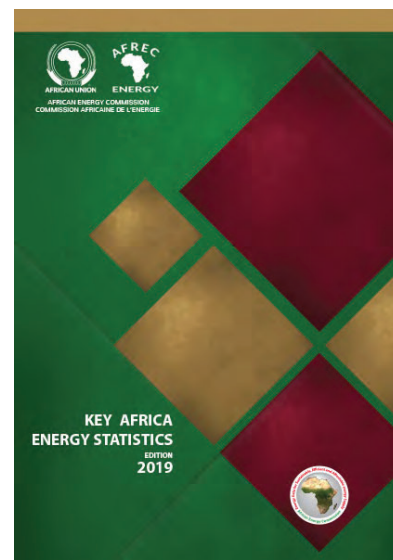
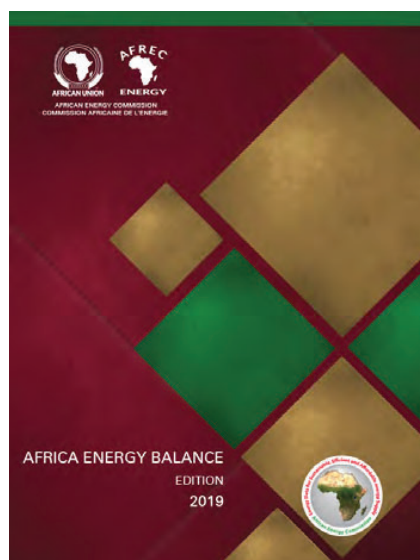
	kg	t	lt	st	lb
kilogram (kg)	1	0.001	9.84×10^{-4}	1.102×10^{-3}	2.2046
ton (t)	1 000	1	0.984	1.1023	2 204.6
long ton (lt)	1 060	1.016	1	1.120	2 240.0
short ton (st)	907.2	0.9072	0.893	1	2 000.0 ⁴
pound (lb)	0454	4.54×10^{-4}	4.46×10^{-4}	5.0×10^{-4}	1

Conversion Factors for Volume

	gal U.S.	gal U.K.	bbl	Ft³	l	m³
U.S. gallon (gal)	1	0.8327	0.02381	0.1337	3.785	0.0038
U.K. gallon (gal)	1.201	1	0.02859	0.1605	4.5466	0.0045
barrel (bbl)	42.0	34.97	1	5.615	159.0	0.159
cubic foot (ft ³)	7.48	6.229	0.1781	1	28.3	0.0283
litre(l)	0.2642	0.220	0.0063	0.0353	1	0.001
cubic metre (m ³)	264.2	220.0	6.289	35.3147	1 000	1

NOTES

PUBLICATIONS





Africa Energy Balances

AFREC



ENERGY

02, Rue Chenoua, Bp 791, Hydra, 16035, Algiers, Algeria
Tel.: + 213 23 45 91 98 / Fax: +213 23 45 92 00

Web: www.afrec-energy.org

E-mail: afrec@africa-union.org

   Social Media: @African Union AFREC

 @ AUAFREC



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