AFREC
African Energy Commission

Africa Energy Balance 2025

AFRICAN ENERGY COMMISSION - AFREC

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FOREWORD

We are pleased to present the 2025 Energy Balance for African Countries, offering a comprehensive analysis of energy production, transformation, and consumption across the continent. This publication represents a key milestone, illuminating both the opportunities and the challenges facing Africa's energy sector, and reaffirming our commitment to transparent, inclusive, and sustainable energy governance.

Energy is a fundamental pillar of development. It is essential for economic growth, improved living conditions, and social transformation. Endowed with abundant natural resources, Africa has considerable potential to become a major player on the global energy scene. However, many challenges remain, such as insufficient infrastructure, disparities in energy access, and the complexity of a just and climate-resilient energy transition.

In this context, Agenda 2063 of the African Union serves as a strategic roadmap for shaping the continent's energy future. By prioritizing inclusive and sustainable development, it positions the transformation of the energy sector at the heart of Africa's growth, fully aligned with the United Nations Sustainable Development Goals, particularly SDG 7, which seeks to ensure universal access to affordable, reliable, sustainable, and modern energy.

This report reflects the outcome of rigorous data collection, analysis, and interpretation—delivering timely and reliable insights into the energy production, consumption patterns, and emerging trends across African Union Member States. It lays a strong foundation for understanding Africa's evolving energy landscape and guiding strategic, evidence-based decision-making.

Our objective is to make this publication a catalyst for dialogue, learning, and continuous improvement among all stakeholders, governments, private sector actors, regulators, development partners, and citizens. Through the expertise of the African Energy Commission (AFREC) and strong collaboration with Member States, we strive to expand energy access, promote clean energy development, and support resilient and inclusive economic growth.

I am confident that this report will inspire the design and implementation of innovative energy policies and initiatives, grounded in Africa's unique realities and ambitions. Let it serve as a shared vision and practical tool to advance toward a future where every African country has the energy resources it needs to flourish and contribute meaningfully to the global economy.

Together, let us build a sustainable, energy-secure, and prosperous Africa.

RASHID Ali Abdallah

Executive Director, African Energy Commission

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ABBREVIATIONS AND ACRONYNMS

-	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 De-carbonization 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
IDDRI	Institute for Sustainable Development and International Relations
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 in Africa. AFREC was created by a Decision of the 37th Summit of the Organisation of African Unity (OAU) Heads of States and Governments which was held in Lusaka, Zambia, on 11th July 2001 and was launched by the AU Ministers in charge of energy in 2008 in Algiers, Algeria.

AFREC's mandate include developing policies, strategies, research, and plans based on Member States (MS), sub-regional, regional, and continental development priorities and recommend their implementation. AFREC 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 addresses other energy related issues in African as stated in AFREC Convention.

STRATEGIC PILLARS

The energy sector in Africa still faces huge challenges that include low generation capacity and efficiency, high costs, unstable and unreliable energy supplies, and low access rates, amongst others. These challenges have adversely affected socio-economic development on the continent. With the demand for modern energy consistently on the rise, there is a need to develop huge energy infrastructure at the continental, regional and national levels to meet current and future demands. The development of the energy infrastructure and electricity market at each of the three levels is recognized as one of the key strategies to address the energy challenges.

In the 2nd Ordinary Session of the African Union (AU) Specialized Technical Committee on Transport, Transcontinental and Interregional Infrastructure and Energy (STC TTIE, 18 April 2019), the Ministers requested the African Energy Commission (AFREC) to implementation following strategic pillars:

- Bioenergy Monitoring and Reporting in Africa
- African Energy Transition
- African Energy Information System
- African Energy Efficiency
- Oil and Natural Gas

During the 3rd Ordinary Session of the African Union (AU) Specialized Technical Committee on Transport, Transcontinental and Interregional Infrastructure and Energy (STC TTIE, 30 June 2021), AFREC reported on the status of implementation of the approved and presented an additional strategic pillar on Energy Sector Capacity Building which was approved by the STC.

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

2- 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.

3- AFREC's programme on Oil and Natural Gas focuses on promoting the Africa domestic oil and Gas market in collaboration with institutions and key African crude oil producers, net oil products consumers, current owners of unused and underused refineries, and regional and national authorities. The programme concentrates on the following:
   - Create African Domestic Market to enable cross-border trade opportunity for oil, oil products and natural gas.
   - Revisit the existing oil and gas policies and laws with a view to strengthen p targeted at oil and gas market.
   - Develop policies, strategies and action plans for expansion of refinery produ capacity in Africa.

4- In 2019, AFREC evaluated the African Energy Information System (AEIS) and came u a holistic improvement plan to address the challenges including the inform technology infrastructure requirements, procedural mechanisms & information processing and finally enhancement and expansion of the energy data and indi collection including monitoring of the UN Sustainable Development Goals (SDG7 enhancement entailed the following:
   - Improving the existing questionnaires and developing new ones (focus on e efficiency for all sectors (transport, Industry, residential and commercial ser energy prices and taxes, CO2 emission, SDG7 tracking, Power Plants ca installed, etc.), new flows, in multiple AU languages and in full alignment International Recommendation for Energy Statistics (IRES), definitions and practices.
   - Improving data collection and submission mechanism by adopting online collection system.
   - Developing a data visualization tool, data dissemination & reporting system.
   - Capacity building for Member States through regional and national workshops

5- The African Energy Sector Transition program (AFRETRAP) intends to accelerat African Energy Transition and transformation required in the continent to foster j inclusive economic growth, wealth creation, poverty eradication, and ineq reduction in a sustainable climate compatible development manner. AFRETR designed to catalyze the African energy transition, informed by a clear and co understanding of the transformations in the energy sector needed in the short, me and long-term to achieve the intertwined visions of Agenda 2063, the SDGs, and the Agreement. The program will identify frameworks and show how they can suppo development of sectorally and technologically detailed, policy-relevant, and co driven strategies consistent with national development agendas.

6- The African Energy Sector capacity building aims in identifying skills gap in energy s and design accordingly a training module that will improve the capacity of policym energy planners, regulators and experts from AU Member States, RECs, regional p pools, centers for renewable energy and energy efficiency, and other re stakeholders in the African energy sector. This programme shall enhance and brid skills gap in the energy sector in the Member States. The programme will focus o following topics:
   - Policy and regulatory frameworks for energy sector
   - Solar Photovoltaics and Hybrid systems
   - Wind energy resource assessment and wind power plants
   - Financing of small and large – scale photovoltaic and wind power plants
   - Entrepreneurship in Renewable Energy and Energy investments
   - Integration of renewables into the national grid
   - Mini-grid models
   - Etc.

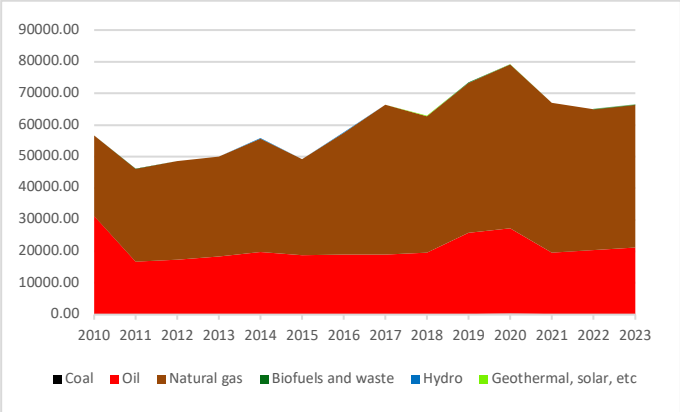
AFREC'S PILLARS

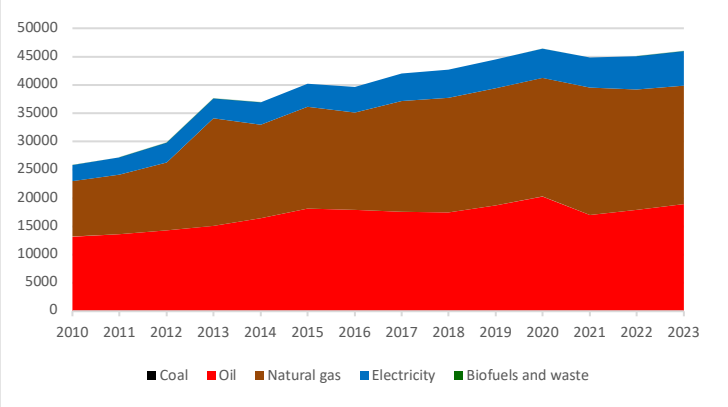
- African Energy Information System (AEIS) Programme (AEIS)
- Bioenergy Programme
- Energy Efficiency Programme
- Oil and Gas Programme
- Energy Transition Programme
- Capacity Building programme

Algeria

Indicators

Figure 3





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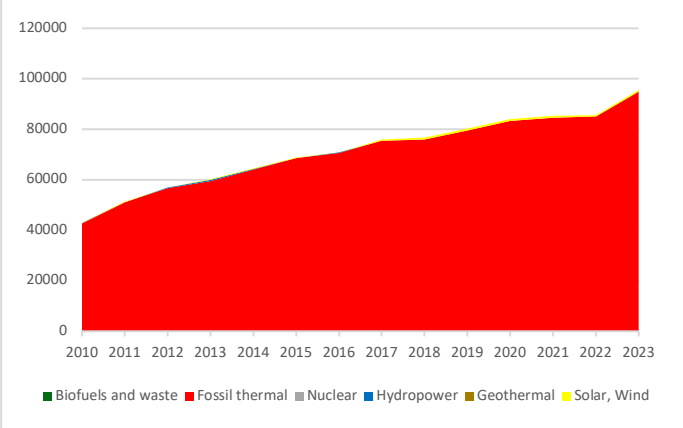

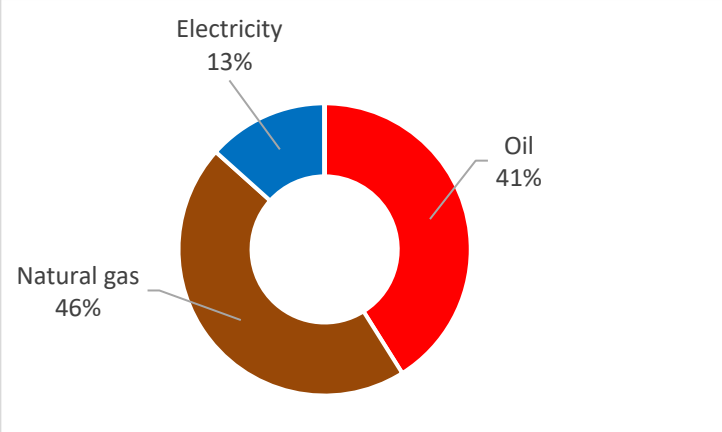

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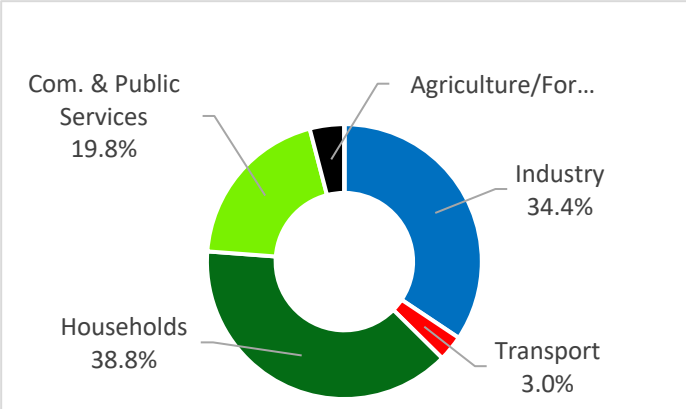

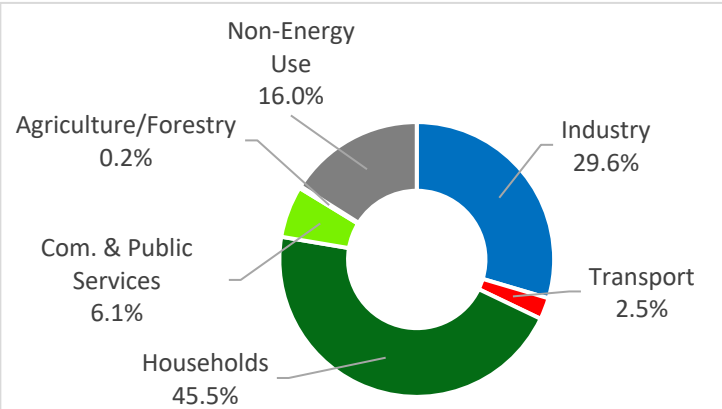

Algeria

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Hydro	Solar	Wind	Electricity	Total of all energy sources
Production		64415,58		89654,39	2,49	60,22	1,08		154133,76
Imports (+)	160,61		804,94					6,84	972,39
Exports (-)		-22353,63	-21372,56	-44496,33				-216,75	-88439,27
International Marine Bunkers (-)			-146,52						-146,52
International Aviation Bunkers (-)			-141,14						-141,14
Stock Changes (+ draw, - build)	-2,37	53,29	-289,76						-238,84
TOTAL PRIMARY ENERGY SUPPLY	**158,24**	**42115,24**	**-21145,05**	**45158,06**	**2,49**	**60,22**	**1,08**	**-209,91**	**66140,37**
Transfers : Origin (-) and Destination (+)		-8639,15	8634,67						-4,48
Statistical Difference	7,63	1315,64	-1074,35	196,57				-34,27	411,21
TRANSFORMATION Inputs (-) and Outputs (+)	**-121,31**	**-31488,89**	**30546,05**	**-19984,86**	**-2,49**	**-60,22**	**-1,08**	**8222,41**	**-12890,39**
Electricity plants			-271,51	-19984,86	-2,49	-60,22	-1,08	8222,41	-12097,74
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces	-121,31								-121,31
Oil Refineries		-31488,89	30150,43						-1338,46
Coal-to-liquids plants									
Gas-to-liquids plants									
Charcoal production plants									
Transformation not elsewhere specified			667,13						667,13
Energy Sector Own Use	**0,17**	**628,66**	**217,59**	**3402,21**				**1152,11**	**5400,73**
Losses	**0,24**		**13,81**	**641,57**				**756,69**	**1412,31**
FINAL CONSUMPTION	**28,90**	**42,90**	**18878,63**	**20932,84**				**6137,98**	**46021,24**
Industry	28,90		656,58	6188,67				2108,78	8982,92
Transport		42,90	15390,39	533,24				186,70	16153,22
Households			1444,38	9531,47				2380,88	13356,73
Commercial and public services			506,18	1270,17				1212,36	2988,71
Agriculture, Forestry and Fishing			42,49	50,77				249,26	342,52
Non-specified (HH, Com. & PS., Agri.)									
Non-Energy Use			838,60	3358,54					4197,14

Angola

Indicators

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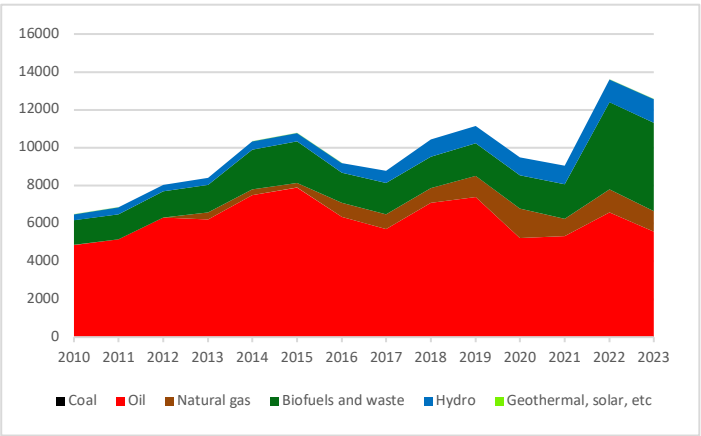

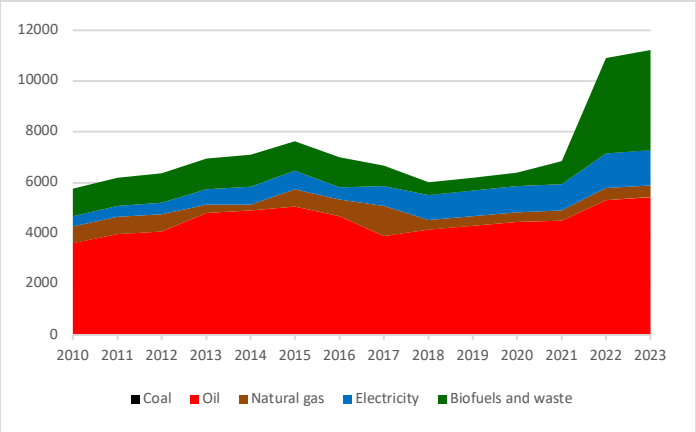

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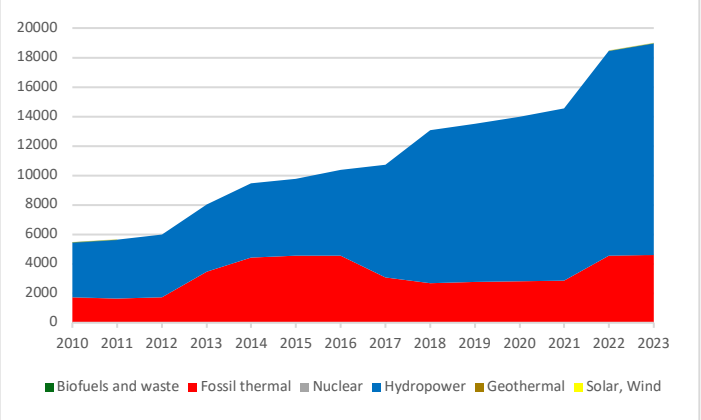

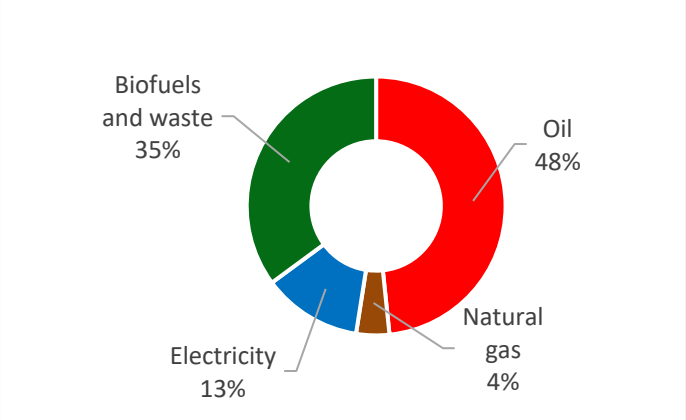

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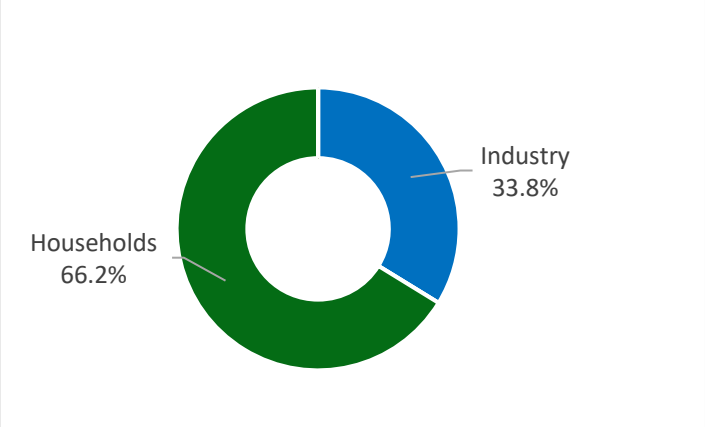
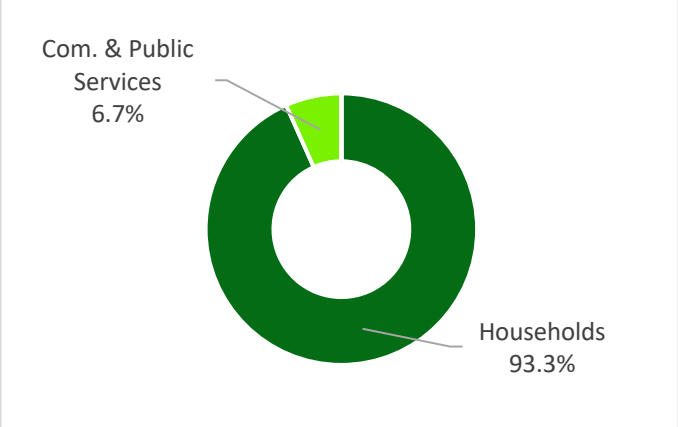




Angola

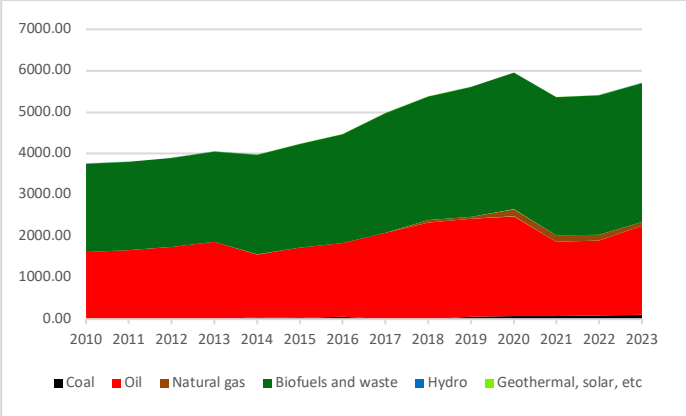
Energy Balance 2023

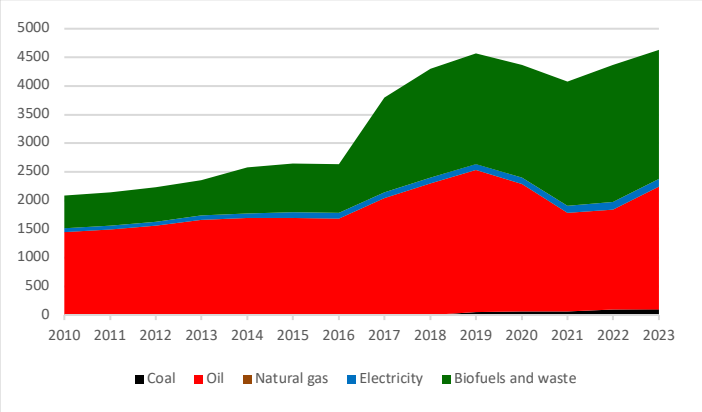
Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Electricity	Total of all energy sources
Production	60376,46		5463,11	4624,15	1195,34		71659,06
Imports (+)		3265,29					3265,29
Exports (-)	-56369,07	-750,17	-4277,04				-61396,29
International Marine Bunkers (-)		-351,32					-351,32
International Aviation Bunkers (-)		-112,53					-112,53
Stock Changes (+ draw, - build)	-52,54	591,58					539,04
TOTAL PRIMARY ENERGY SUPPLY	**3954,85**	**2642,84**	**1186,07**	**4624,15**	**1195,34**		**13603,26**
Transfers : Origin (-) and Destination (+)	-1665,51	1782,32					116,81
Statistical Difference	-0,80	10,98	0,05	94,67		0,09	104,98
TRANSFORMATION Inputs (-) and Outputs (+)	**-2290,14**	**970,20**	**-354,31**	**-777,95**	**-1195,34**	**1587,20**	**-2060,35**
Electricity plants		-1149,95	-354,31		-1195,34	1587,20	-1112,40
CHP Plants							
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries	-2290,14	2120,15					-170,00
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants				-777,95			-777,95
Transformation not elsewhere specified							
Energy Sector Own Use		**62,63**	**371,90**			**39,06**	**473,59**
Losses						**178,76**	**178,76**
FINAL CONSUMPTION		**5321,77**	**459,82**	**3751,53**		**1369,28**	**10902,39**
Industry		206,77	459,82			462,32	1128,91
Transport		2464,88					2464,88
Households		1858,27		3501,24		906,96	6266,46
Commercial and public services		579,98		250,29			830,27
Agriculture, Forestry and Fishing		4,78					4,78
Non-specified (HH, Com. & PS., Agri.)		7,65					7,65
Non-Energy Use		199,44					199,44

Benin

Indicators

Figure





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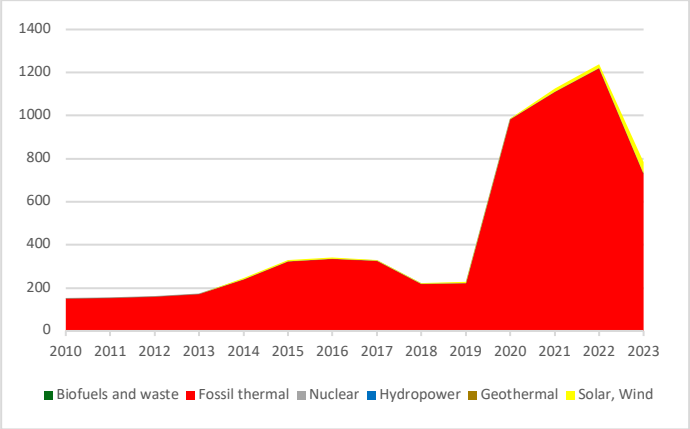


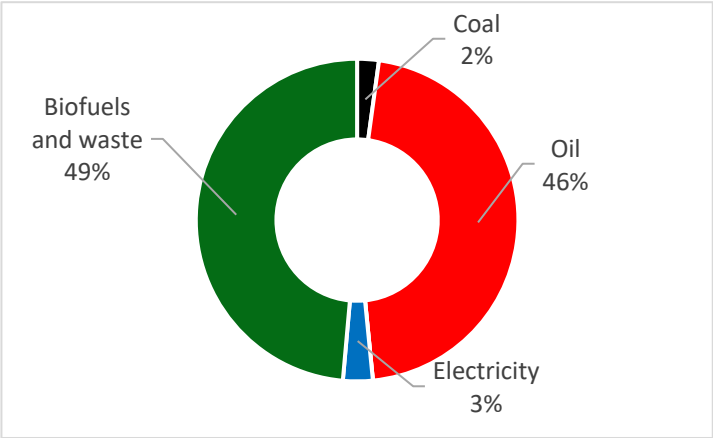
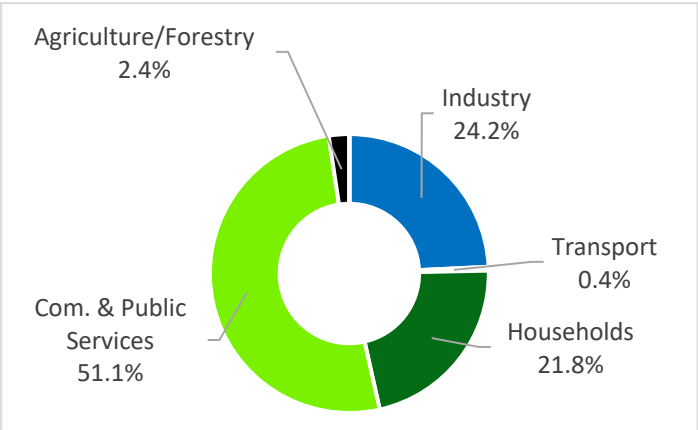
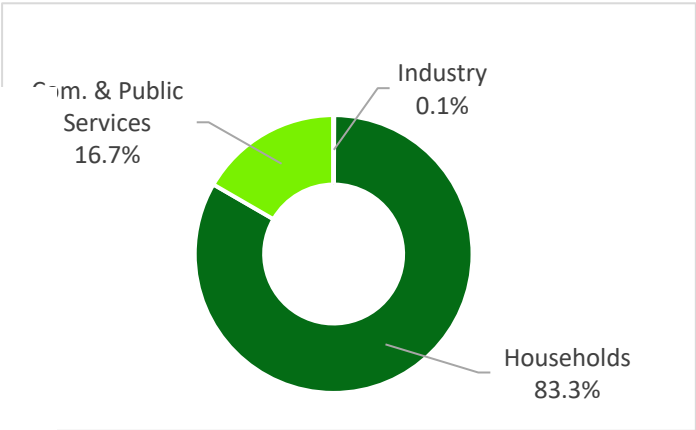


Figure 3.5. – Electricity Consumption by Sector

Figure 3.6. – Biofuels and Waste Consumption by Sector





Benin

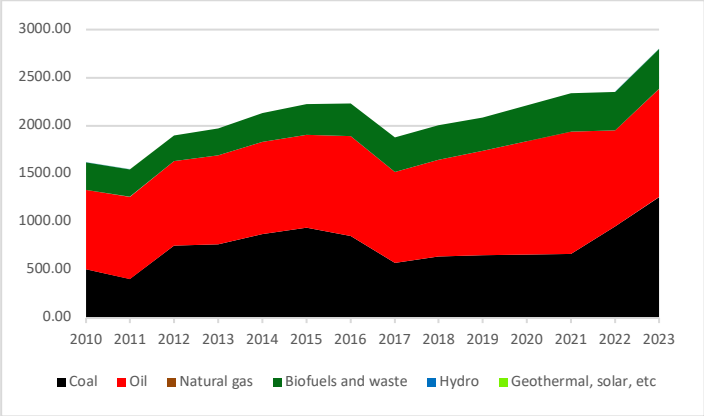
Energy Balance 2023

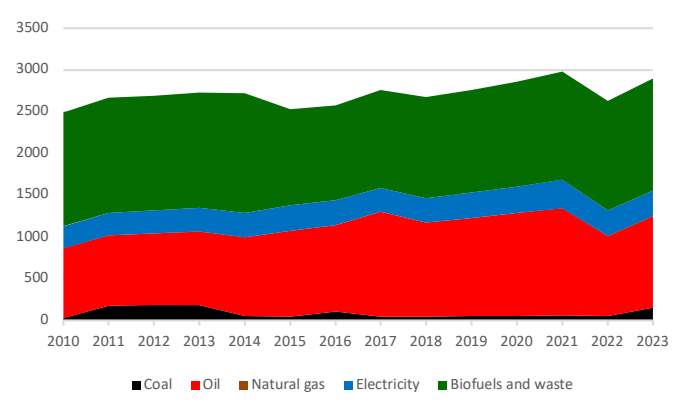
Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Natural Gas	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production				3353,03	4,47		3357,49
Imports (+)	108,64	2187,21	105,66			111,51	2513,01
Exports (-)						-0,20	-0,20
International Marine Bunkers (-)		-4,23					-4,23
International Aviation Bunkers (-)		-38,92					-38,92
Stock Changes (+ draw, - build)	-7,81	6,04					-1,77
TOTAL PRIMARY ENERGY SUPPLY	**100,82**	**2150,10**	**105,66**	**3353,03**	**4,47**	**111,31**	**5825,39**
Transfers : Origin (-) and Destination (+)		-0,01					-0,01
Statistical Difference		-25,63				0,24	-25,40
TRANSFORMATION Inputs (-) and Outputs (+)		**-49,87**	**-105,66**	**-1103,15**	**-4,47**	**67,33**	**-1195,82**
Electricity plants		-49,87	-105,66			62,87	-92,66
CHP Plants					-4,47	4,47	
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants				-1103,15			-1103,15
Transformation not elsewhere specified							
Energy Sector Own Use						**5,32**	**5,32**
Losses		**-16,08**				**39,47**	**23,39**
FINAL CONSUMPTION	**100,82**	**2141,94**		**2249,88**		**133,62**	**4626,26**
Industry	100,82	105,19		1,58		32,38	239,96
Transport		1887,01				0,58	1887,59
Households		57,02		1873,57		29,17	1959,77
Commercial and public services		13,70		374,71		68,31	456,72
Agriculture, Forestry and Fishing		8,83		0,01		3,17	12,01
Non-specified (HH, Com. & PS., Agri.)							
Non-Energy Use	0,00	70,20					70,20

Botswana

Indicators

Figure





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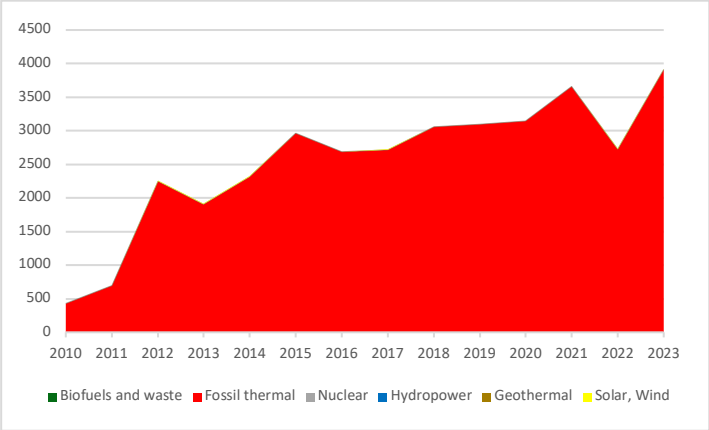


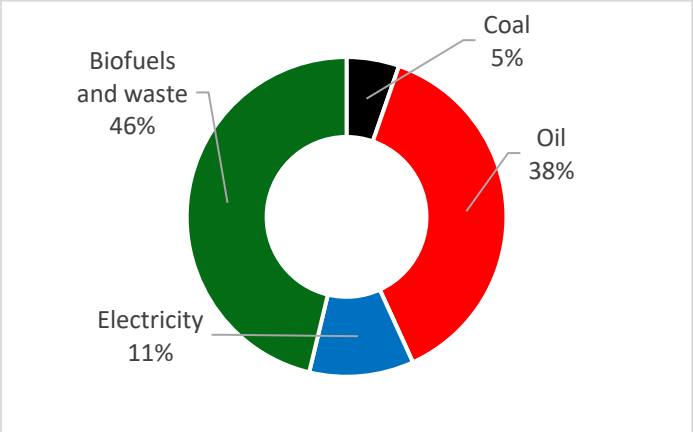
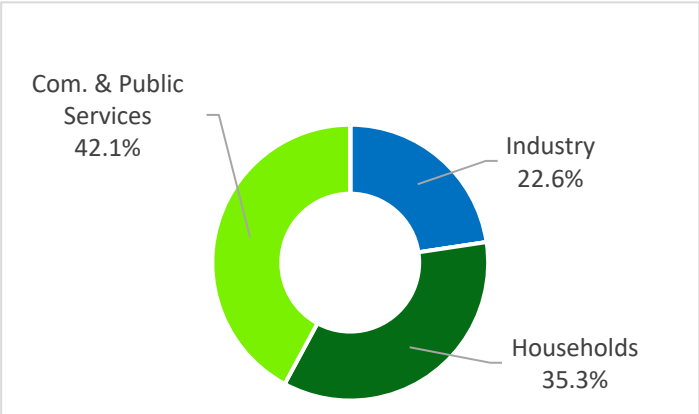
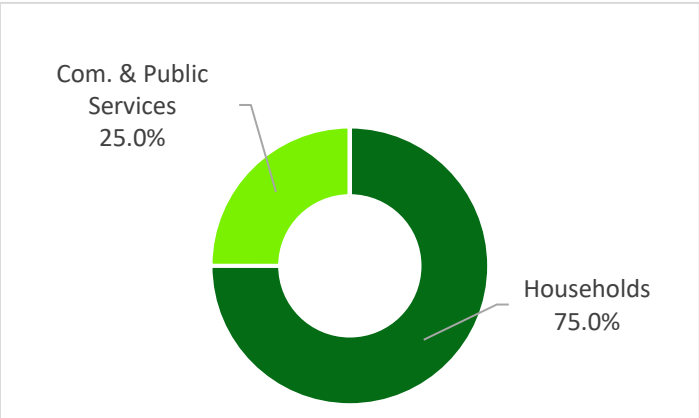


Figure 3.5. – Electricity Consumption by Sector

Figure 3.6. – Biofuels and Waste Consumption by Sector





Botswana

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production	1315,04		399,57	0,57		1715,18
Imports (+)		1004,29			157,20	1161,48
Exports (-)	-360,18				-0,19	-360,37
International Marine Bunkers (-)						
International Aviation Bunkers (-)		-6,07				-6,07
Stock Changes (+ draw, - build)		-0,79				-0,79
TOTAL PRIMARY ENERGY SUPPLY	**954,87**	**997,43**	**399,57**	**0,57**	**157,01**	**2509,44**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	0,00	0,23	1,43		0,76	2,42
TRANSFORMATION Inputs (-) and Outputs (+)	**-902,69**	**-34,37**	**-166,03**	**-0,57**	**235,13**	**-868,52**
Electricity plants	-902,69	-34,37		-0,57	235,13	-702,49
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants			-166,03			-166,03
Transformation not elsewhere specified						
Energy Sector Own Use					**34,90**	**34,90**
Losses					**54,20**	**54,20**
FINAL CONSUMPTION	**52,18**	**962,83**	**232,11**		**302,29**	**1549,41**
Industry	47,45	145,68			79,64	272,77
Transport		754,25				754,25
Households		15,26	174,12		115,96	305,34
Commercial and public services	1,34	14,71	57,99		76,80	150,85
Agriculture, Forestry and Fishing	3,39	7,70			17,78	28,87
Non-specified (HH, Com. & PS., Agri.)		0,97			12,11	13,08
Non-Energy Use		24,25				24,25

Burkina Faso

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

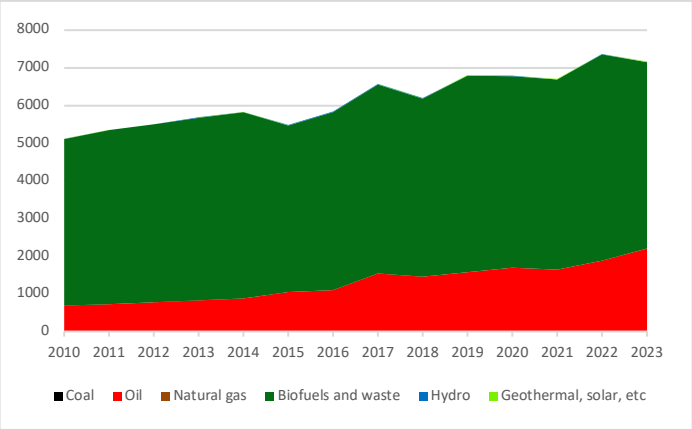
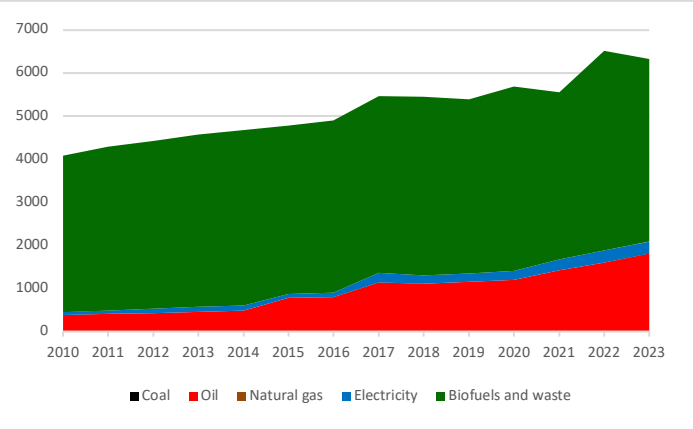


Figure 3.2. - Total Final Consumption (ktoe)



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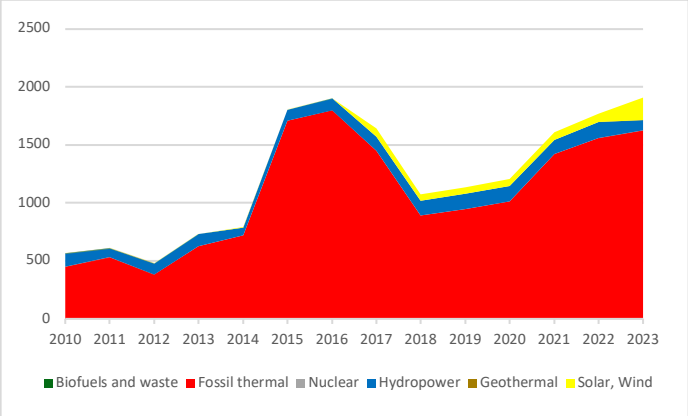

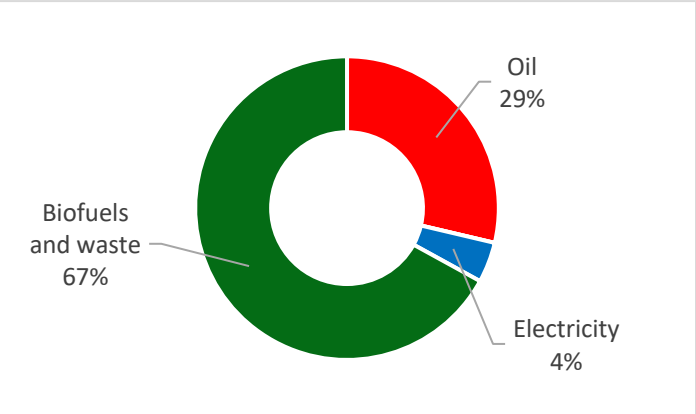

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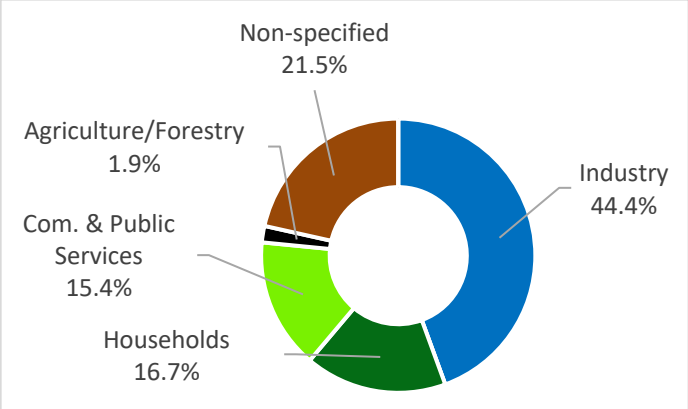
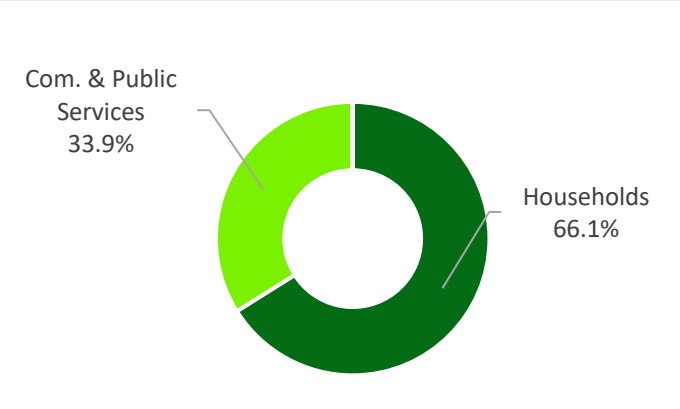




Burkina Faso

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production		4922,56	7,68	16,60		4946,84
Imports (+)	2124,37				136,04	2260,42
Exports (-)						
International Marine Bunkers (-)						
International Aviation Bunkers (-)						
Stock Changes (+ draw, - build)	76,80					76,80
TOTAL PRIMARY ENERGY SUPPLY	**2201,17**	**4922,56**	**7,68**	**16,60**	**136,04**	**7284,06**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	23,51	0,00			5,25	28,76
TRANSFORMATION Inputs (-) and Outputs (+)	**-362,74**	**-682,17**	**-7,68**	**-16,60**	**164,13**	**-905,06**
Electricity plants	-362,74	-218,80	-7,68	-16,60	164,13	-441,69
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-463,37				-463,37
Transformation not elsewhere specified						
Energy Sector Own Use					**-2,63**	**-2,63**
Losses					**24,69**	**24,69**
FINAL CONSUMPTION	**1814,92**	**4240,39**			**272,86**	**6328,17**
Industry	226,17				121,22	347,40
Transport	1413,74					1413,74
Households	105,00	2802,69			45,67	2953,36
Commercial and public services	69,48	1437,70			42,00	1549,18
Agriculture, Forestry and Fishing	0,52				5,27	5,79
Non-specified (HH, Com. & PS., Agri.)					58,69	58,69
Non-Energy Use						

Burundi

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

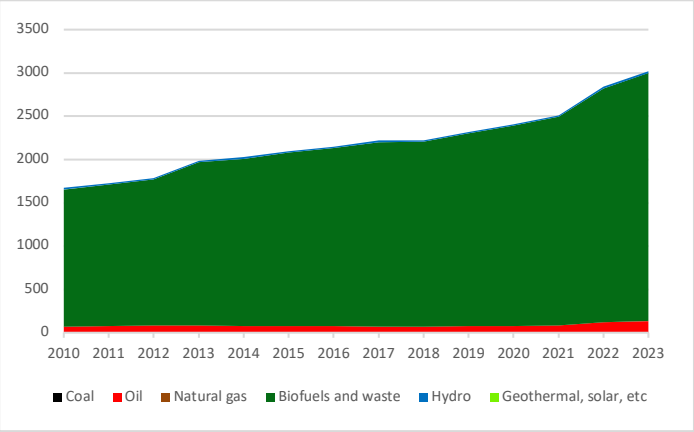
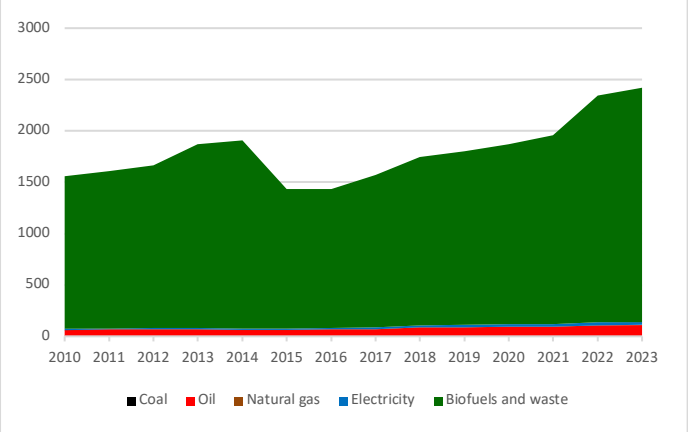


Figure 3.2. - Total Final Consumption (ktoe)



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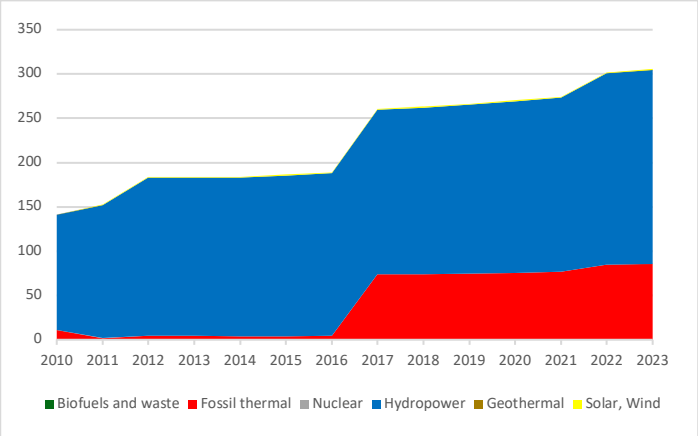

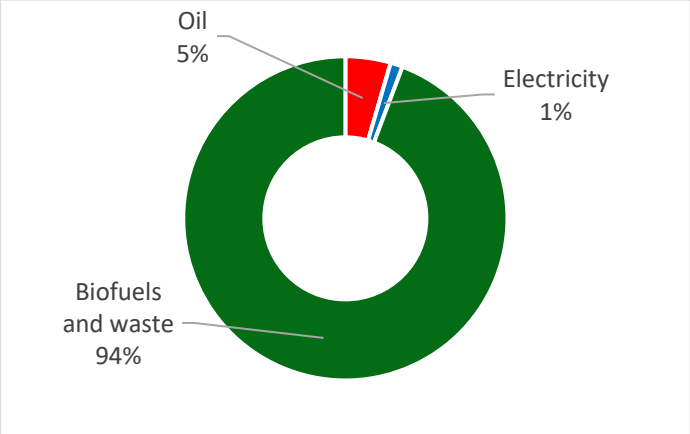

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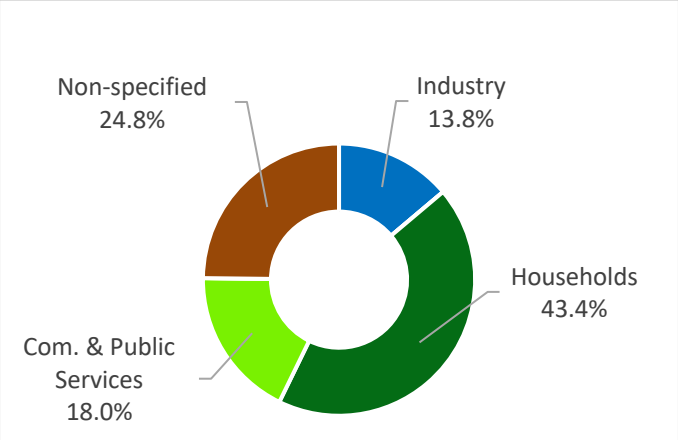
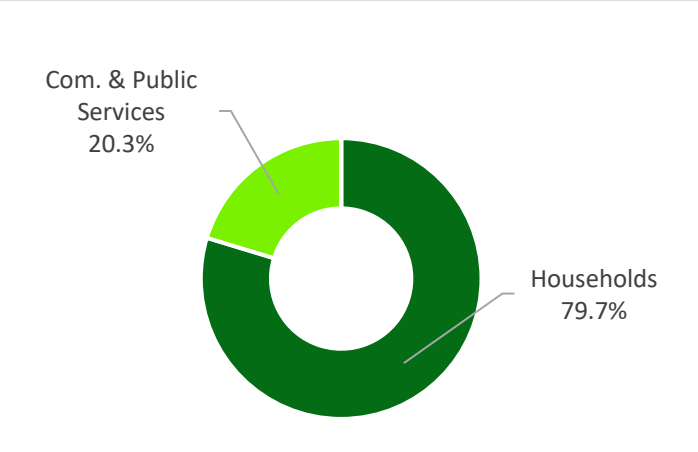




Burundi

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production		2703,97	18,58	0,10		2722,64
Imports (+)	97,24				13,70	110,95
Exports (-)						
International Marine Bunkers (-)						
International Aviation Bunkers (-)	-4,70					-4,70
Stock Changes (+ draw, - build)	25,68					25,68
TOTAL PRIMARY ENERGY SUPPLY	**118,22**	**2703,97**	**18,58**	**0,10**	**13,70**	**2854,56**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	-0,87	26,16			0,33	25,62
TRANSFORMATION Inputs (-) and Outputs (+)	**-12,49**	**-467,69**	**-18,58**	**-0,10**	**25,95**	**-472,90**
Electricity plants	-12,49		-18,58	-0,10	25,95	-5,21
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-467,69				-467,69
Transformation not elsewhere specified						
Energy Sector Own Use					**2,36**	**2,36**
Losses					**8,71**	**8,71**
FINAL CONSUMPTION	**106,61**	**2210,11**			**28,25**	**2344,97**
Industry	32,39				3,91	36,30
Transport	68,36					68,36
Households	4,38	1761,16			12,25	1777,79
Commercial and public services	1,48	448,95			5,07	455,50
Agriculture, Forestry and Fishing						
Non-specified (HH, Com. & PS., Agri.)					7,01	7,01
Non-Energy Use						

Cape Verde

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

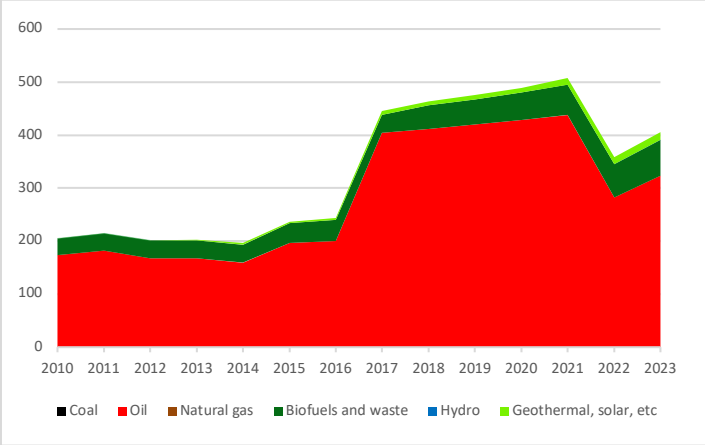
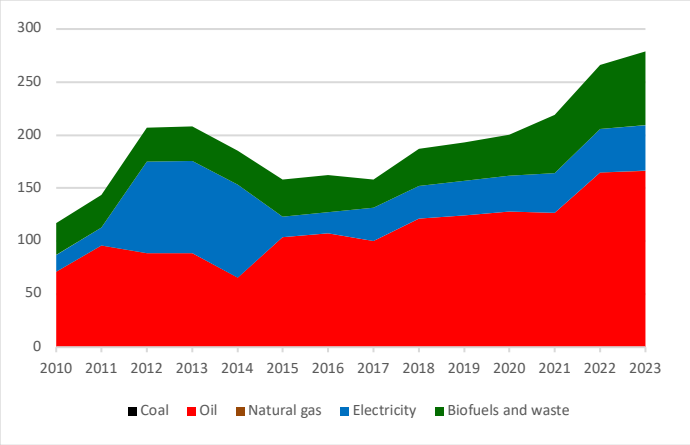
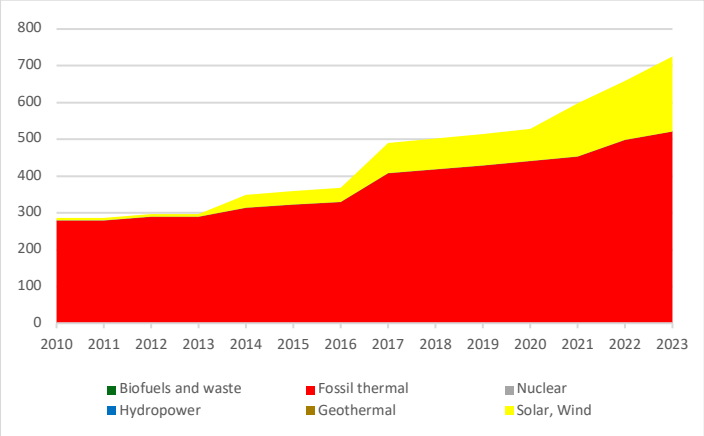
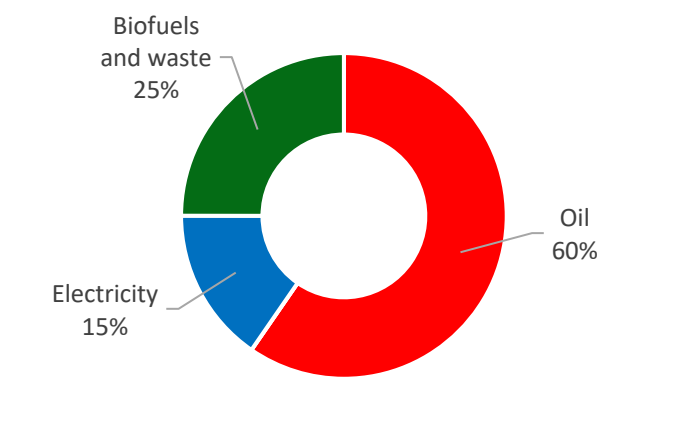
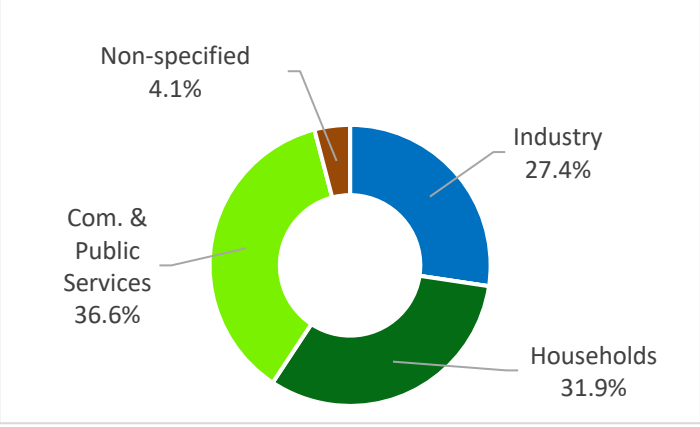


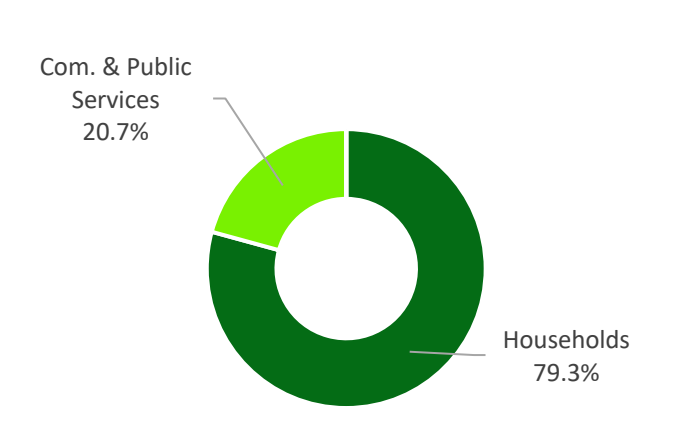
Figure 3.2. - Total Final Consumption (ktoe)











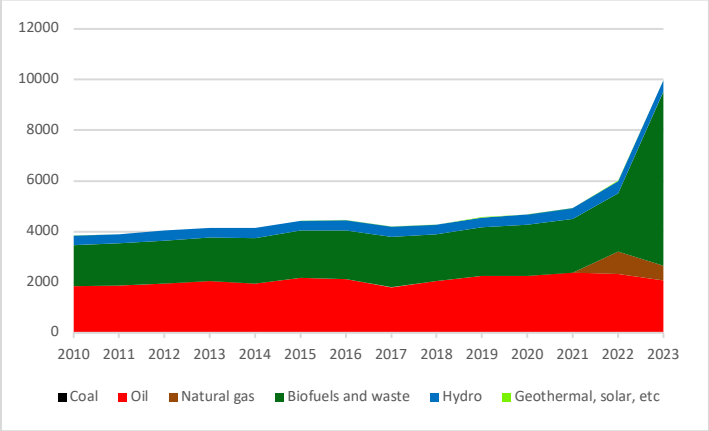
Cape Verde

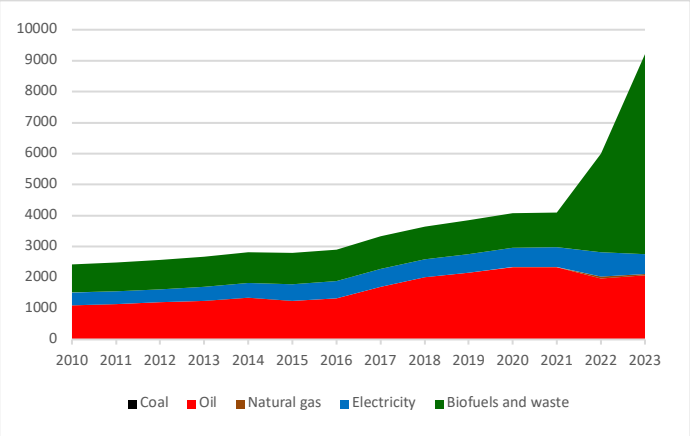
Energy Balance 2023

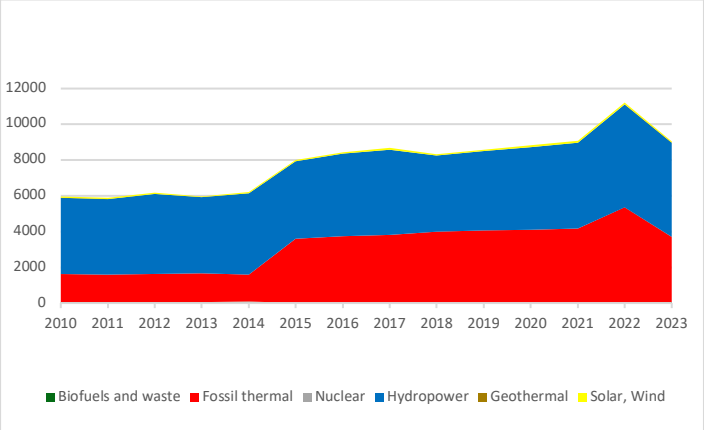
Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Wind	Electricity	Total of all energy sources
Production		62,45	1,09	12,68		76,22
Imports (+)	531,62					531,62
Exports (-)						
International Marine Bunkers (-)	-186,06					-186,06
International Aviation Bunkers (-)	-107,97					-107,97
Stock Changes (+ draw, - build)	44,67					44,67
TOTAL PRIMARY ENERGY SUPPLY	**282,25**	**62,45**	**1,09**	**12,68**		**358,48**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	-0,13	0,24			0,12	0,23
TRANSFORMATION Inputs (-) and Outputs (+)	**-117,49**	**-1,66**	**-1,09**	**-12,68**	**56,64**	**-76,28**
Electricity plants	-117,49		-1,09	-12,68	56,64	-74,62
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-1,66				-1,66
Transformation not elsewhere specified						
Energy Sector Own Use					**1,81**	**1,81**
Losses					**14,01**	**14,01**
FINAL CONSUMPTION	**164,89**	**60,55**			**40,71**	**266,15**
Industry	33,64				11,14	44,78
Transport	105,50					105,50
Households	10,47	47,98			12,99	71,44
Commercial and public services	10,48	12,56			14,91	37,95
Agriculture, Forestry and Fishing						
Non-specified (HH, Com. & PS., Agri.)	3,93				1,66	5,60
Non-Energy Use	0,87					0,87

Cameroon

Indicators







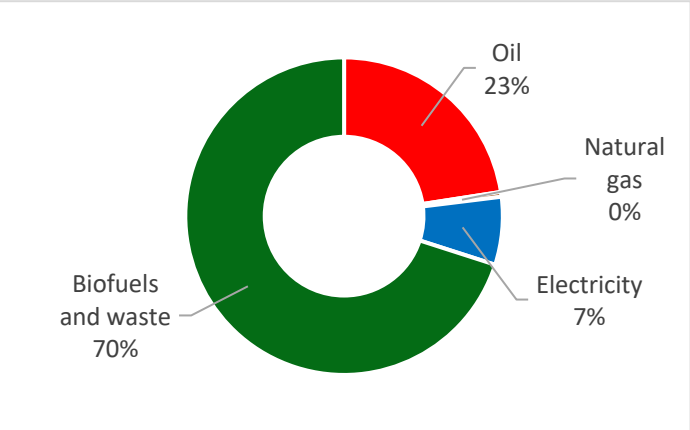
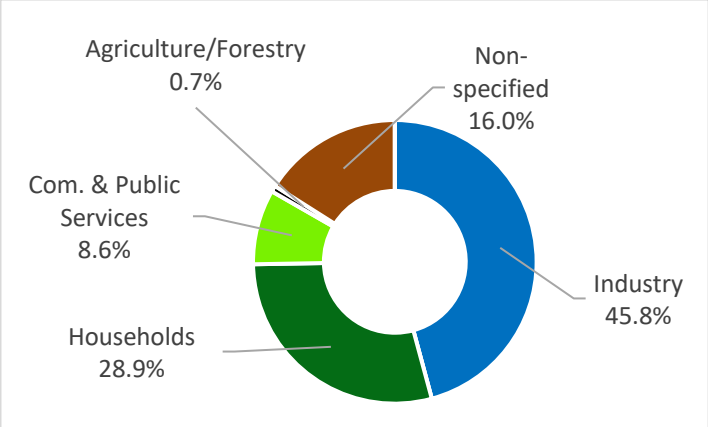
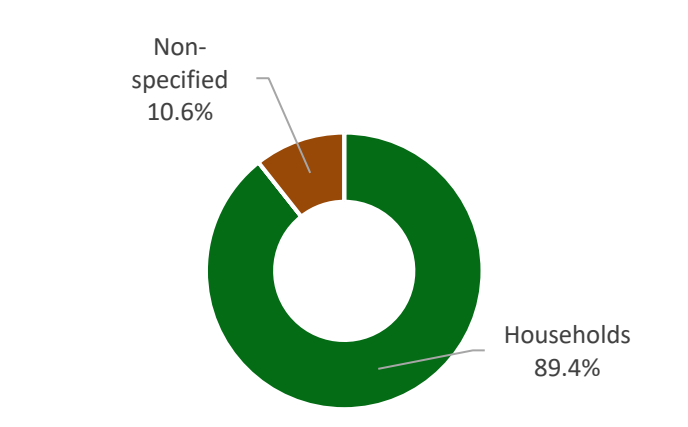


Figure 3.5. – Electricity Consumption by Sector

Figure 3.6. – Biofuels and Waste Consumption by Sector





Cameroon

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Wind	Electricity	Total of all energy sources
Production	3206,75	35,02	54,17	6878,74	452,79	5,27	0,02		10632,76
Imports (+)		2085,63							2085,63
Exports (-)	-3206,75		-39,97						-3246,71
International Marine Bunkers (-)									
International Aviation Bunkers (-)		-53,88							-53,88
Stock Changes (+ draw, - build)									
TOTAL PRIMARY ENERGY SUPPLY		**2066,78**	**14,21**	**6878,74**	**452,79**	**5,27**	**0,02**		**9417,80**
Transfers : Origin (-) and Destination (+)									
Statistical Difference		-276,65	-0,23	24,70		0,00		9,27	-242,91
TRANSFORMATION Inputs (-) and Outputs (+)		**-252,50**	**-16,90**	**-425,90**	**-452,79**	**-5,27**	**-0,02**	**777,09**	**-376,29**
Electricity plants		-252,50	-6,14	-63,49	-452,79	-5,27	-0,02	777,09	-3,11
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces									
Oil Refineries									
Coal-to-liquids plants									
Gas-to-liquids plants			-10,76						-10,76
Charcoal production plants				-362,41					-362,41
Transformation not elsewhere specified									
Energy Sector Own Use		**12,84**	**-3,64**					**48,65**	**57,86**
Losses								**83,00**	**83,00**
FINAL CONSUMPTION		**2078,09**	**1,18**	**6428,14**				**636,16**	**9143,57**
Industry		123,45	1,18					291,36	415,99
Transport		1575,12							1575,12
Households		215,58		5744,15				184,01	6143,74
Commercial and public services								54,43	54,43
Agriculture, Forestry and Fishing								4,47	4,47
Non-specified (HH, Com. & PS., Agri.)		57,20		683,99				101,88	843,07
Non-Energy Use		106,75							106,75

Central African Republic

Indicators

Figure

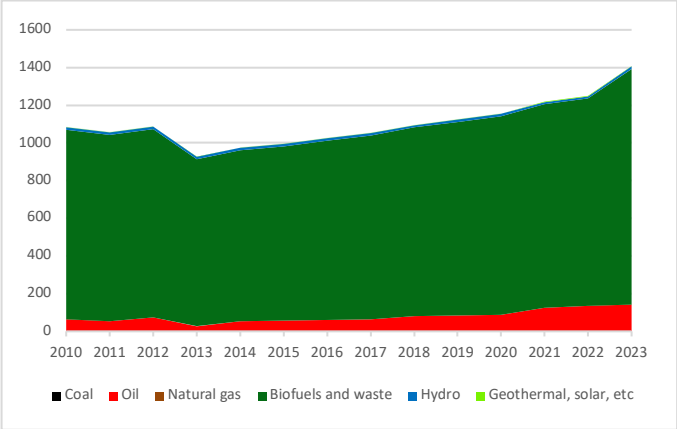


Figure 3.3. - Electricity Generation by Source (GWh)

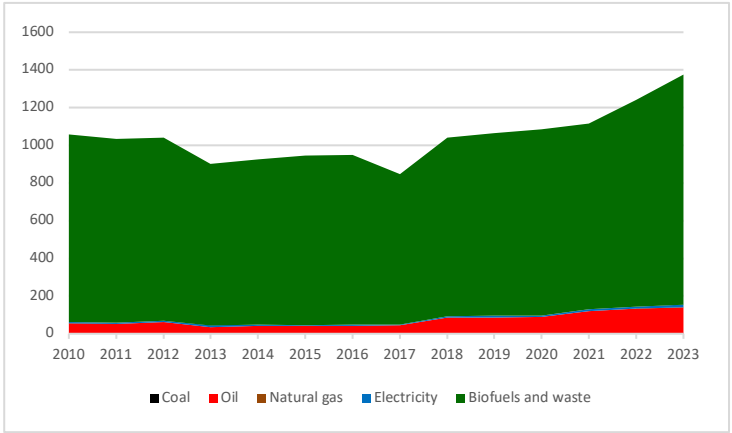


Figure 3.4. - Fuel Shares of Total Final Consumption

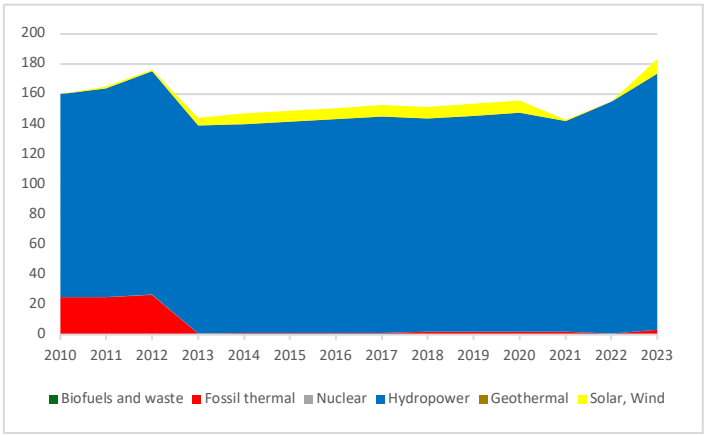


Figure 3.5. – Electricity Consumption by Sector

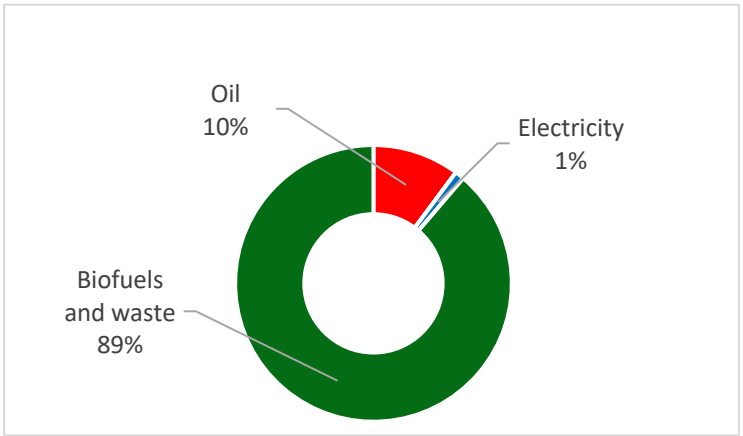
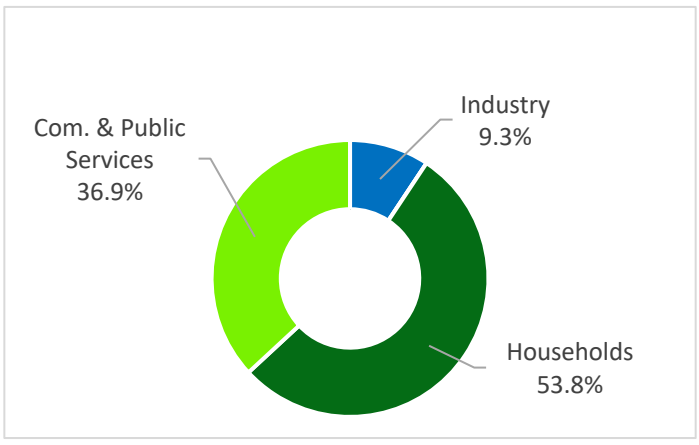
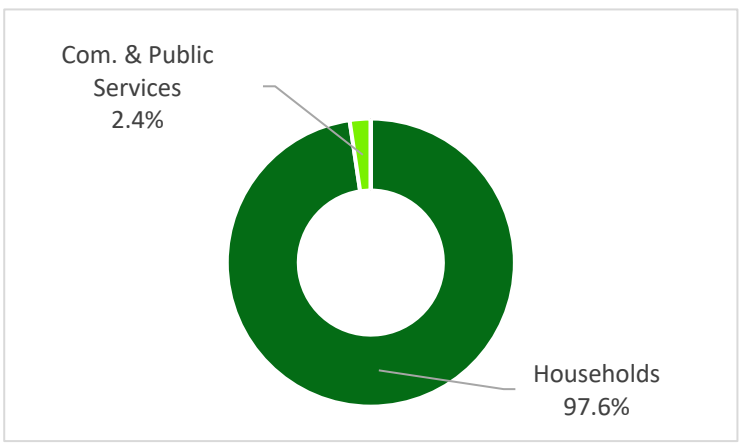


Figure 3.6. – Biofuels and Waste Consumption by Sector





Central African Republic

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production		1249,63	14,66	0,84		1265,13
Imports (+)	121,96				0,37	122,33
Exports (-)					-0,18	-0,18
International Marine Bunkers (-)						
International Aviation Bunkers (-)	15,64					15,64
Stock Changes (+ draw, - build)	4,62					4,62
TOTAL PRIMARY ENERGY SUPPLY	**142,22**	**1249,63**	**14,66**	**0,84**	**0,18**	**1407,54**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	2,33				-1,73	0,60
TRANSFORMATION Inputs (-) and Outputs (+)		**-28,96**	**-14,66**	**-0,84**	**15,77**	**-28,69**
Electricity plants			-14,66	-0,84	15,77	0,27
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-28,96				-28,96
Transformation not elsewhere specified						
Energy Sector Own Use					**1,11**	**1,11**
Losses					**1,65**	**1,65**
FINAL CONSUMPTION	**139,89**	**1220,67**			**14,92**	**1375,49**
Industry	46,02				1,39	47,41
Transport	92,11					92,11
Households	1,76	1170,70			8,03	1180,49
Commercial and public services		49,97			5,50	55,48
Agriculture, Forestry and Fishing						
Non-specified (HH, Com. & PS., Agri.)						
Non-Energy Use						

Chad

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

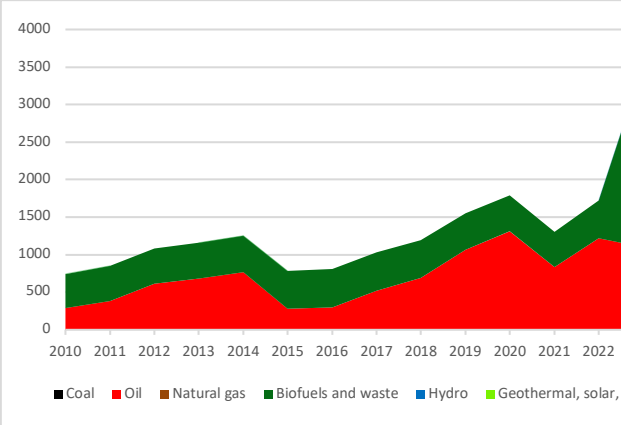
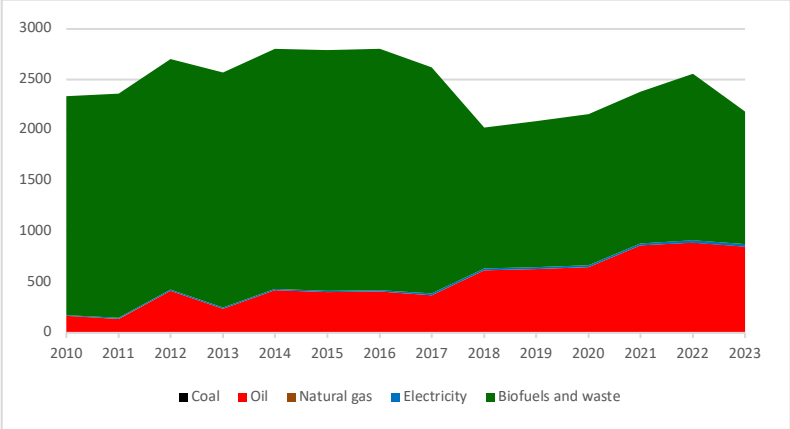
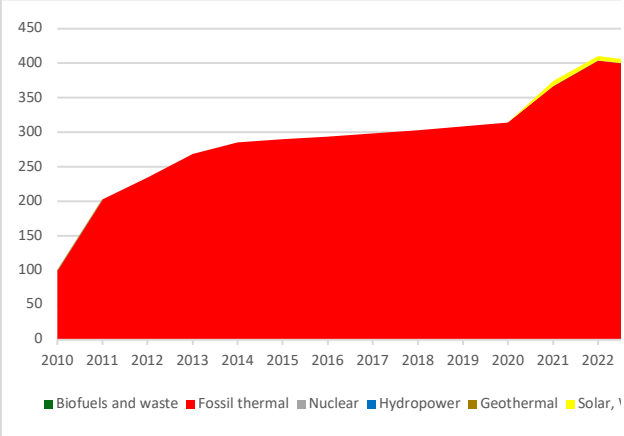
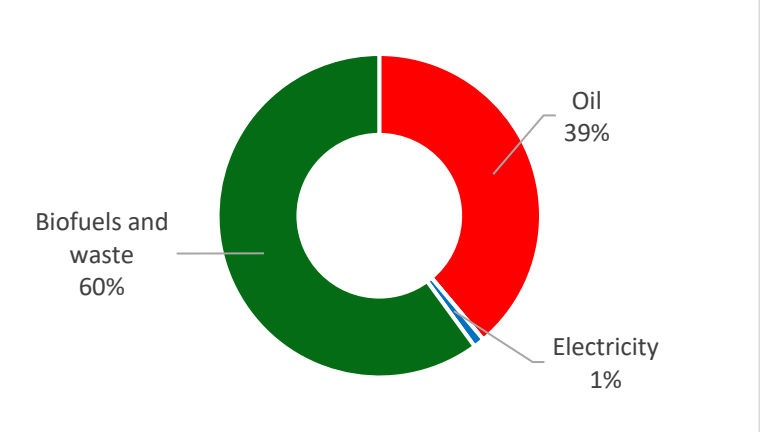
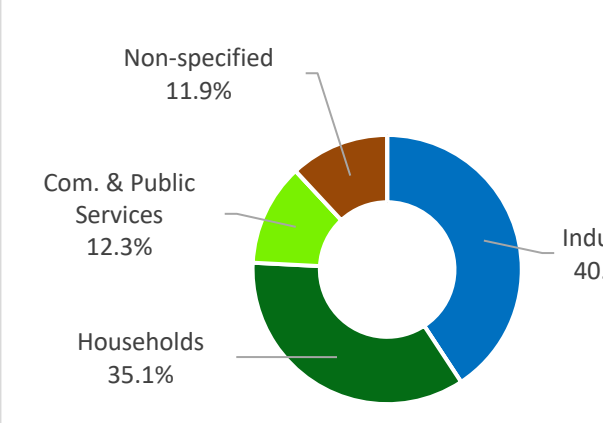


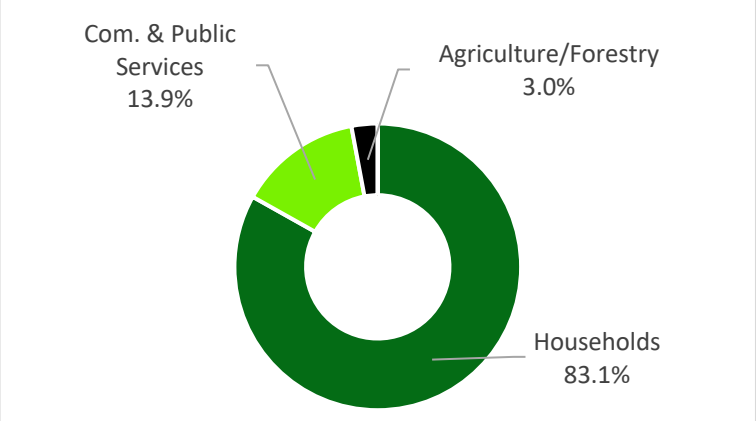
Figure 3.2. - Total Final Consumption (ktoe)











Chad

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Biofuels and waste	Wind	Electricity	Total of all energy sources
Production	6567,07		2424,60	0,48		8992,14
Imports (+)		3,43				3,43
Exports (-)	-5758,81	-13,38				-5772,19
International Marine Bunkers (-)						
International Aviation Bunkers (-)		-52,67				-52,67
Stock Changes (+ draw, - build)	129,52	227,35				356,87
TOTAL PRIMARY ENERGY SUPPLY	**937,78**	**164,74**	**2424,60**	**0,48**		**3527,59**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	1,21	-38,29	191,84		6,26	161,02
TRANSFORMATION Inputs (-) and Outputs (+)	**-936,56**	**646,51**	**-920,96**	**-0,48**	**34,55**	**-1176,94**
Electricity plants		-225,59		-0,48	34,55	-191,52
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries	-936,56	872,09				-64,47
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants			-831,91			-831,91
Transformation not elsewhere specified			-89,05			-89,05
Energy Sector Own Use					**-3,01**	**-3,01**
Losses					**7,42**	**7,42**
FINAL CONSUMPTION		**849,53**	**1311,80**		**23,89**	**2185,22**
Industry		202,11			9,73	211,84
Transport		540,51				540,51
Households		9,01	1090,45		8,38	1107,84
Commercial and public services		58,86	182,59		2,93	244,38
Agriculture, Forestry and Fishing			38,75			38,75
Non-specified (HH, Com. & PS., Agri.)		39,05			2,85	41,89
Non-Energy Use						

Comoros

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

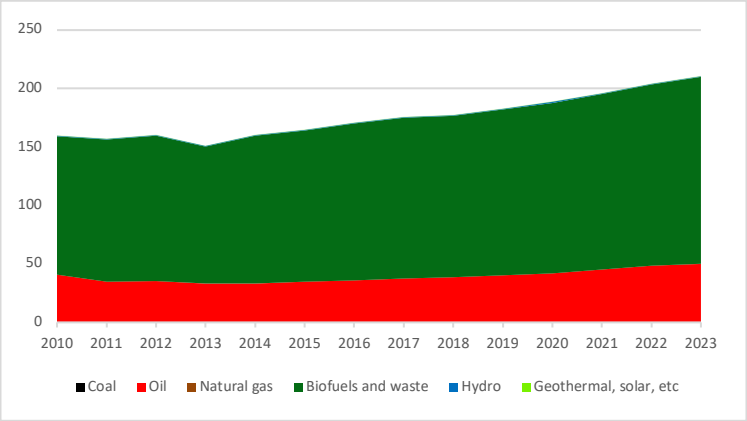
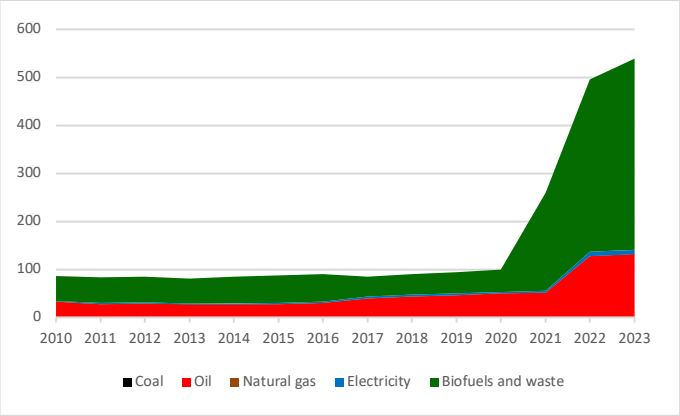
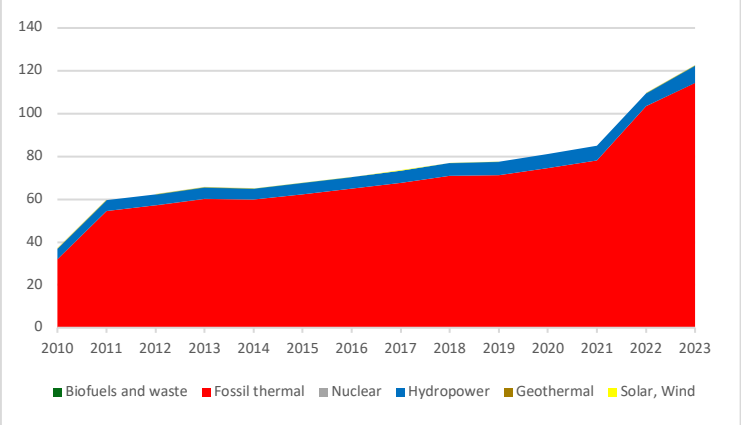
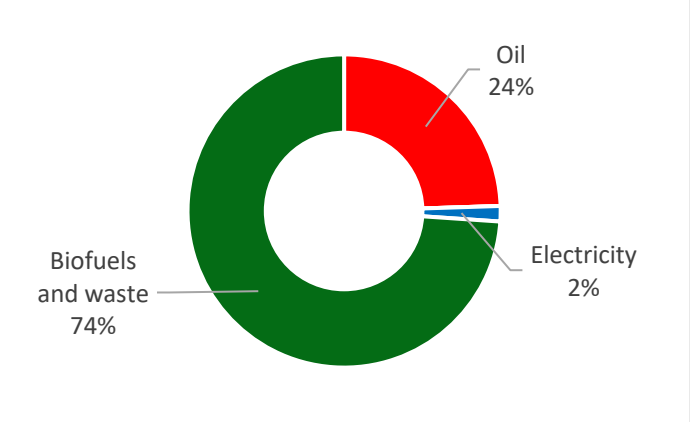
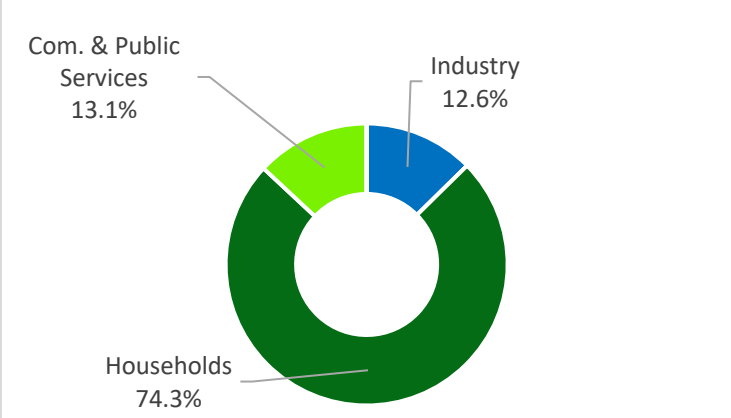


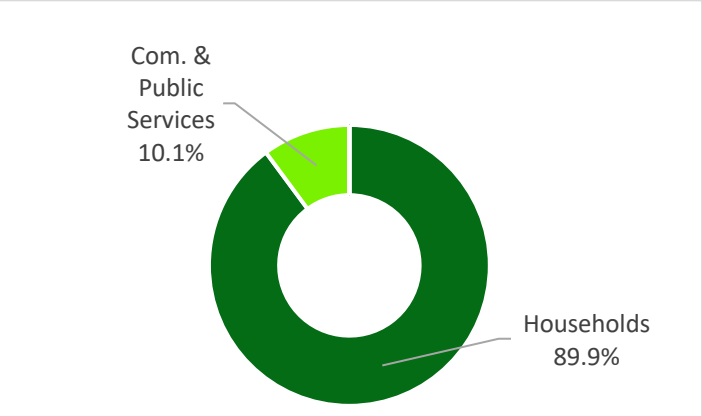
Figure 3.2. - Total Final Consumption (ktoe)











Comoros

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production		507,37	0,52		507,90
Imports (+)	159,40				159,40
Exports (-)					
International Marine Bunkers (-)					
International Aviation Bunkers (-)	-17,71				-17,71
Stock Changes (+ draw, - build)	6,76				6,76
TOTAL PRIMARY ENERGY SUPPLY	**148,46**	**507,37**	**0,52**		**656,35**
Transfers : Origin (-) and Destination (+)					
Statistical Difference	2,00	17,60		-0,46	19,14
TRANSFORMATION Inputs (-) and Outputs (+)	**-18,70**	**-91,29**	**-0,52**	**9,43**	**-101,08**
Electricity plants	-18,70		-0,52	9,43	-9,80
CHP Plants					
Heat Plants					
Coke ovens					
Blast furnaces					
Oil Refineries					
Coal-to-liquids plants					
Gas-to-liquids plants					
Charcoal production plants		-91,29			-91,29
Transformation not elsewhere specified					
Energy Sector Own Use				**1,29**	**1,29**
Losses				**0,03**	**0,03**
FINAL CONSUMPTION	**127,75**	**398,49**		**8,56**	**534,80**
Industry	18,98			1,08	20,06
Transport	48,37				48,37
Households	39,54	358,13		6,36	404,03
Commercial and public services	20,86	40,36		1,12	62,34
Agriculture, Forestry and Fishing					
Non-specified (HH, Com. & PS., Agri.)					
Non-Energy Use					

Congo Republic

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

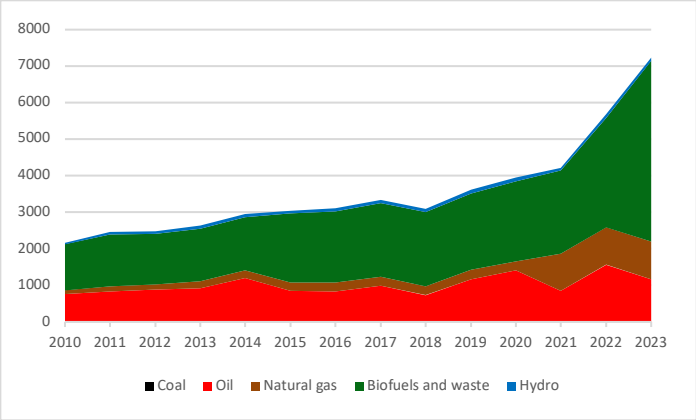
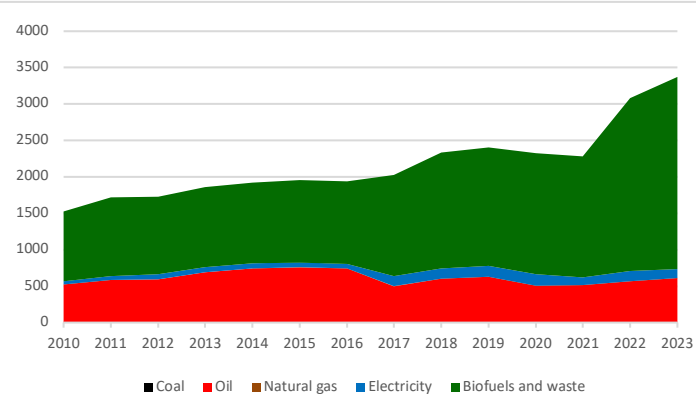
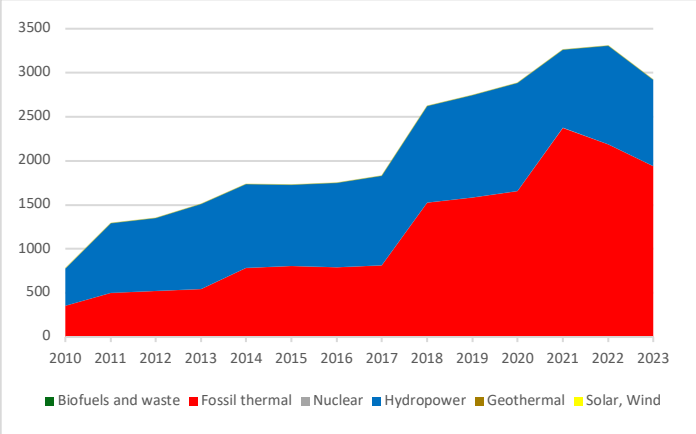
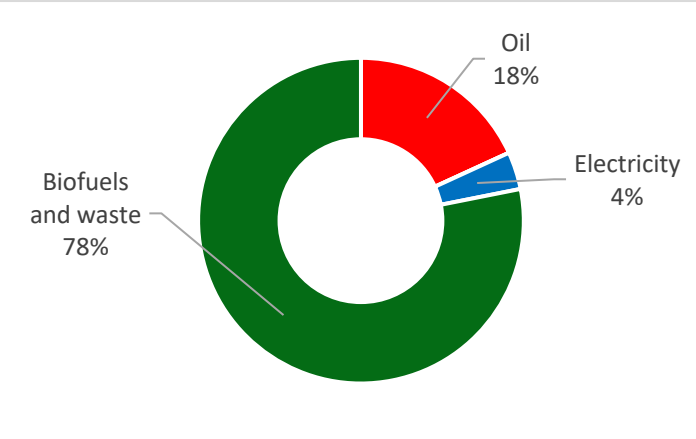
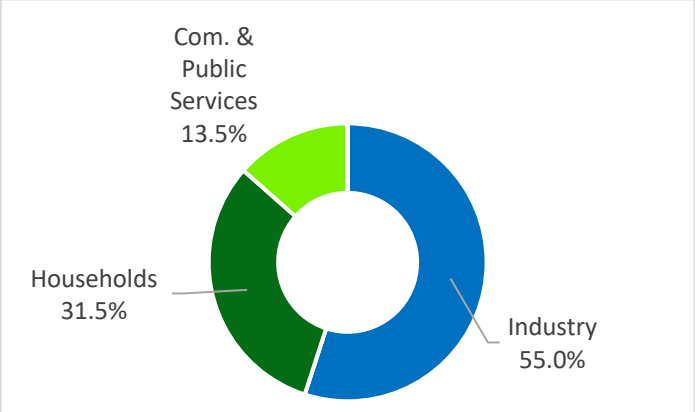


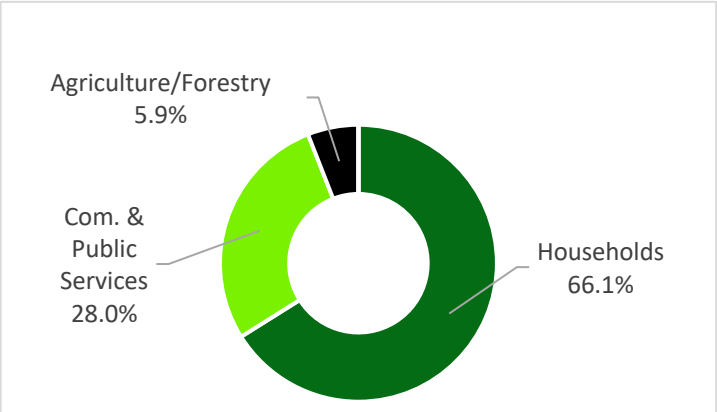
Figure 3.2. - Total Final Consumption (ktoe)











Congo Republic

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Biofuels and waste	Hydro	Electricity	Total of all energy sources
Production	15356,84		4944,89	84,40		20386,13
Imports (+)	14498,07	301,28			0,32	14799,67
Exports (-)					-12,34	-12,34
International Marine Bunkers (-)						
International Aviation Bunkers (-)						
Stock Changes (+ draw, - build)						
TOTAL PRIMARY ENERGY SUPPLY	**29854,90**	**301,28**	**4944,89**	**84,40**	**-12,02**	**35173,46**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	28996,13	4,85	0,04			29001,02
TRANSFORMATION Inputs (-) and Outputs (+)	**-858,77**	**315,84**	**-2309,80**	**-84,40**	**251,51**	**-2685,61**
Electricity plants				-84,40	251,51	167,11
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries	-858,77	315,84				-542,93
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants			-2309,80			-2309,80
Transformation not elsewhere specified						
Energy Sector Own Use						
Losses					**113,96**	**113,96**
FINAL CONSUMPTION		**612,27**	**2635,06**		**125,54**	**3372,87**
Industry		27,73			69,05	96,77
Transport		503,07				503,07
Households		2,90	1741,60		39,54	1784,04
Commercial and public services		74,59	737,00		16,95	828,54
Agriculture, Forestry and Fishing			156,47			156,47
Non-specified (HH, Com. & PS., Agri.)		3,99				3,99
Non-Energy Use						

Côte d'Ivoire

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

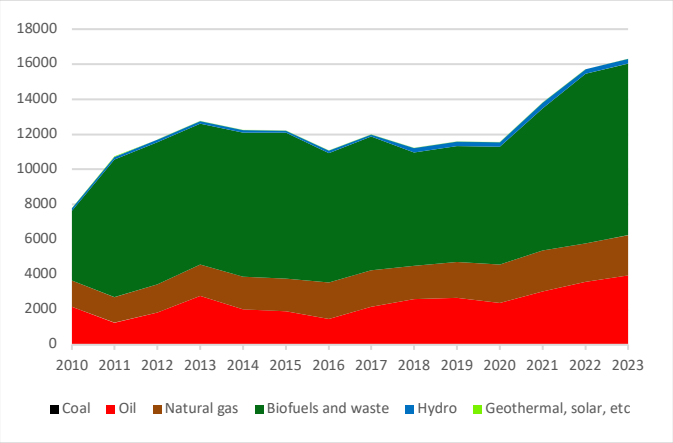
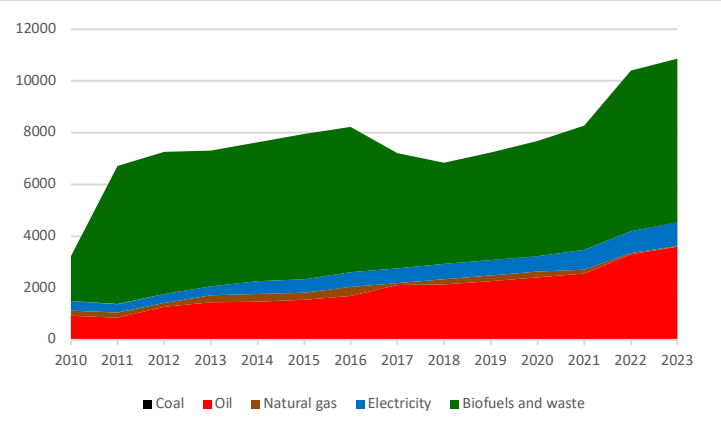
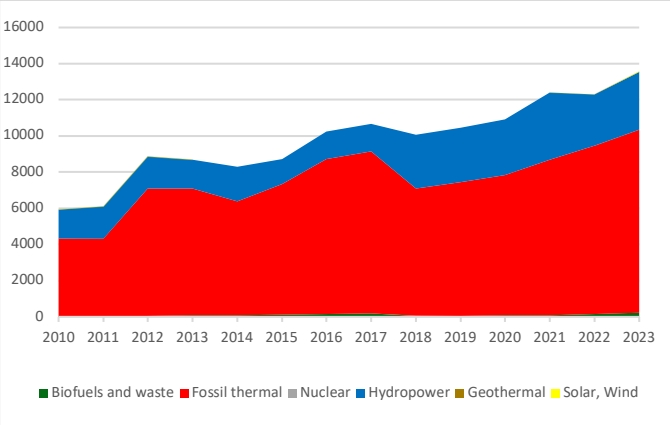


Figure 3.2. - Total Final Consumption (ktoe)



Figure



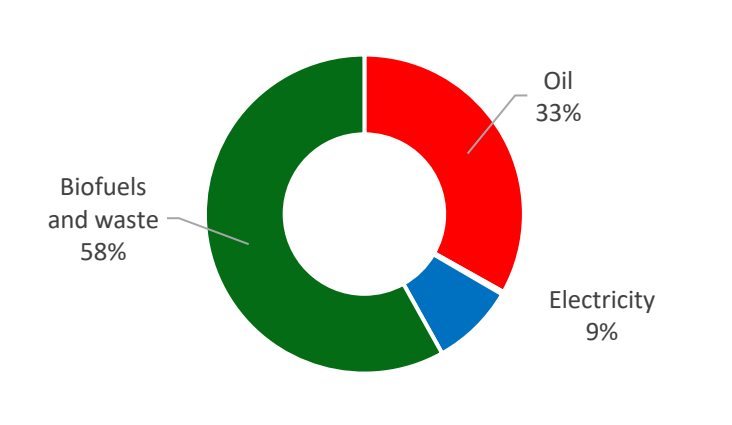
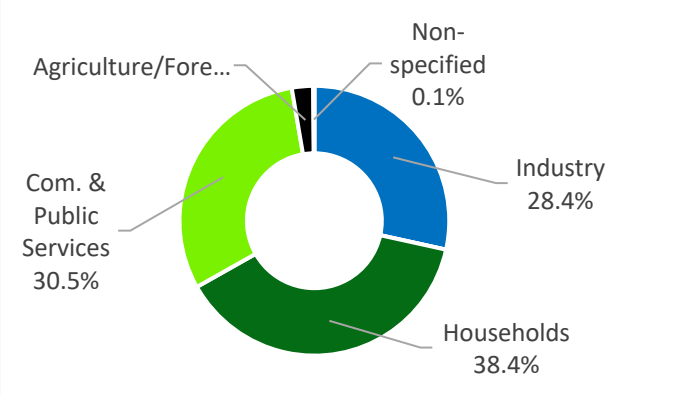
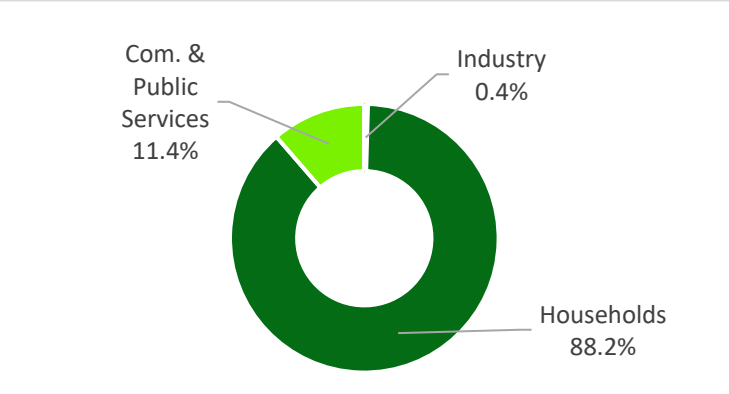


Figure 3





Côte d'Ivoire

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	1536,98		2289,69	8914,56	275,14	2,05		13018,42
Imports (+)	5474,43	851,00					23,10	6348,53
Exports (-)	-1430,03	-2135,87					-90,95	-3656,85
International Marine Bunkers (-)								
International Aviation Bunkers (-)		-183,54						-183,54
Stock Changes (+ draw, - build)	-84,97	-70,67						-155,64
TOTAL PRIMARY ENERGY SUPPLY	**5496,40**	**-1539,07**	**2289,69**	**8914,56**	**275,14**	**2,05**	**-67,85**	**15370,92**
Transfers : Origin (-) and Destination (+)		-0,08						-0,08
Statistical Difference	38,56	-15,23					-0,43	22,90
TRANSFORMATION Inputs (-) and Outputs (+)	**-5457,84**	**5125,68**	**-1950,00**	**-3070,31**	**-275,14**	**-2,05**	**1167,36**	**-4462,31**
Electricity plants		-161,54	-1950,00	-209,44	-275,14	-2,05	1167,36	-1430,82
CHP Plants								
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries	-5457,84	5287,22						-170,62
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants				-2860,87				-2860,87
Transformation not elsewhere specified								
Energy Sector Own Use		**2,22**	**144,84**				**17,09**	**164,15**
Losses			**164,84**				**159,68**	**324,52**
FINAL CONSUMPTION		**3599,54**	**30,00**	**5844,25**			**923,17**	**10396,96**
Industry		175,48	30,00	25,89			262,58	493,94
Transport		2511,11						2511,11
Households		676,88		5154,52			354,40	6185,80
Commercial and public services		2,87		663,84			281,33	948,04
Agriculture, Forestry and Fishing		44,62					23,58	68,20
Non-specified (HH, Com. & PS., Agri.)							1,28	1,28
Non-Energy Use		188,58						188,58

Democratic Republic of the Congo

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

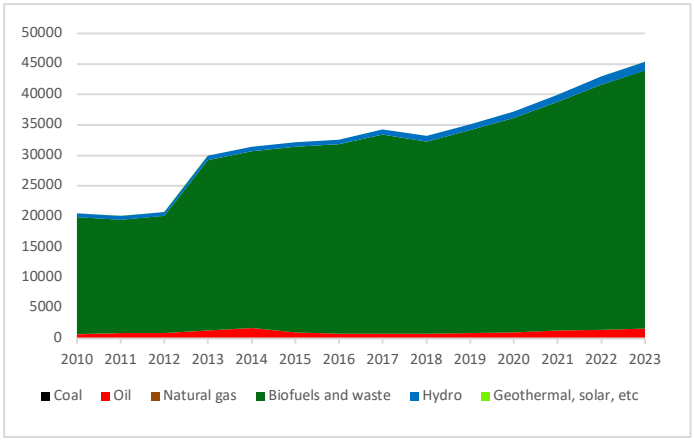
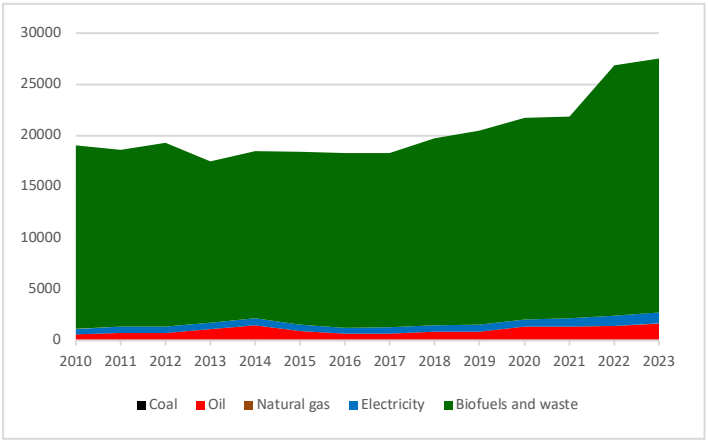


Figure 3.2. - Total Final Consumption (ktoe)



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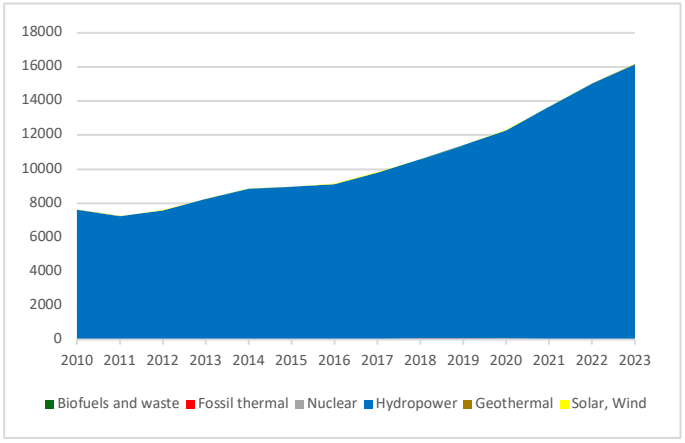


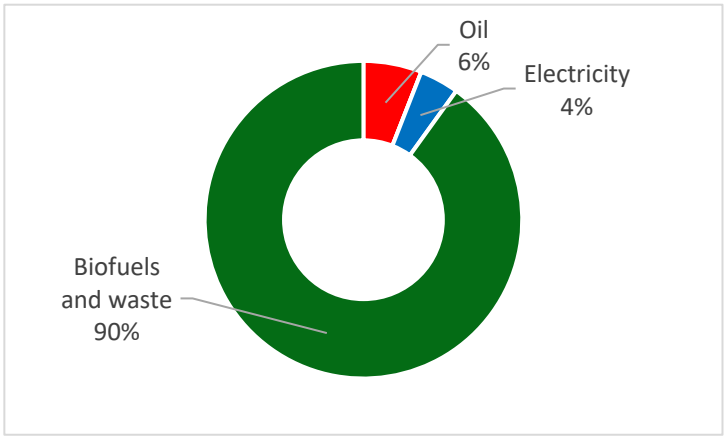


Figure 3.5. – Electricity Consumption by Sector

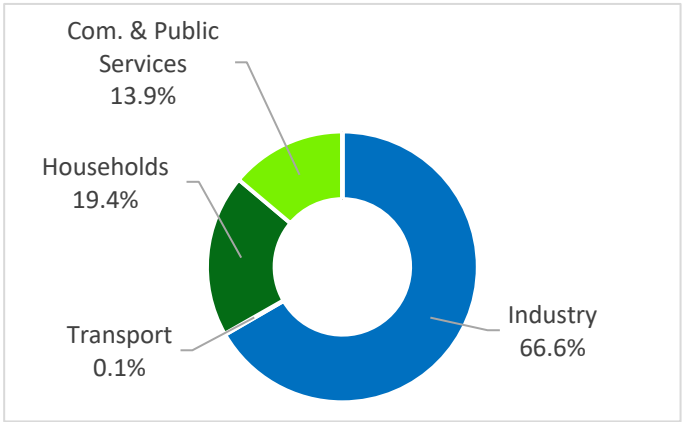
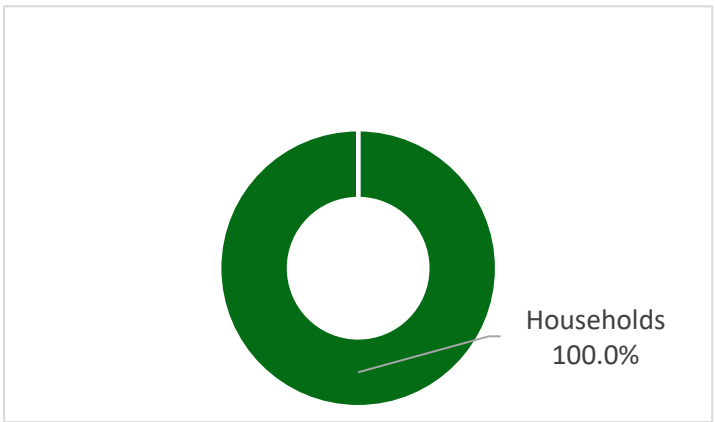


Figure 3.6. – Biofuels and Waste Consumption by Sector



Democratic Republic of the Congo

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	1463,06		40274,60	1289,05	0,78		43027,49
Imports (+)		1503,90				123,74	1627,64
Exports (-)	-1463,06					-5,21	-1468,27
International Marine Bunkers (-)		-113,04					-113,04
International Aviation Bunkers (-)							
Stock Changes (+ draw, - build)	12,12	-20,04					-7,92
TOTAL PRIMARY ENERGY SUPPLY	**12,12**	**1370,82**	**40274,60**	**1289,05**	**0,78**	**118,52**	**43065,90**
Transfers : Origin (-) and Destination (+)							
Statistical Difference	12,12	2,93				38,12	53,17
TRANSFORMATION Inputs (-) and Outputs (+)		**30,81**	**-15854,98**	**-1289,05**	**-0,78**	**1290,57**	**-15823,44**
Electricity plants		30,81		-1289,05	-0,78	1290,57	31,54
CHP Plants							
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants			-15854,98				-15854,98
Transformation not elsewhere specified							
Energy Sector Own Use							
Losses						**346,24**	**346,24**
FINAL CONSUMPTION		**1398,70**	**24419,61**			**1024,73**	**26843,05**
Industry		720,39				682,93	1403,31
Transport		651,97				1,26	653,23
Households		16,94	24419,61			198,47	24635,02
Commercial and public services						142,07	142,07
Agriculture, Forestry and Fishing							
Non-specified (HH, Com. & PS., Agri.)							
Non-Energy Use		9,41					9,41

Djibouti

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

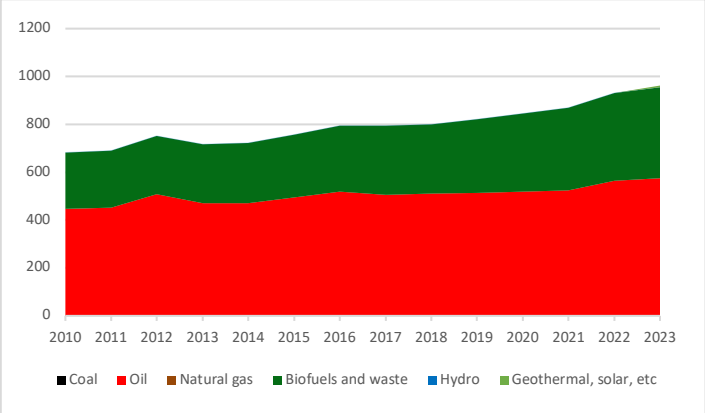


Figure 3.2. - Total Final Consumption (ktoe)

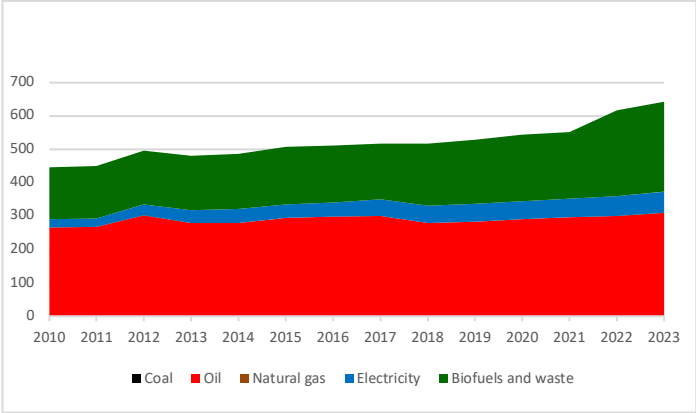


Figure 3.3. - Electricity Generation by Source (GWh)

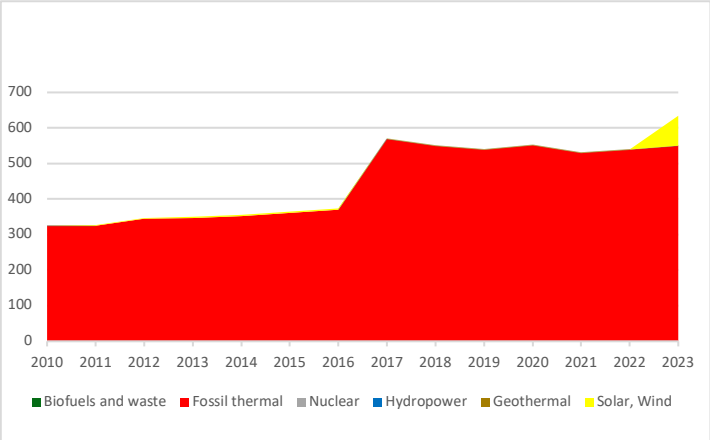


Figure 3.4. - Fuel Shares of Total Final Consumption

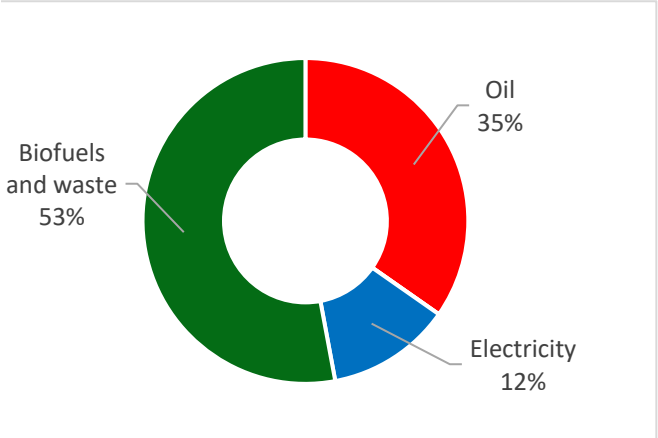
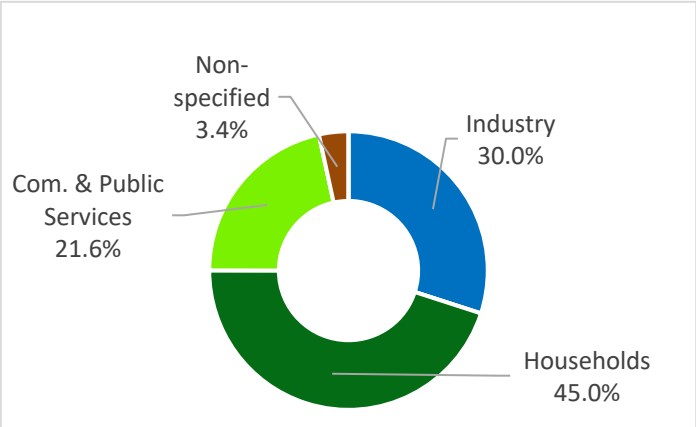
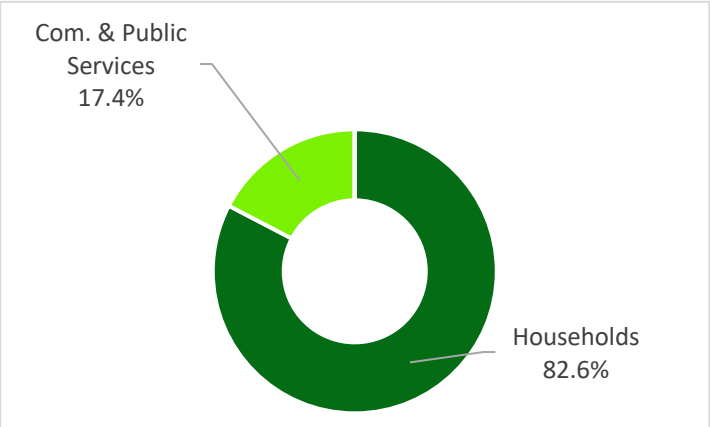


Figure 3.





Djibouti

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production		365,87	0,02		365,90
Imports (+)	204,11			59,43	263,53
Exports (-)					
International Marine Bunkers (-)					
International Aviation Bunkers (-)	-51,93				-51,93
Stock Changes (+ draw, - build)	11,91				11,91
TOTAL PRIMARY ENERGY SUPPLY	**164,08**	**365,87**	**0,02**	**59,43**	**589,41**
Transfers : Origin (-) and Destination (+)					
Statistical Difference	1,23	2,53		-2,07	1,69
TRANSFORMATION Inputs (-) and Outputs (+)	**-20,13**	**-106,43**	**-0,02**	**3,07**	**-123,51**
Electricity plants	-20,13		-0,02	3,07	-17,08
CHP Plants					
Heat Plants					
Coke ovens					
Blast furnaces					
Oil Refineries					
Coal-to-liquids plants					
Gas-to-liquids plants					
Charcoal production plants		-106,43			-106,43
Transformation not elsewhere specified					
Energy Sector Own Use				**1,42**	**1,42**
Losses				**2,36**	**2,36**
FINAL CONSUMPTION	**142,72**	**256,91**		**60,79**	**460,42**
Industry	9,44			11,86	21,29
Transport	104,89				104,89
Households	18,27	212,30		27,36	257,93
Commercial and public services	4,99	44,60		17,05	66,64
Agriculture, Forestry and Fishing					
Non-specified (HH, Com. & PS., Agri.)				4,53	4,53
Non-Energy Use	5,13				5,13

Egypt

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

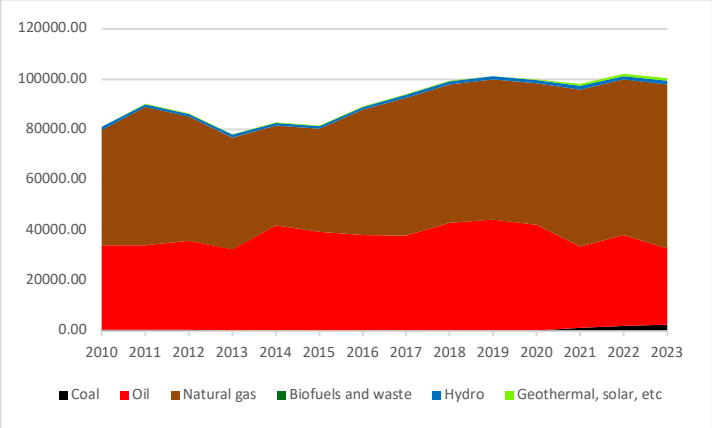


Figure 3.2. - Total Final Consumption (ktoe)

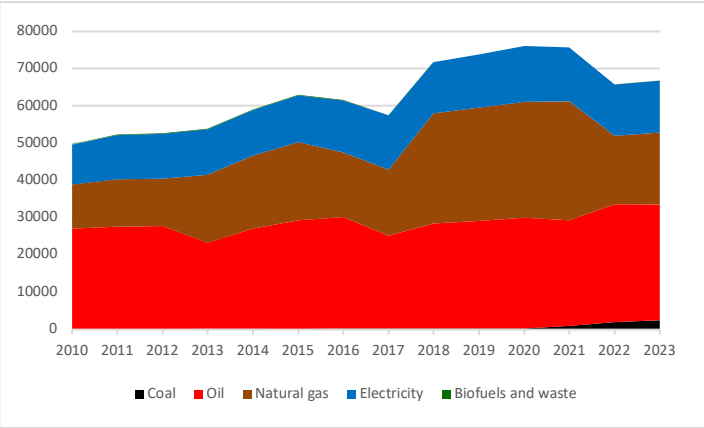


Figure 3.3. - Electricity Generation by Source (GWh)

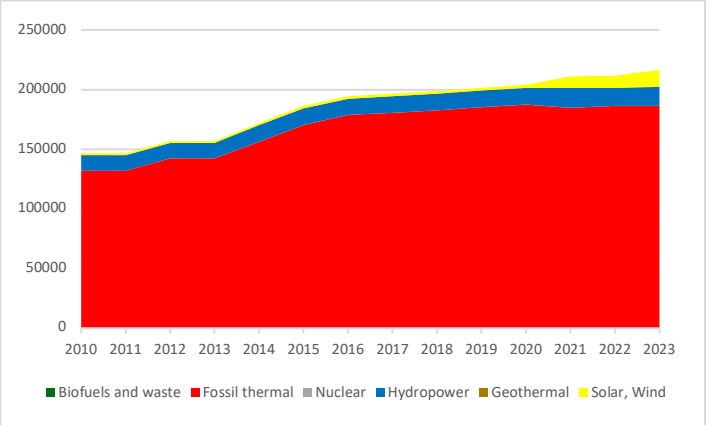
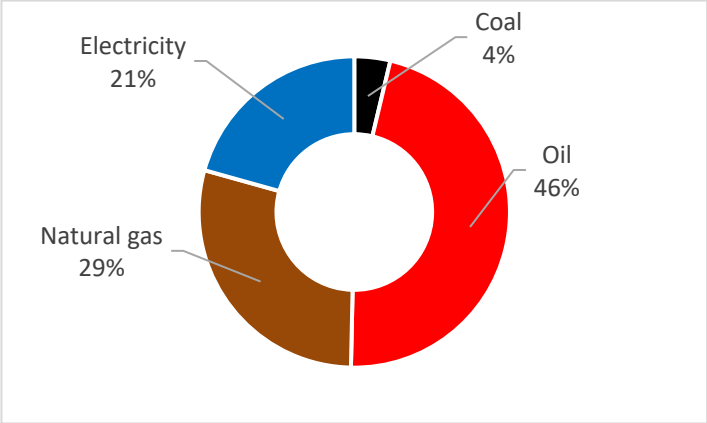
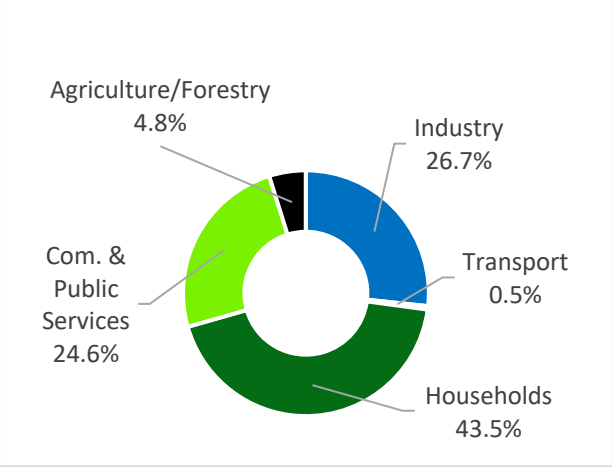
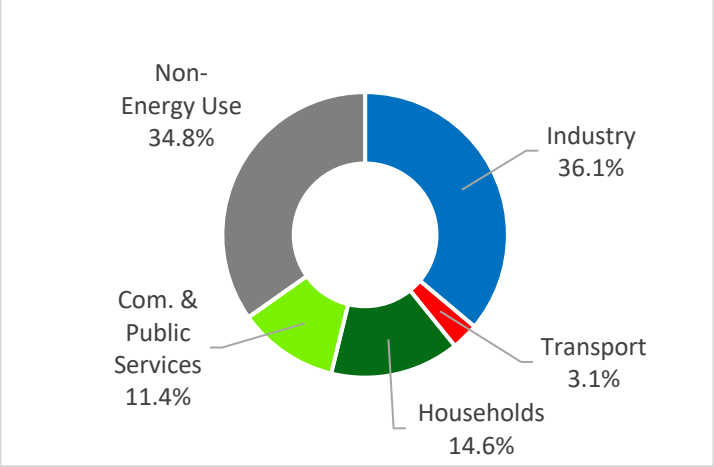


Figure 3.4. - Fuel Shares of Total Final Consumption







Egypt

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Hydro	Solar	Wind	Electricity	Total of all energy sources
Production		33092,70		61658,24	1282,60	391,32	520,48		96945,34
Imports (+)	2080,31	14110,16	7086,89	2125,04				13,48	25415,88
Exports (-)		-10026,46	-10033,54	-2116,17				-122,42	-22298,60
International Marine Bunkers (-)			-384,72						-384,72
International Aviation Bunkers (-)			-1232,48						-1232,48
Stock Changes (+ draw, - build)		2321,71	1257,63						3579,34
TOTAL PRIMARY ENERGY SUPPLY	**2080,31**	**39498,11**	**-3306,23**	**61667,11**	**1282,60**	**391,32**	**520,48**	**-108,94**	**102024,75**
Transfers : Origin (-) and Destination (+)		-1447,29	1404,27						-43,02
Statistical Difference	2,40	-1,30	184,26	2080,16				789,27	3054,79
TRANSFORMATION Inputs (-) and Outputs (+)	**3,85**	**-38052,11**	**33576,52**	**-34723,85**	**-1282,60**	**-391,32**	**-520,48**	**18209,71**	**-23180,30**
Electricity plants			-2158,02	-34723,85	-1282,60	-391,32	-520,48	18209,71	-20866,57
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces									
Oil Refineries		-38052,11	35734,54						-2317,58
Coal-to-liquids plants									
Gas-to-liquids plants									
Charcoal production plants									
Transformation not elsewhere specified	3,85								3,85
Energy Sector Own Use				**6379,68**				**554,75**	**6934,43**
Losses								**3021,54**	**3021,54**
FINAL CONSUMPTION	**2081,75**		**31490,30**	**18483,42**				**13735,21**	**65790,68**
Industry	2081,75		4175,96	6674,14				3664,32	16596,17
Transport			18461,63	569,08				62,31	19093,02
Households			4338,81	2705,62				5968,93	13013,36
Commercial and public services			909,07	2106,62				3376,50	6392,20
Agriculture, Forestry and Fishing			979,29					663,14	1642,43
Non-specified (HH, Com. & PS., Agri.)			45,72						45,72
Non-Energy Use			2579,82	6427,96					9007,77

Equatorial Guinea

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

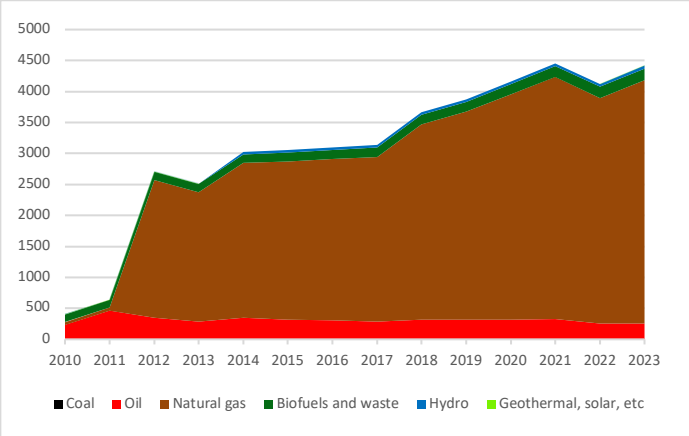


Figure 3.2. - Total Final Consumption (ktoe)

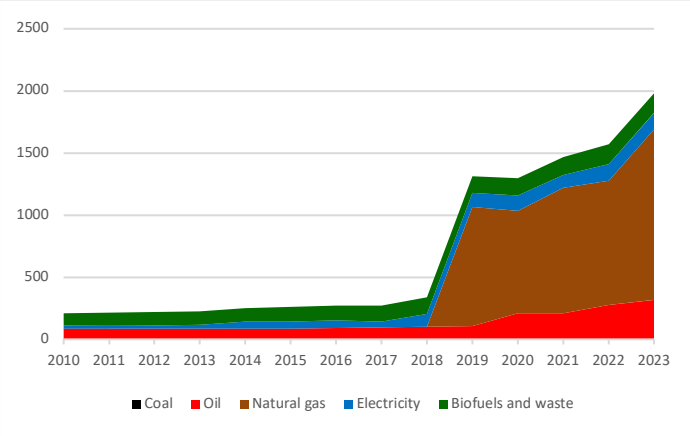


Figure 3.3. - Electricity Generation by Source (GWh)

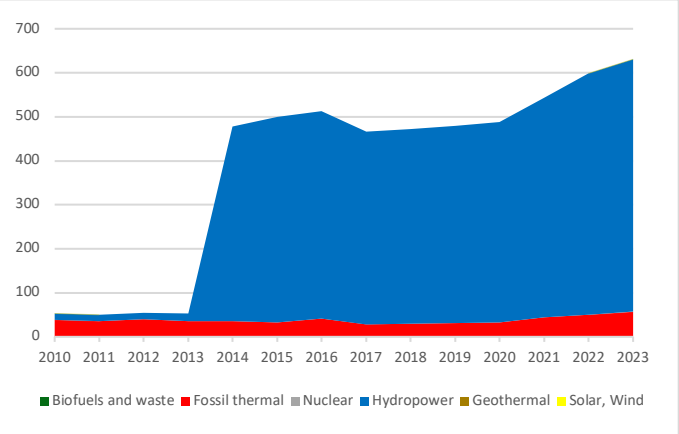


Figure 3.4. - Fuel Shares of Total Final Consumption

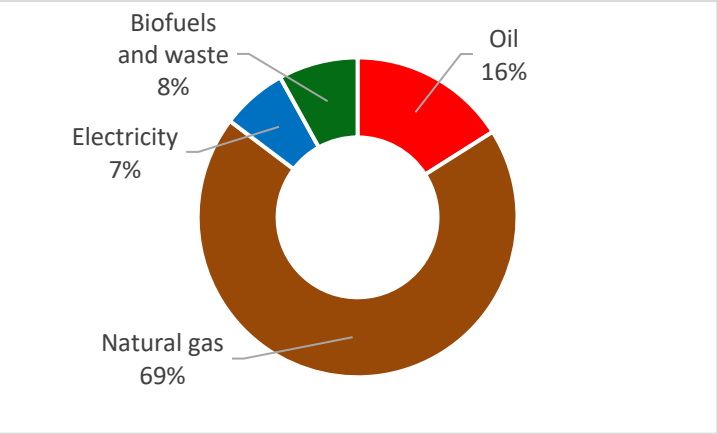
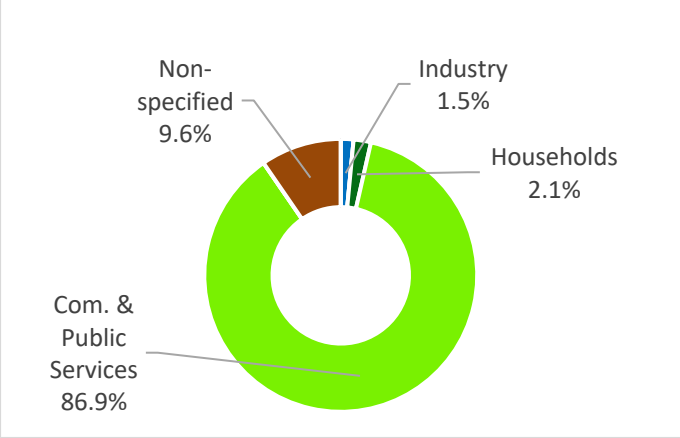
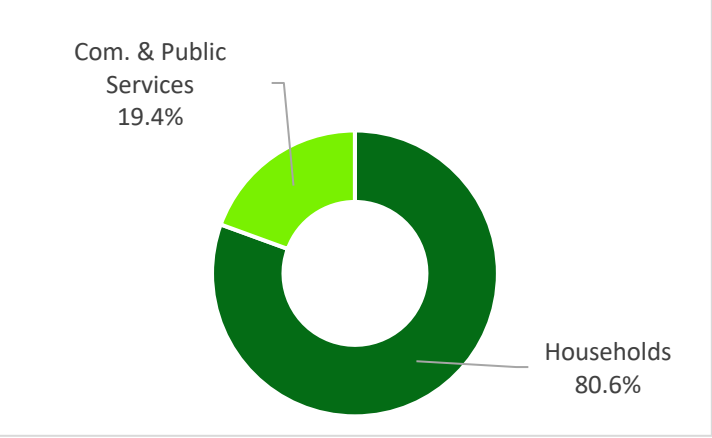


Figure 3





Equatorial Guinea

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Electricity	Total of all energy sources
Production	5502,79		5953,58	182,51	47,18		11686,05
Imports (+)		207,13					207,13
Exports (-)	-5752,81	-595,16	-3979,19				-10327,15
International Marine Bunkers (-)		-10,27					-10,27
International Aviation Bunkers (-)		-26,04					-26,04
Stock Changes (+ draw, - build)	943,90	-17,69	-331,04				595,18
TOTAL PRIMARY ENERGY SUPPLY	**693,89**	**-442,03**	**1643,35**	**182,51**	**47,18**		**2124,89**
Transfers : Origin (-) and Destination (+)	-701,62	716,48					14,86
Statistical Difference	-7,73	-3,38	13,60	0,92		-2375,22	-2371,81
TRANSFORMATION Inputs (-) and Outputs (+)		**-2,09**	**-284,11**	**-22,91**	**-47,18**	**135,84**	**-220,45**
Electricity plants		-2,09	-284,11		-47,18	135,84	-197,54
CHP Plants							
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants				-22,91			-22,91
Transformation not elsewhere specified							
Energy Sector Own Use			**347,13**			**3,07**	**350,20**
Losses						**12,26**	**12,26**
FINAL CONSUMPTION		**275,75**	**998,51**	**158,67**		**2495,73**	**3928,65**
Industry		72,00	998,51			37,63	1108,13
Transport		152,77					152,77
Households		29,81		127,83		51,30	208,93
Commercial and public services		14,83		30,84		2167,64	2213,31
Agriculture, Forestry and Fishing							
Non-specified (HH, Com. & PS., Agri.)						239,17	239,17
Non-Energy Use		6,34					6,34

Eritrea

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

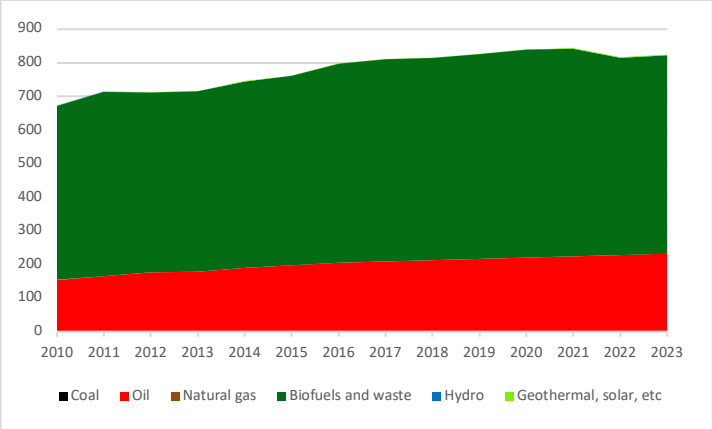


Figure 3.2. - Total Final Consumption (ktoe)

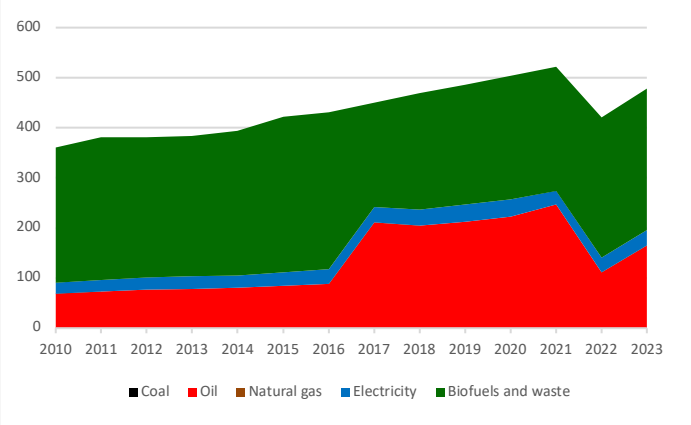


Figure 3.3. - Electricity Generation by Source (GWh)

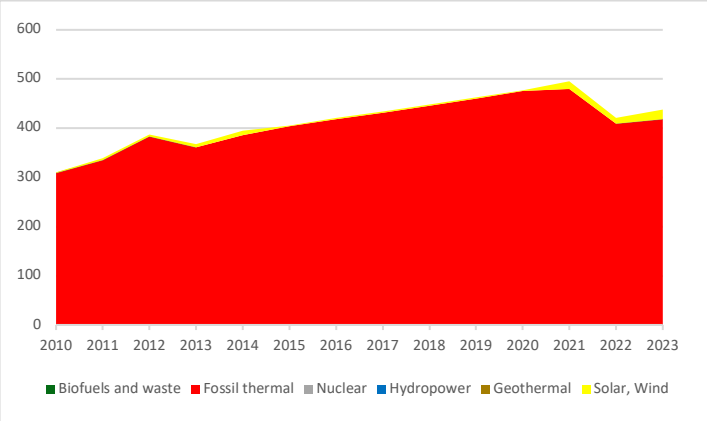


Figure 3.4. - Fuel Shares of Total Final Consumption

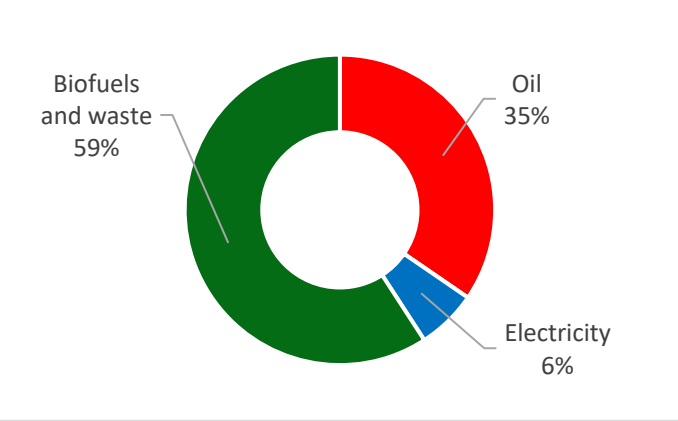
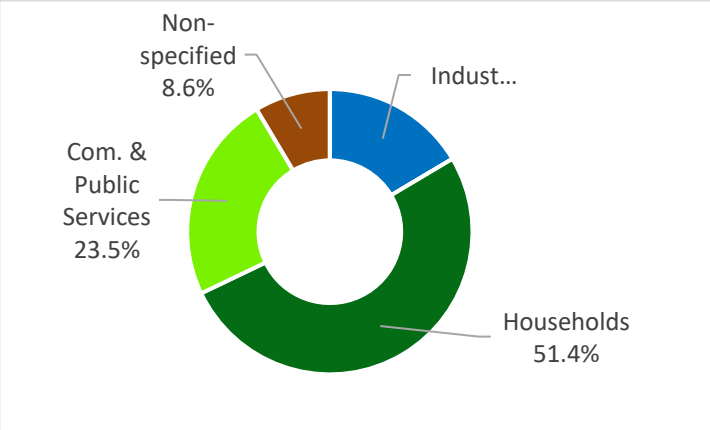
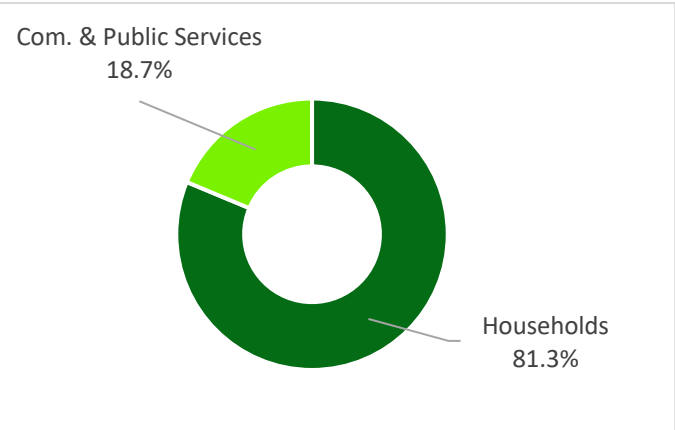


Figure 3





Eritrea

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Wind	Electricity	Total of all energy sources
Production		586,45	0,85	0,19		587,49
Imports (+)	246,78					246,78
Exports (-)						
International Marine Bunkers (-)						
International Aviation Bunkers (-)	-5,28					-5,28
Stock Changes (+ draw, - build)	-12,64					-12,64
TOTAL PRIMARY ENERGY SUPPLY	**228,86**	**586,45**	**0,85**	**0,19**		**816,35**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	0,21	-14,20			0,32	-13,67
TRANSFORMATION Inputs (-) and Outputs (+)	**-117,44**	**-321,31**	**-0,85**	**-0,19**	**36,21**	**-403,58**
Electricity plants	-117,44		-0,85	-0,19	36,21	-82,27
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-321,31				-321,31
Transformation not elsewhere specified						
Energy Sector Own Use					**1,59**	**1,59**
Losses					**4,21**	**4,21**
FINAL CONSUMPTION	**111,21**	**279,34**			**30,09**	**420,64**
Industry	7,78				4,95	12,73
Transport	77,37					77,37
Households	13,01	227,06			15,47	255,54
Commercial and public services	4,07	52,28			7,08	63,44
Agriculture, Forestry and Fishing	1,00					1,00
Non-specified (HH, Com. & PS., Agri.)					2,58	2,58
Non-Energy Use	7,99					7,99

Eswatini

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

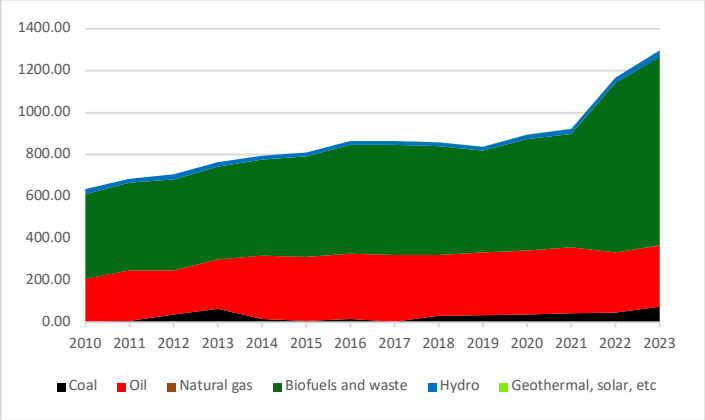
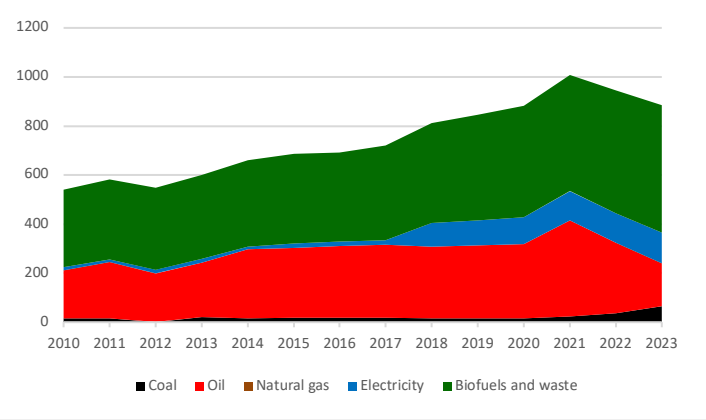
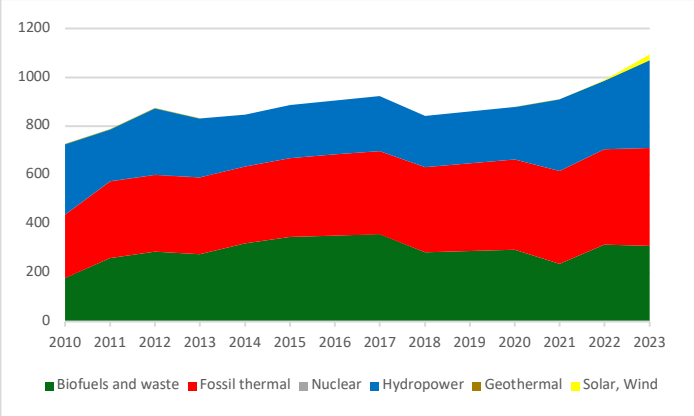
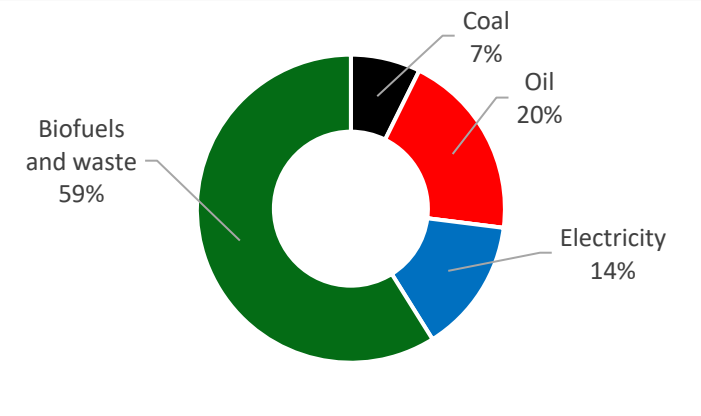


Figure 3.2. - Total Final Consumption (ktoe)







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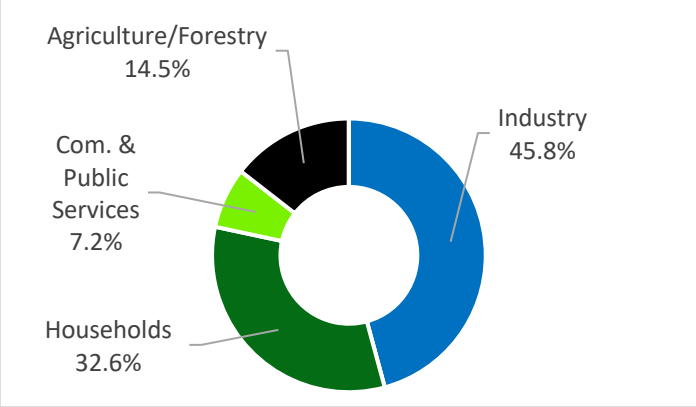
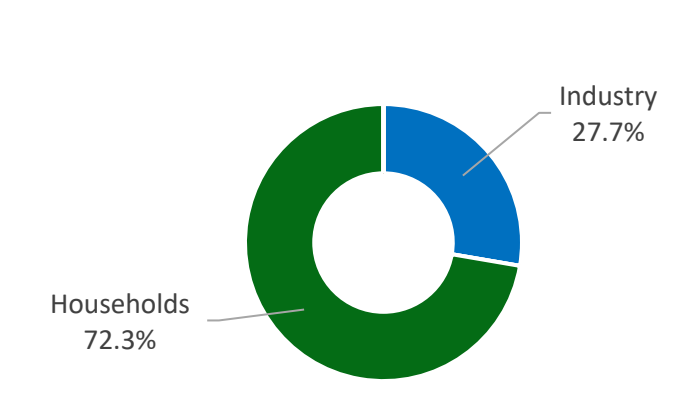




Eswatini

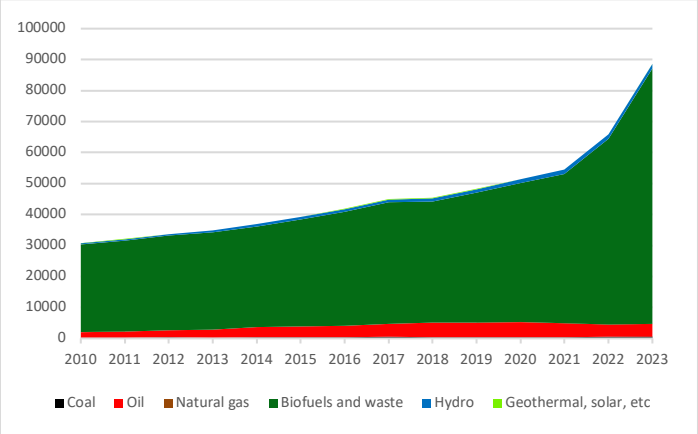
Energy Balance 2023

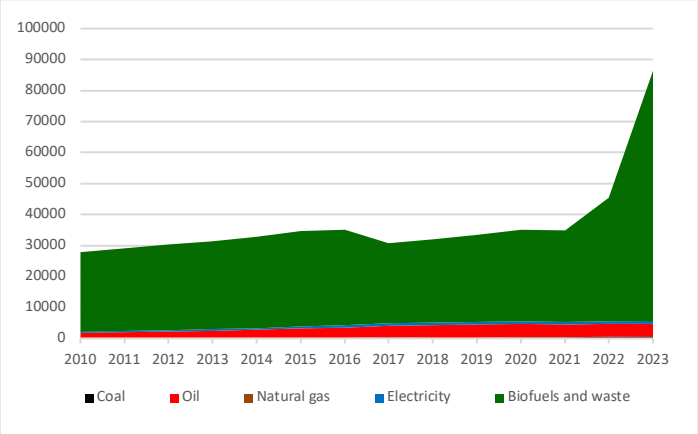
Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	225,75		6313,30	30,88	2,02		6571,96
Imports (+)	75,01	292,99				79,45	447,45
Exports (-)	-225,75						-225,75
International Marine Bunkers (-)							
International Aviation Bunkers (-)		-1,83					-1,83
Stock Changes (+ draw, - build)							
TOTAL PRIMARY ENERGY SUPPLY	**75,01**	**291,16**	**6313,30**	**30,88**	**2,02**	**79,45**	**6791,83**
Transfers : Origin (-) and Destination (+)							
Statistical Difference	0,00	117,34	0,00			-0,55	116,80
TRANSFORMATION Inputs (-) and Outputs (+)	**-10,14**	**0,39**	**-314,74**	**-30,88**	**-2,02**	**60,36**	**-297,03**
Electricity plants		0,39		-30,88	-2,02	32,90	0,39
CHP Plants	-10,14		-314,74			27,46	-297,42
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants							
Transformation not elsewhere specified							
Energy Sector Own Use						**0,00**	**0,00**
Losses						**15,33**	**15,33**
FINAL CONSUMPTION	**64,87**	**174,21**	**5998,56**			**125,04**	**6362,68**
Industry	64,85	21,22	1661,15			57,24	1804,46
Transport		101,26					101,26
Households		7,36	4337,42			40,72	4385,50
Commercial and public services		24,60				8,96	33,56
Agriculture, Forestry and Fishing	0,02	19,21				18,11	37,34
Non-specified (HH, Com. & PS., Agri.)							
Non-Energy Use		0,55					0,55

Ethiopia

Indicators

Figure





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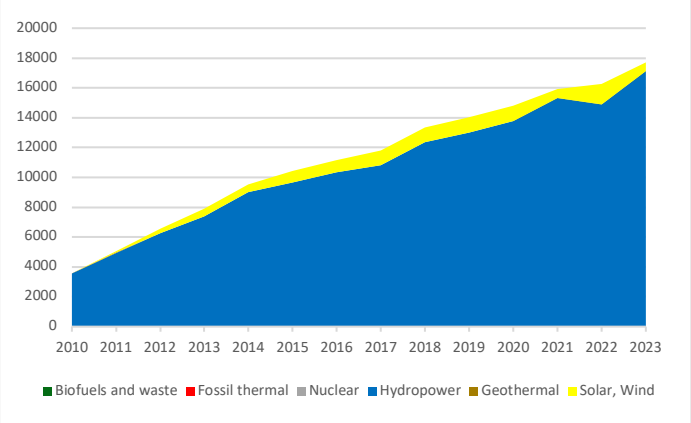

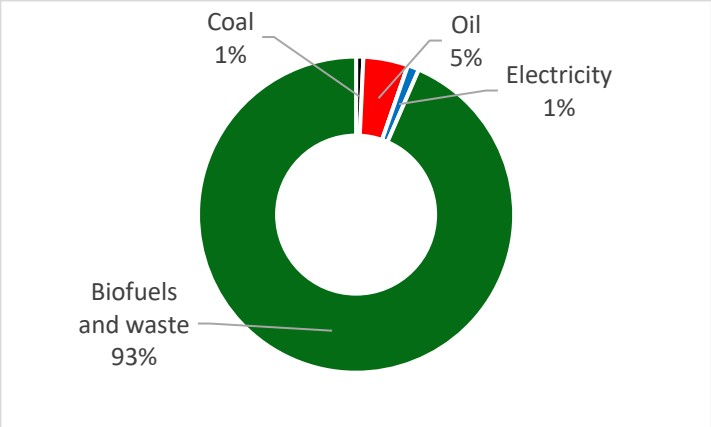

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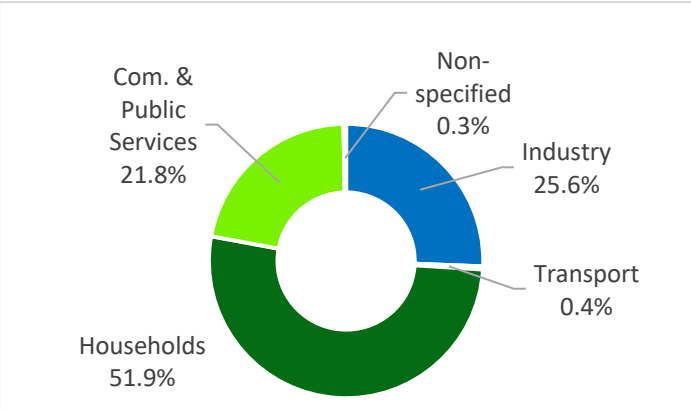
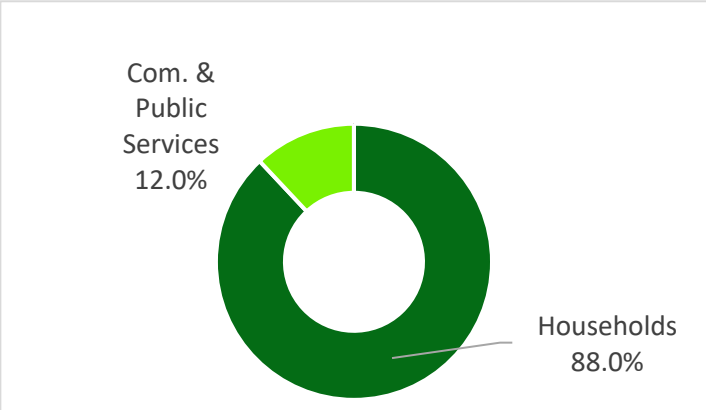




Ethiopia

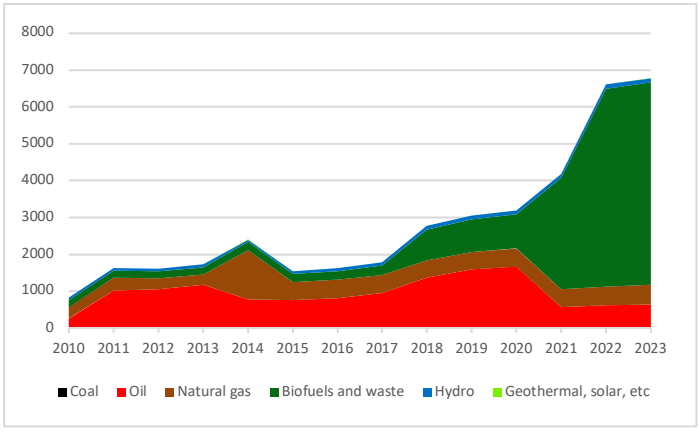
Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Wind	Electricity	Total of all energy sources
Production	436,07		45898,59	1472,58	0,16	49,49		47856,90
Imports (+)	204,10	4498,95						4703,05
Exports (-)							-148,33	-148,33
International Marine Bunkers (-)								
International Aviation Bunkers (-)								
Stock Changes (+ draw, - build)		90,85						90,85
TOTAL PRIMARY ENERGY SUPPLY	**640,17**	**4589,81**	**45898,59**	**1472,58**	**0,16**	**49,49**	**-148,33**	**52502,47**
Transfers : Origin (-) and Destination (+)								
Statistical Difference		4,39	0,72				49,94	55,05
TRANSFORMATION Inputs (-) and Outputs (+)			**-13147,21**	**-1472,58**	**-0,16**	**-49,49**	**1522,80**	**-13146,64**
Electricity plants				-1472,58	-0,16	-49,49	1522,80	0,57
CHP Plants								
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries								
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants			-13147,21					-13147,21
Transformation not elsewhere specified								
Energy Sector Own Use							**5,31**	**5,31**
Losses			**770,36**				**308,94**	**1079,31**
FINAL CONSUMPTION	**640,17**	**4585,41**	**31980,31**				**1010,27**	**38216,16**
Industry	640,17	333,72					258,93	1232,82
Transport		4136,26					3,69	4139,95
Households		115,43	30844,58				524,29	31484,30
Commercial and public services			1135,72				220,30	1356,02
Agriculture, Forestry and Fishing								
Non-specified (HH, Com. & PS., Agri.)							3,06	3,06
Non-Energy Use								

Gabon

Indicators

Figure 3



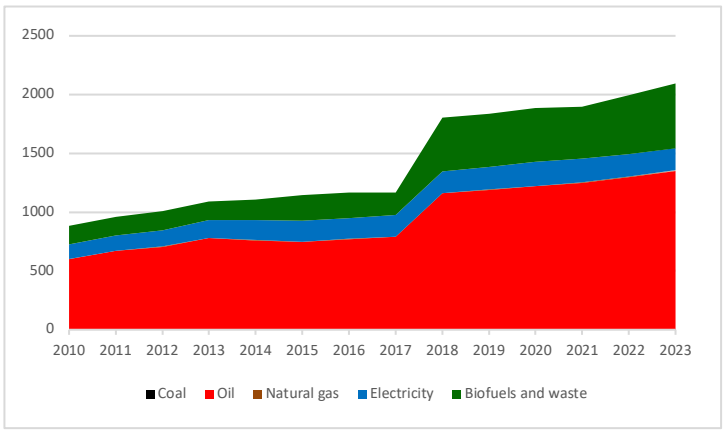
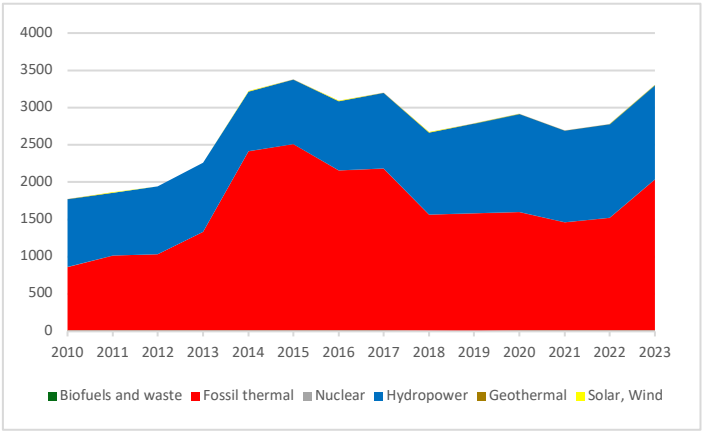
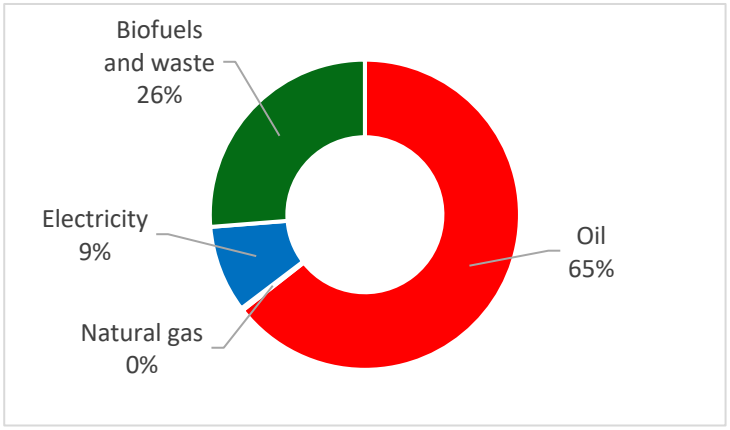
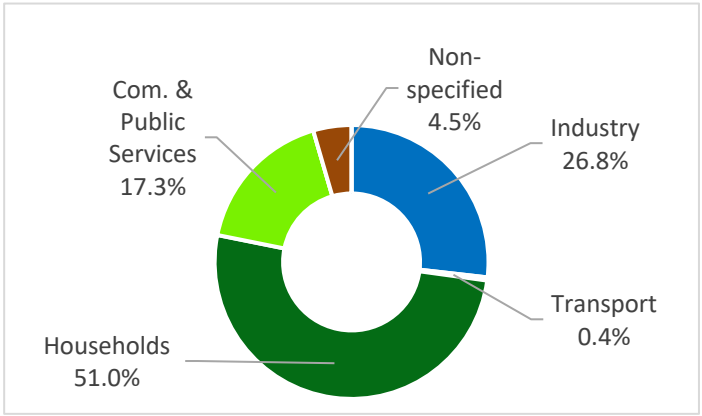


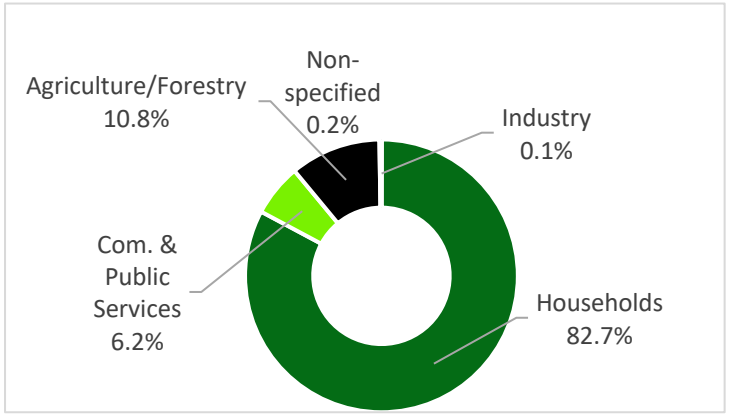
Figure 3





Figure





Gabon

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Other sources	Electricity	Total of all energy sources
Production	12628,37		509,87	5369,00	108,36	0,23	549,76		19165,59
Imports (+)		309,63							309,63
Exports (-)	-11654,63	-278,61							-11933,23
International Marine Bunkers (-)		-166,73							-166,73
International Aviation Bunkers (-)		-34,54							-34,54
Stock Changes (+ draw, - build)		-183,28	24,18						-159,10
TOTAL PRIMARY ENERGY SUPPLY	**973,74**	**-353,52**	**534,04**	**5369,00**	**108,36**	**0,23**	**549,76**		**7181,61**
Transfers : Origin (-) and Destination (+)									
Statistical Difference	-0,61	-4,09	-12,49	-8,09	0,00			-11,99	-37,28
TRANSFORMATION Inputs (-) and Outputs (+)	**-974,35**	**804,32**	**-466,87**	**-1643,90**	**-108,36**	**-0,23**	**-549,76**	**833,47**	**-2105,68**
Electricity plants		-75,28	-466,87	-1202,00	-108,36	-0,23	-549,76	833,47	-1569,03
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces									
Oil Refineries	-974,35	879,60							-94,75
Coal-to-liquids plants									
Gas-to-liquids plants									
Charcoal production plants				-441,90					-441,90
Transformation not elsewhere specified									
Energy Sector Own Use		**130,71**	**79,66**					**606,81**	**817,18**
Losses		**2,25**						**48,51**	**50,76**
FINAL CONSUMPTION		**321,93**		**3733,20**				**190,14**	**4245,27**
Industry		164,69		1,93				50,95	217,58
Transport		70,49						0,71	71,21
Households		53,07		3089,21				96,94	3239,22
Commercial and public services		14,56		231,22				32,95	278,72
Agriculture, Forestry and Fishing		1,04		401,95					402,99
Non-specified (HH, Com. & PS., Agri.)		3,40		8,89				8,58	20,87
Non-Energy Use		14,67							14,67

Gambia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

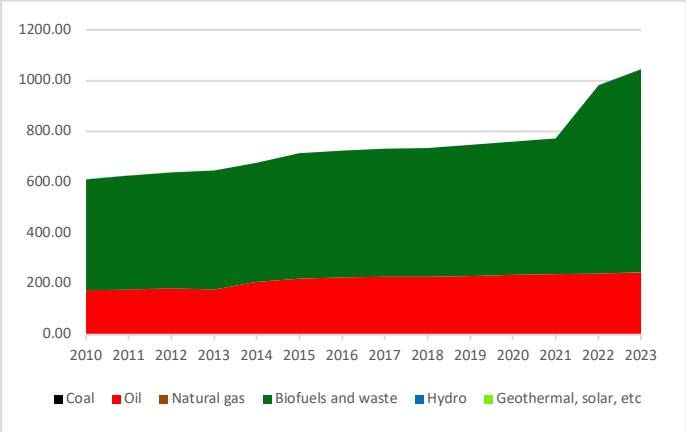


Figure 3.2. - Total Final Consumption (ktoe)

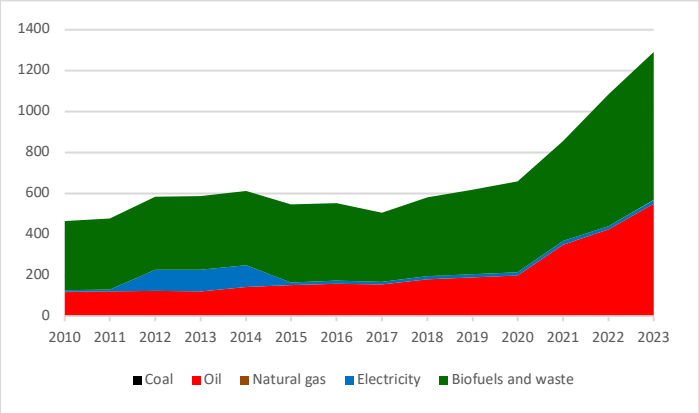
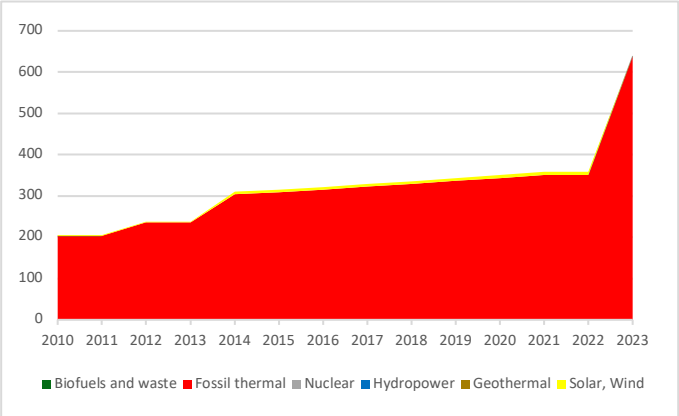


Figure 3



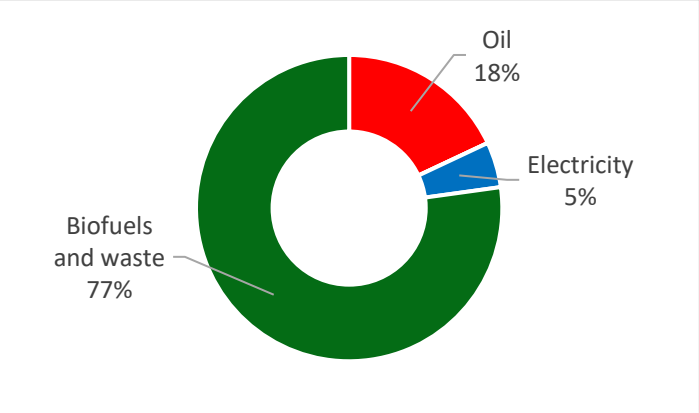


Figure 3.5. – Electricity Consumption by Sector

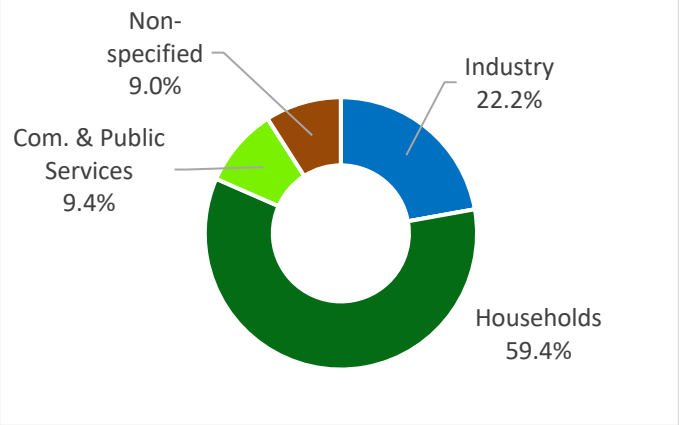
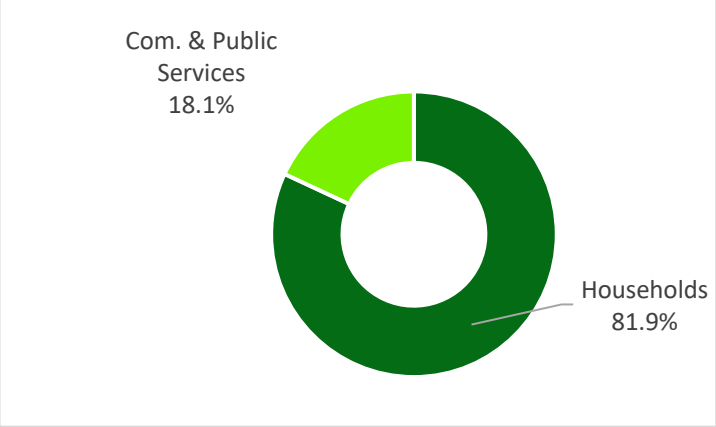


Figure 3.6. – Biofuels and Waste Consumption by Sector



Gambia

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production		740,98	0,63		741,61
Imports (+)	285,80				285,80
Exports (-)					
International Marine Bunkers (-)					
International Aviation Bunkers (-)	-24,66				-24,66
Stock Changes (+ draw, - build)	216,80				216,80
TOTAL PRIMARY ENERGY SUPPLY	**477,94**	**740,98**	**0,63**		**1219,54**
Transfers : Origin (-) and Destination (+)					
Statistical Difference	-3,19	-19,05		-0,24	-22,49
TRANSFORMATION Inputs (-) and Outputs (+)	**-57,06**	**-116,75**	**-0,63**	**30,86**	**-143,58**
Electricity plants	-57,06		-0,63	30,86	-26,83
CHP Plants					
Heat Plants					
Coke ovens					
Blast furnaces					
Oil Refineries					
Coal-to-liquids plants					
Gas-to-liquids plants					
Charcoal production plants		-116,75			-116,75
Transformation not elsewhere specified					
Energy Sector Own Use				**1,64**	**1,64**
Losses				**12,74**	**12,74**
FINAL CONSUMPTION	**424,07**	**643,28**		**16,73**	**1084,08**
Industry	79,33			3,71	83,04
Transport	312,07				312,07
Households	6,62	527,11		9,94	543,67
Commercial and public services	3,56	116,17		1,57	121,30
Agriculture, Forestry and Fishing					
Non-specified (HH, Com. & PS., Agri.)				1,51	1,51
Non-Energy Use	22,48				22,48

Ghana

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

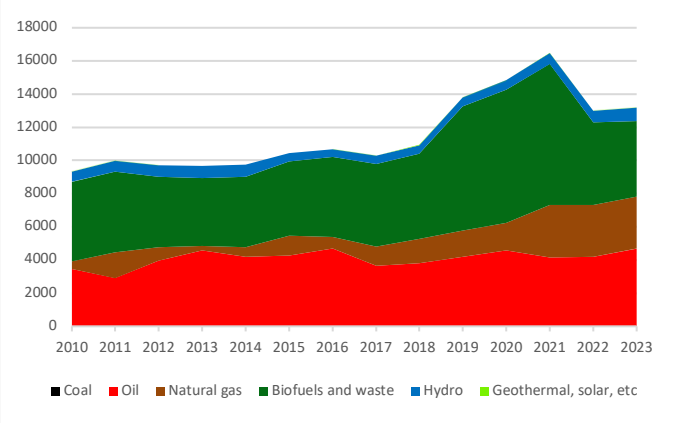


Figure 3.2. - Total Final Consumption (ktoe)

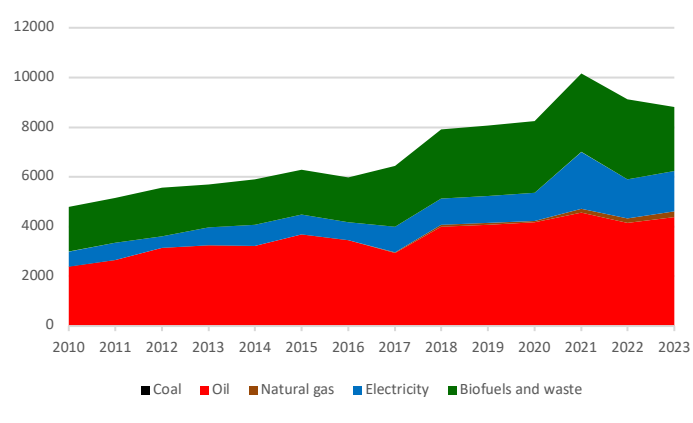


Figure 3.3. - Electricity Generation by Source (GWh)

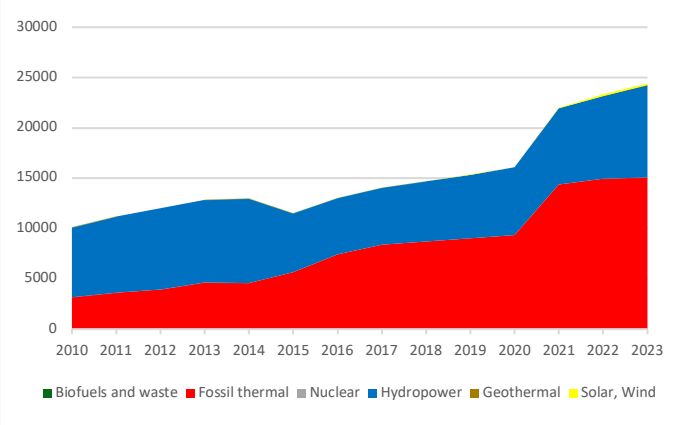


Figure 3.4. - Fuel Shares of Total Final Consumption

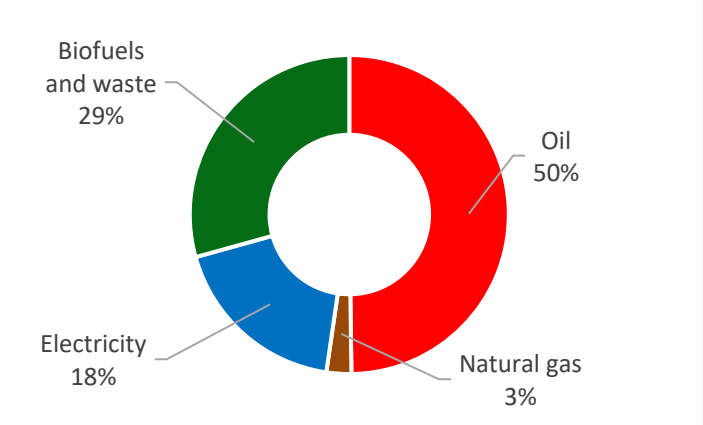
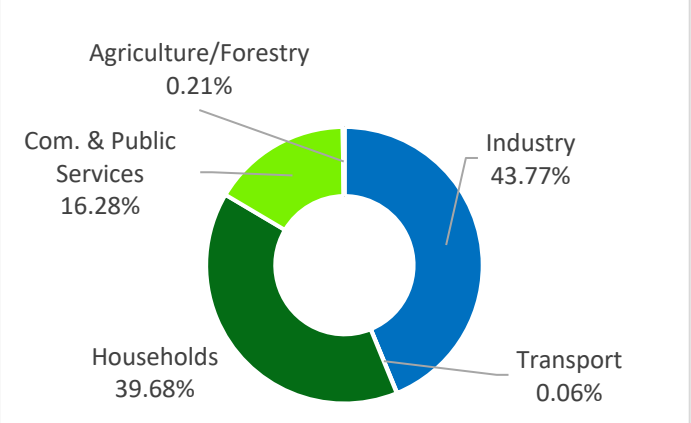
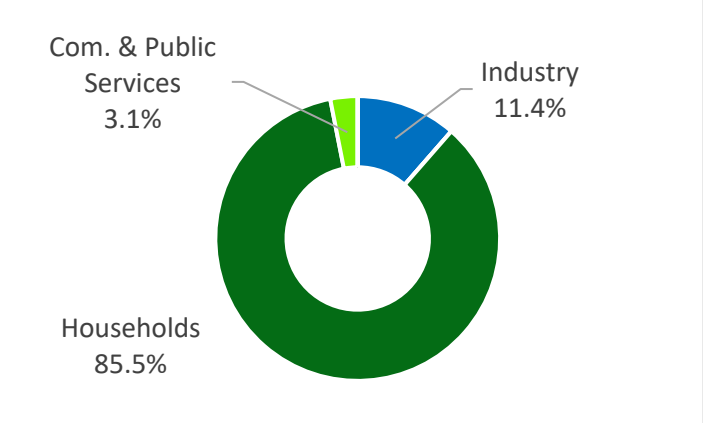


Figure 3





Ghana

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	6754,72		2605,25	4564,56	789,90	12,70		14727,13
Imports (+)	429,16	4693,05	533,51	0,06			6,78	5662,54
Exports (-)	-6598,22	-6,96		-0,65			-217,35	-6823,18
International Marine Bunkers (-)		-3,64						-3,64
International Aviation Bunkers (-)		-192,01						-192,01
Stock Changes (+ draw, - build)	-221,25	-173,55						-394,80
TOTAL PRIMARY ENERGY SUPPLY	**364,41**	**4316,88**	**3138,75**	**4563,96**	**789,90**	**12,70**	**-210,57**	**12976,03**
Transfers : Origin (-) and Destination (+)	-104,67	112,01						7,34
Statistical Difference	25,27	53,57	11,62	0,06			7,62	98,14
TRANSFORMATION Inputs (-) and Outputs (+)	**-234,46**	**112,47**	**-2905,03**	**-1981,59**	**-789,90**	**-12,70**	**2099,21**	**-3712,01**
Electricity plants	-63,94	-56,15	-2905,03		-789,90	-12,70	2099,21	-1728,51
CHP Plants								
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries	-170,52	168,61						-1,90
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants				-1981,59				-1981,59
Transformation not elsewhere specified								
Energy Sector Own Use		**100,26**					**25,65**	**125,90**
Losses							**234,67**	**234,67**
FINAL CONSUMPTION		**4387,53**	**222,10**	**2582,31**			**1620,70**	**8812,65**
Industry		512,44	222,10	295,15			709,37	1739,06
Transport		3587,37					0,98	3588,35
Households		174,77		2207,04			643,08	3024,90
Commercial and public services		23,06		80,12			263,90	367,08
Agriculture, Forestry and Fishing		89,51					3,37	92,88
Non-specified (HH, Com. & PS., Agri.)								
Non-Energy Use		0,38						0,38

Guinea

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

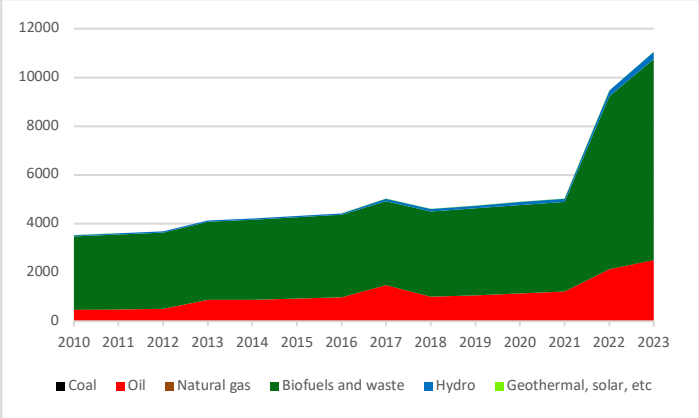


Figure 3.2. - Total Final Consumption (ktoe)

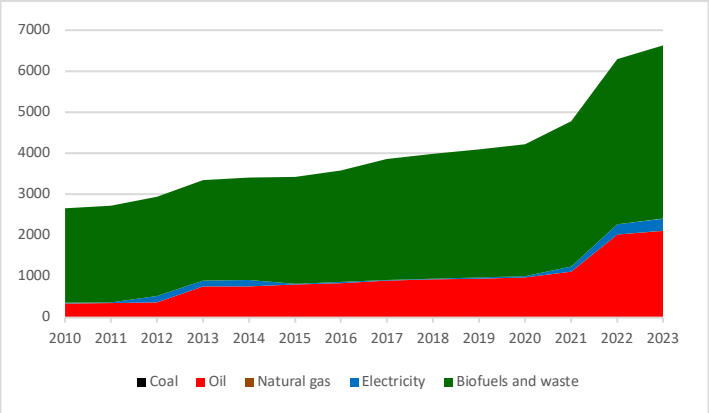


Figure 3.3. - Electricity Generation by Source (GWh)

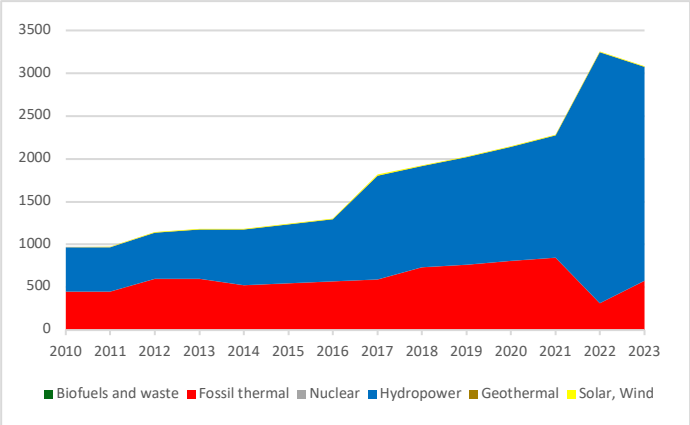


Figure 3.4. - Fuel Shares of Total Final Consumption

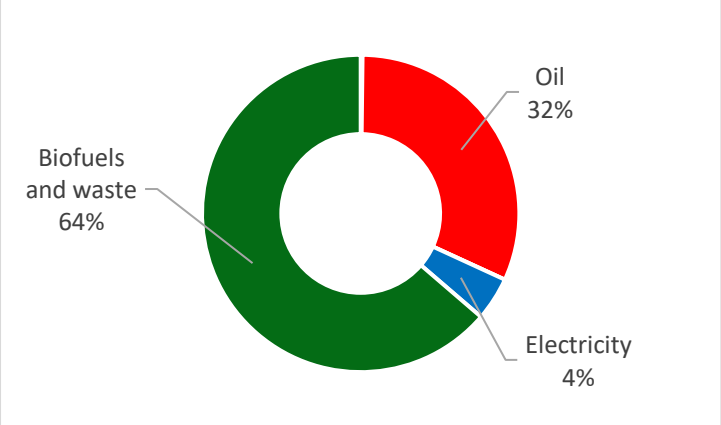
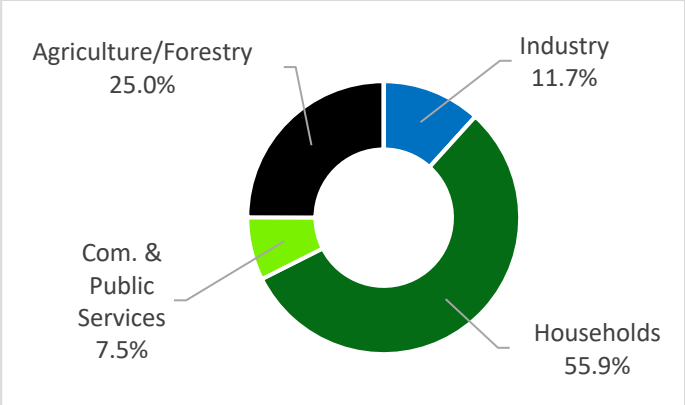
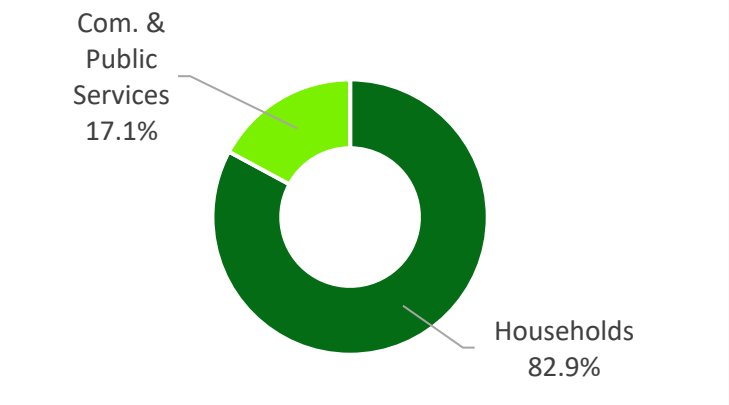


Figure 3





Guinea

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production			7068,61	252,02	0,79		7321,42
Imports (+)	12,37	2186,23				1,63	2200,23
Exports (-)							
International Marine Bunkers (-)							
International Aviation Bunkers (-)		-0,81					-0,81
Stock Changes (+ draw, - build)		-44,29					-44,29
TOTAL PRIMARY ENERGY SUPPLY	**12,37**	**2141,13**	**7068,61**	**252,02**	**0,79**	**1,63**	**9476,56**
Transfers : Origin (-) and Destination (+)							
Statistical Difference		23,06	-380,52			10,65	-346,81
TRANSFORMATION Inputs (-) and Outputs (+)		**-103,02**	**-3431,98**	**-252,02**	**-0,79**	**279,82**	**-3507,98**
Electricity plants		-103,02		-252,02	-0,79	279,82	-76,01
CHP Plants							
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants			-3431,98				-3431,98
Transformation not elsewhere specified							
Energy Sector Own Use						**8,77**	**8,77**
Losses						**14,79**	**14,79**
FINAL CONSUMPTION	**12,37**	**2015,05**	**4017,16**			**247,25**	**6291,83**
Industry	12,37	571,68				28,98	613,02
Transport		1430,46					1430,46
Households		7,90	3329,26			138,09	3475,25
Commercial and public services		2,13	687,90			18,48	708,51
Agriculture, Forestry and Fishing						61,70	61,70
Non-specified (HH, Com. & PS., Agri.)							
Non-Energy Use		2,88					2,88

Guinea-Bissau

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

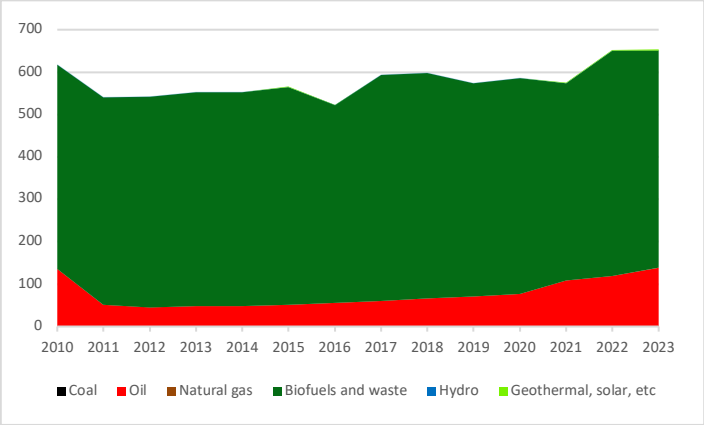


Figure 3.2. - Total Final Consumption (ktoe)

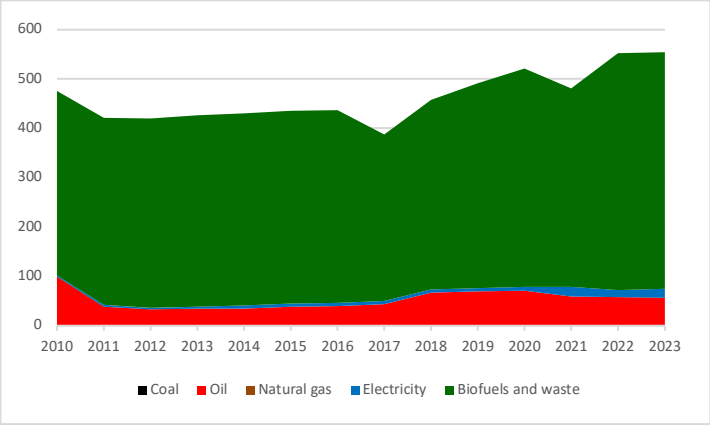


Figure 3.3. - Electricity Generation by Source (GWh)

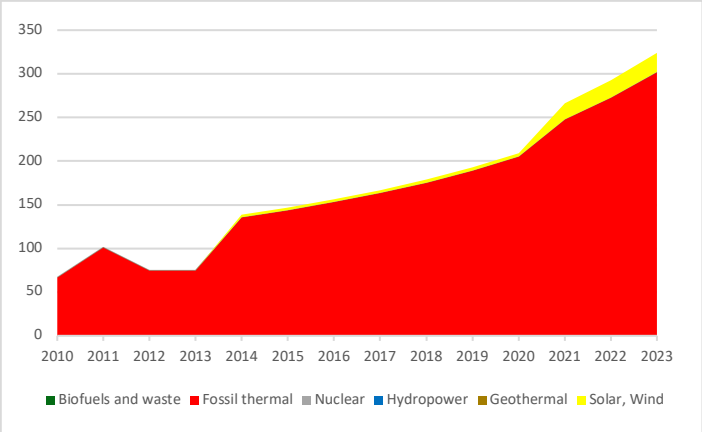


Figure 3.4. - Fuel Shares of Total Final Consumption

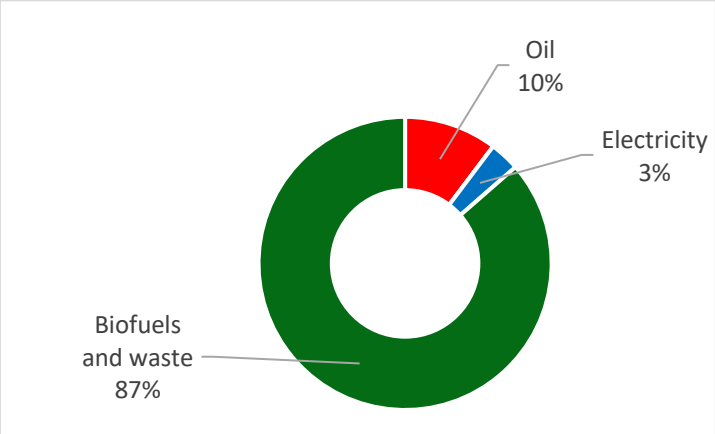
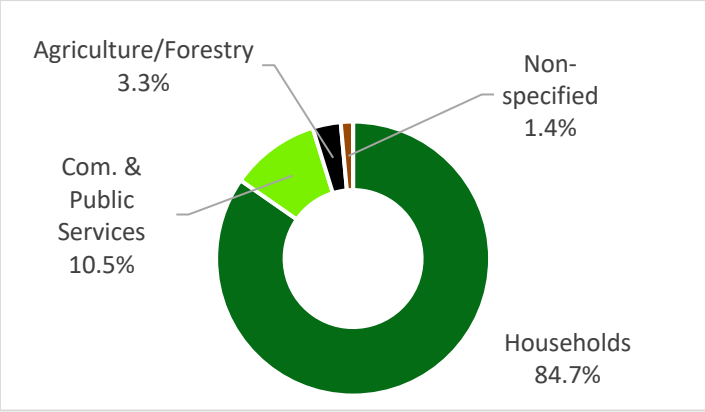
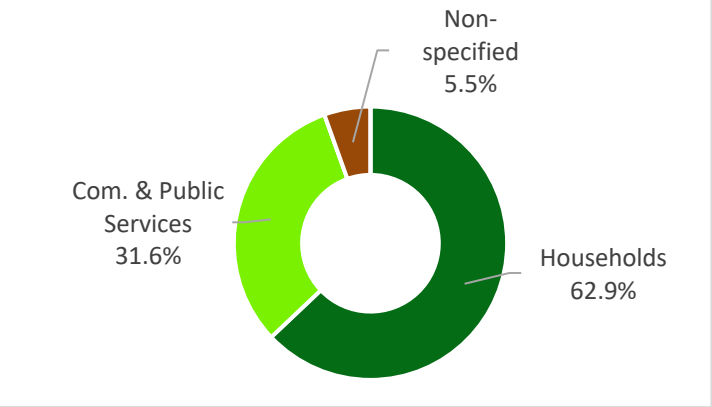


Figure 3





Guinea-Bissau

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production		531,19	1,73		532,92
Imports (+)	118,81				118,81
Exports (-)					
International Marine Bunkers (-)					
International Aviation Bunkers (-)					
Stock Changes (+ draw, - build)	0,96				0,96
TOTAL PRIMARY ENERGY SUPPLY	**119,77**	**531,19**	**1,73**		**652,69**
Transfers : Origin (-) and Destination (+)					
Statistical Difference	0,49	2,64		-0,98	2,15
TRANSFORMATION Inputs (-) and Outputs (+)	**-61,28**	**-47,56**	**-1,73**	**25,19**	**-85,38**
Electricity plants	-60,17		-1,73	25,19	-36,71
CHP Plants					
Heat Plants					
Coke ovens					
Blast furnaces					
Oil Refineries					
Coal-to-liquids plants					
Gas-to-liquids plants					
Charcoal production plants		-47,56			-47,56
Transformation not elsewhere specified	-1,12				-1,12
Energy Sector Own Use				**5,59**	**5,59**
Losses				**6,80**	**6,80**
FINAL CONSUMPTION	**57,99**	**481,00**		**13,78**	**552,77**
Industry	8,13				8,13
Transport	47,75				47,75
Households	2,05	302,73		11,67	316,45
Commercial and public services		151,93		1,45	153,39
Agriculture, Forestry and Fishing				0,46	0,46
Non-specified (HH, Com. & PS., Agri.)	0,06	26,33		0,20	26,59
Non-Energy Use					

Kenya

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

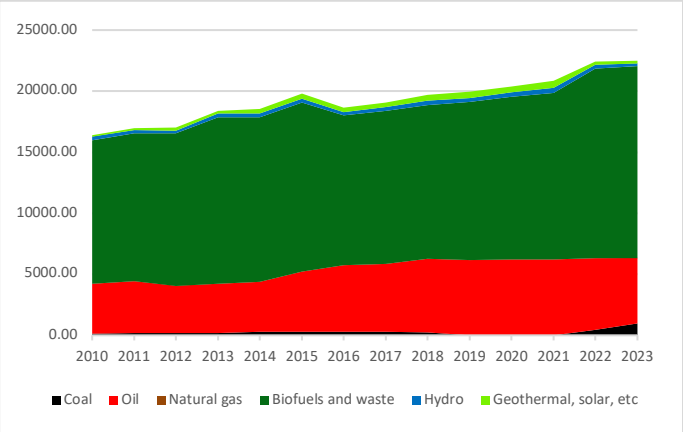


Figure 3.2. - Total Final Consumption (ktoe)

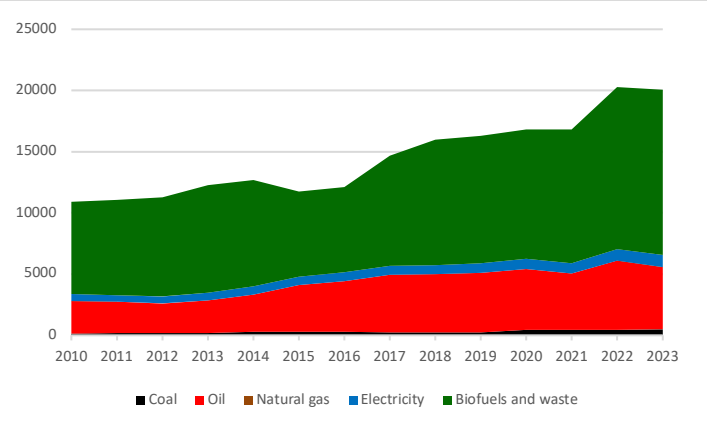


Figure 3.3. - Electricity Generation by Source (GWh)

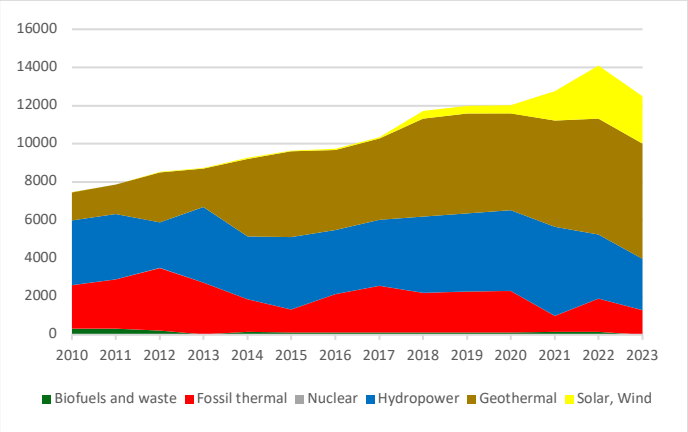


Figure 3.4. - Fuel Shares of Total Final Consumption

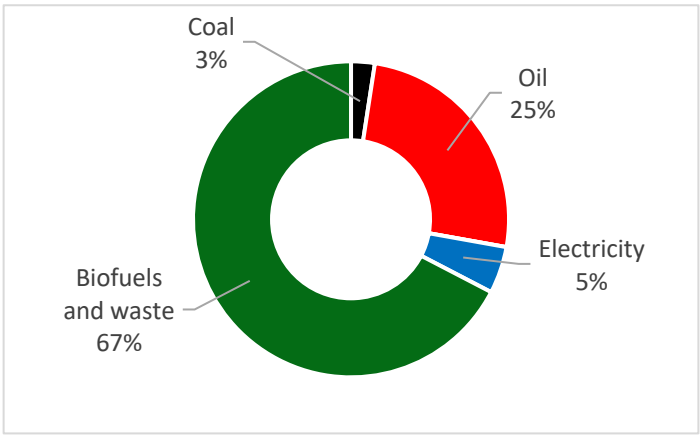
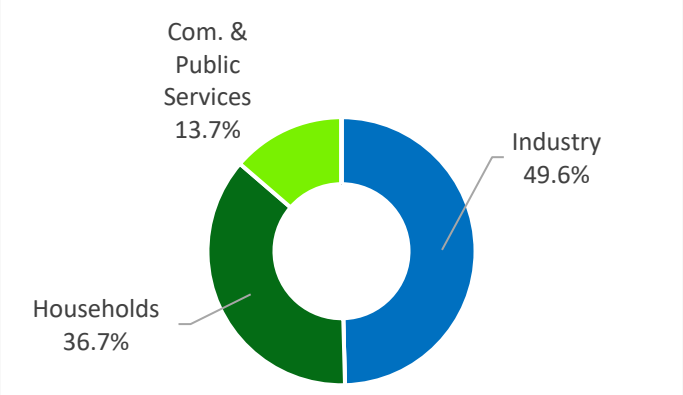
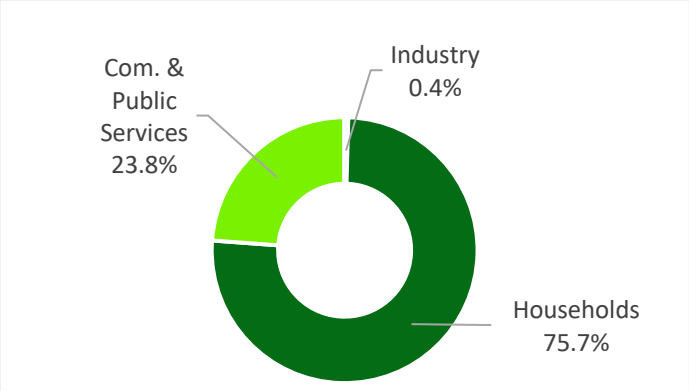


Figure 3





Kenya

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Geothermal	Solar	Wind	Electricity	Total of all energy sources
Production			15571,64	287,52	5218,58	36,29	202,69		21316,73
Imports (+)	719,92	5113,57							5833,48
Exports (-)	-4,29	-54,64							-58,93
International Marine Bunkers (-)		-52,60							-52,60
International Aviation Bunkers (-)		-659,37							-659,37
Stock Changes (+ draw, - build)	-270,52	1505,41							1234,89
TOTAL PRIMARY ENERGY SUPPLY	**445,11**	**5852,37**	**15571,64**	**287,52**	**5218,58**	**36,29**	**202,69**		**27614,21**
Transfers : Origin (-) and Destination (+)									
Statistical Difference	0,41	2,18	191,26					-33,16	160,70
TRANSFORMATION Inputs (-) and Outputs (+)		**-183,89**	**-2141,48**	**-287,52**	**-5218,58**	**-36,29**	**-202,69**	**1198,28**	**-6872,18**
Electricity plants		-183,89		-287,52	-5218,58	-36,29	-202,69	1198,28	-4730,70
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces									
Oil Refineries									
Coal-to-liquids plants									
Gas-to-liquids plants									
Charcoal production plants			-2141,48						-2141,48
Transformation not elsewhere specified									
Energy Sector Own Use		**1,94**						**9,26**	**11,20**
Losses								**290,38**	**290,38**
FINAL CONSUMPTION	**444,69**	**5664,36**	**13238,90**					**931,79**	**20279,75**
Industry	444,69	253,84	58,83					462,00	1219,36
Transport		3733,98							3733,98
Households		406,27	10024,49					342,24	10773,00
Commercial and public services		978,74	3155,58					127,55	4261,87
Agriculture, Forestry and Fishing		161,03							161,03
Non-specified (HH, Com. & PS., Agri.)		18,52							18,52
Non-Energy Use		111,98							111,98

Lesotho

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

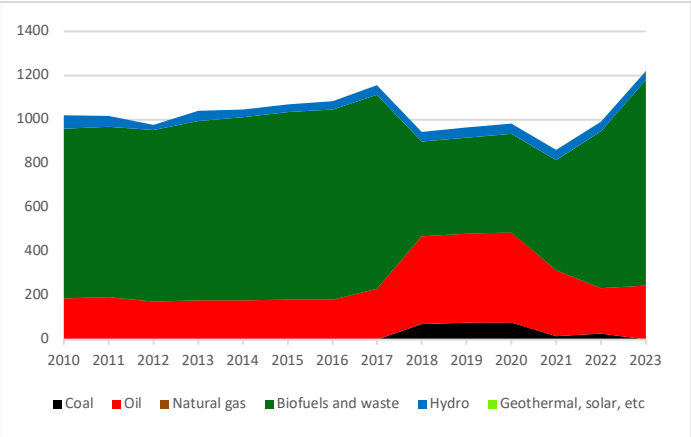


Figure 3.2. - Total Final Consumption (ktoe)

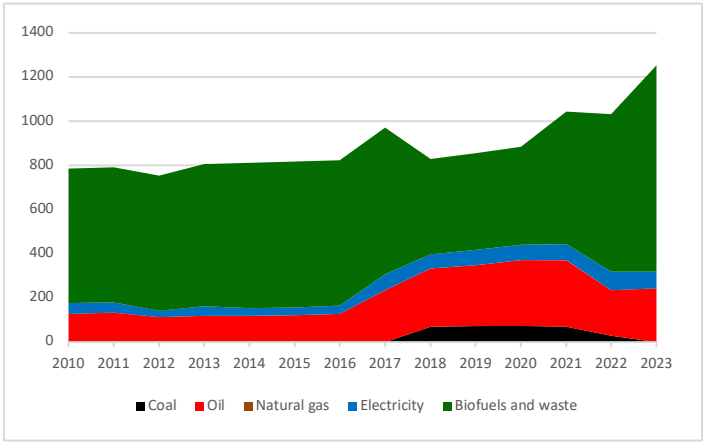
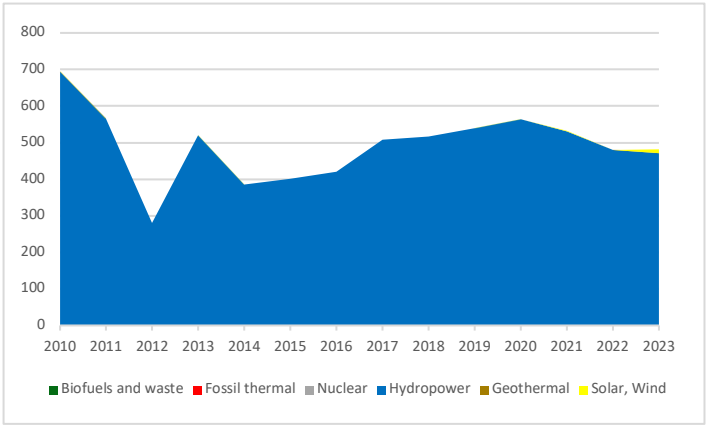


Figure 3



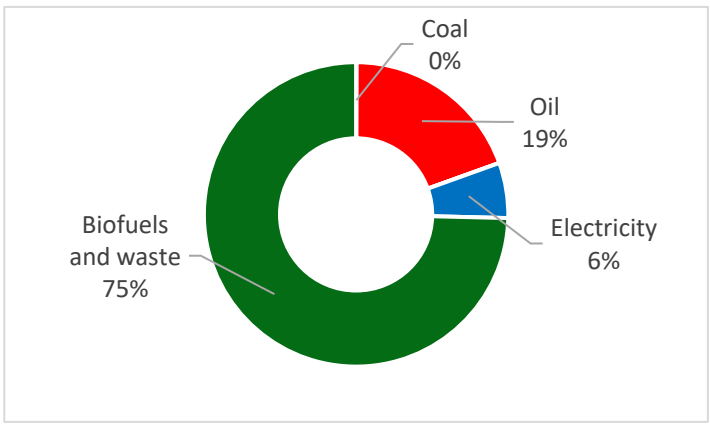
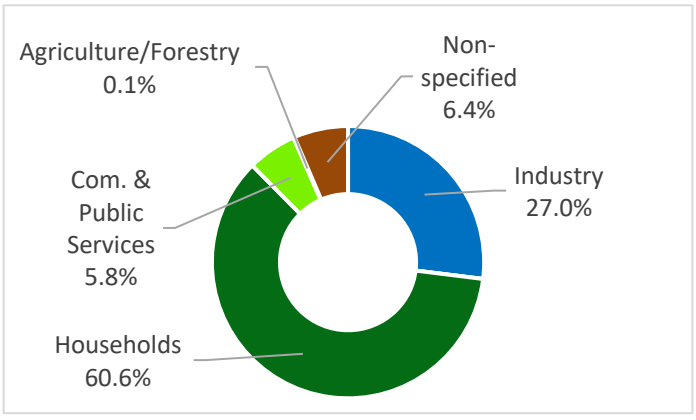
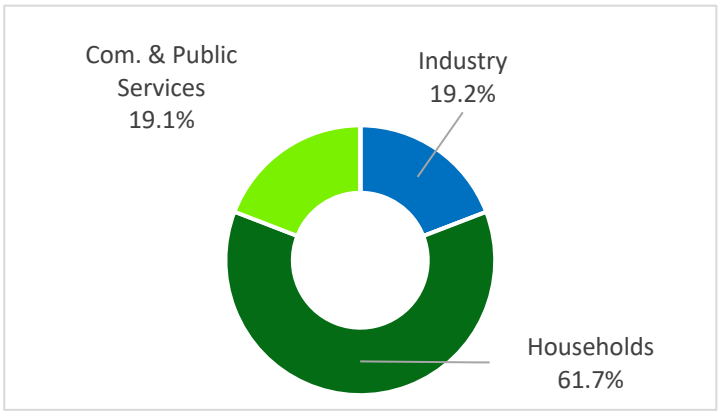


Figure 3.5





Lesotho

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production			713,25	41,23	0,00		754,48
Imports (+)	27,99	206,21				43,66	277,85
Exports (-)						-0,06	-0,06
International Marine Bunkers (-)							
International Aviation Bunkers (-)							
Stock Changes (+ draw, - build)							
TOTAL PRIMARY ENERGY SUPPLY	**27,99**	**206,21**	**713,25**	**41,23**	**0,00**	**43,60**	**1032,28**
Transfers : Origin (-) and Destination (+)							
Statistical Difference		-0,11	1,04			-0,01	0,92
TRANSFORMATION Inputs (-) and Outputs (+)		**-0,21**	**-0,07**	**-41,23**	**0,00**	**41,30**	**-0,21**
Electricity plants		-0,21		-41,23	0,00	41,30	-0,14
CHP Plants							
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants			-0,07				-0,07
Transformation not elsewhere specified							
Energy Sector Own Use							
Losses							
FINAL CONSUMPTION	**27,99**	**206,11**	**712,13**			**84,91**	**1031,15**
Industry	0,70	75,56				25,87	102,13
Transport		98,37					98,37
Households	0,99	29,14	107,78			44,82	182,73
Commercial and public services	26,30	3,05	604,36			14,02	647,74
Agriculture, Forestry and Fishing						0,14	0,14
Non-specified (HH, Com. & PS., Agri.)						0,05	0,05
Non-Energy Use							

Liberia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

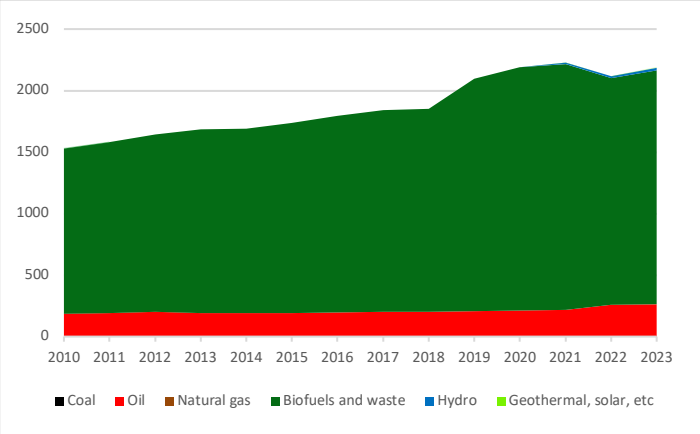
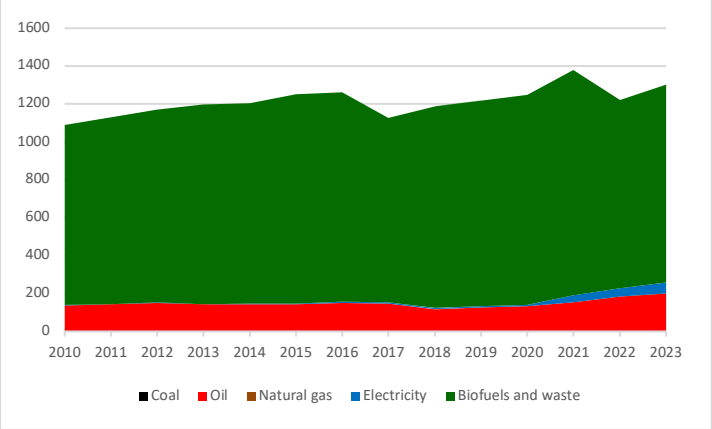
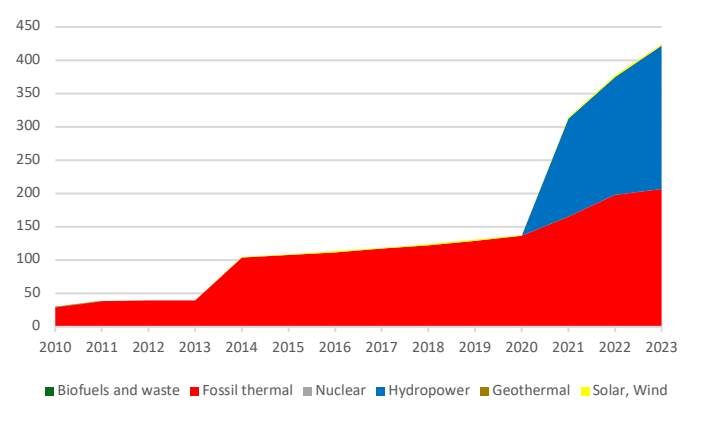
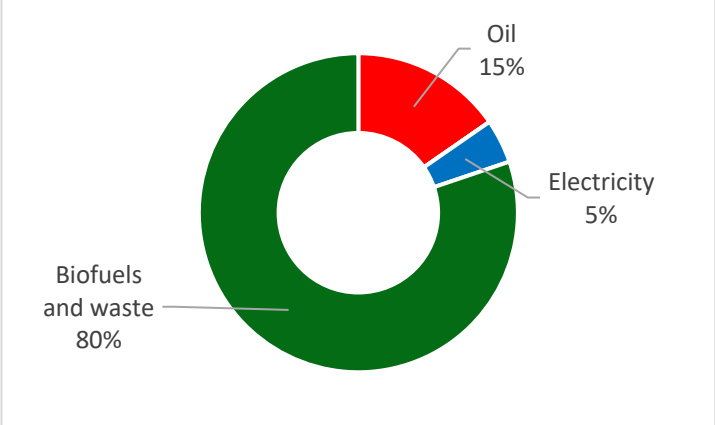
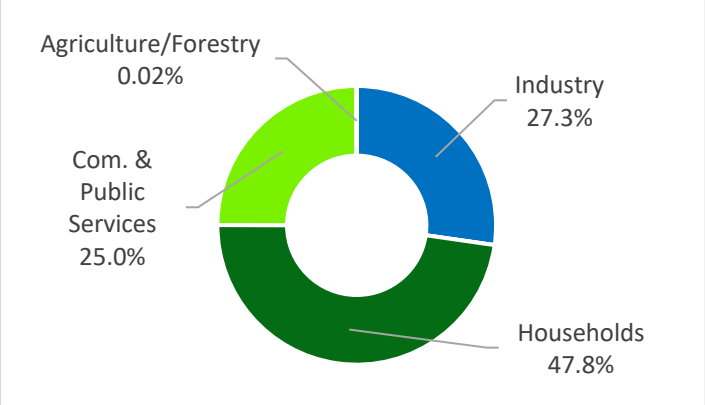


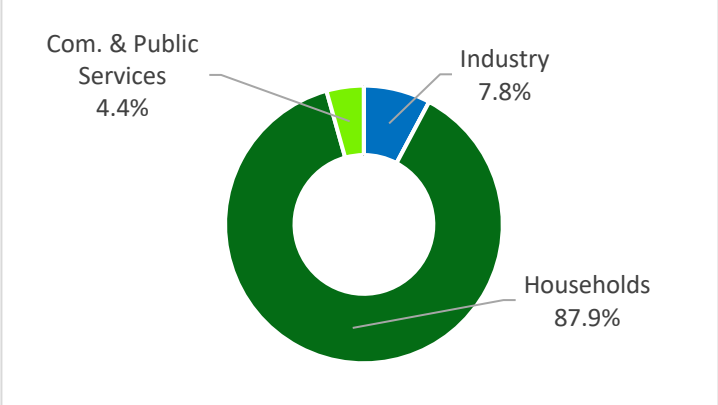
Figure 3.2. - Total Final Consumption (ktoe)











Liberia

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production		1845,34	15,20	0,15		1860,69
Imports (+)	262,82				22,05	284,87
Exports (-)						
International Marine Bunkers (-)						
International Aviation Bunkers (-)	-2,69					-2,69
Stock Changes (+ draw, - build)	-2,12					-2,12
TOTAL PRIMARY ENERGY SUPPLY	**258,01**	**1845,34**	**15,20**	**0,15**	**22,05**	**2140,76**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	1,44	0,13			1,53	3,10
TRANSFORMATION Inputs (-) and Outputs (+)	**-71,06**	**-852,70**	**-15,20**	**-0,15**	**32,43**	**-906,68**
Electricity plants	-71,06		-15,20	-0,15	32,43	-53,98
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-852,70				-852,70
Transformation not elsewhere specified						
Energy Sector Own Use					**1,79**	**1,79**
Losses					**7,02**	**7,02**
FINAL CONSUMPTION	**185,51**	**992,51**			**44,15**	**1222,17**
Industry	48,03	77,28			12,04	137,35
Transport	118,00					118,00
Households	3,57	872,02			21,09	896,68
Commercial and public services	7,00	43,21			11,02	61,23
Agriculture, Forestry and Fishing	6,72				0,01	6,73
Non-specified (HH, Com. & PS., Agri.)						
Non-Energy Use	2,18					2,18

Libya

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

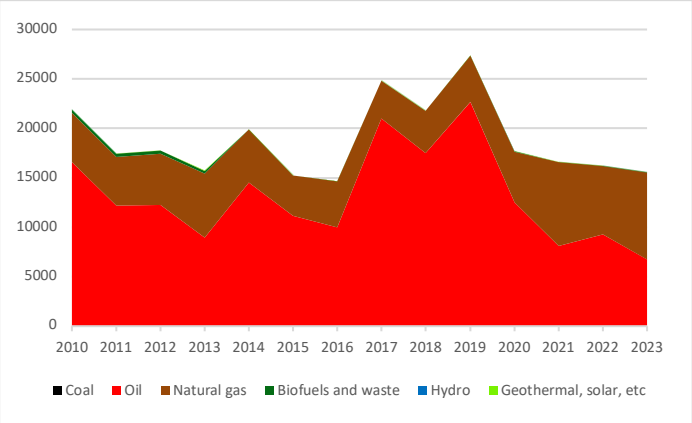


Figure 3.2. - Total Final Consumption (ktoe)

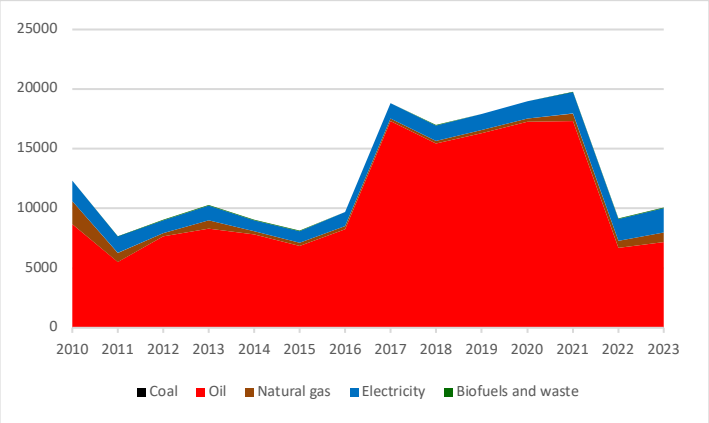


Figure 3.3. - Electricity Generation by Source (GWh)

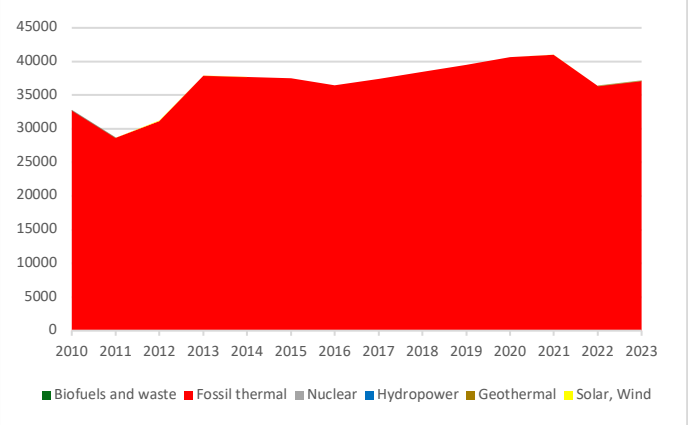


Figure 3.4. - Fuel Shares of Total Final Consumption

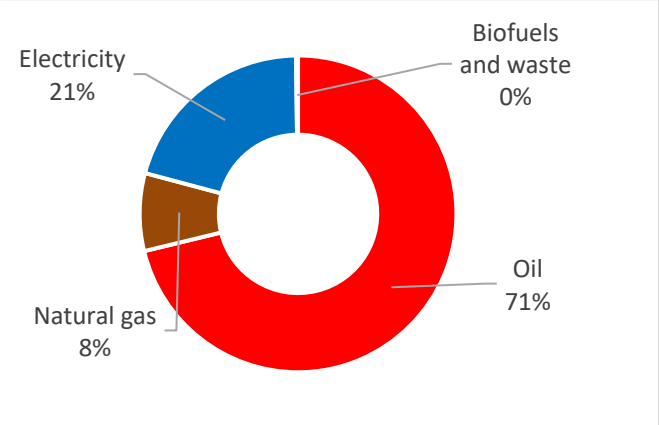
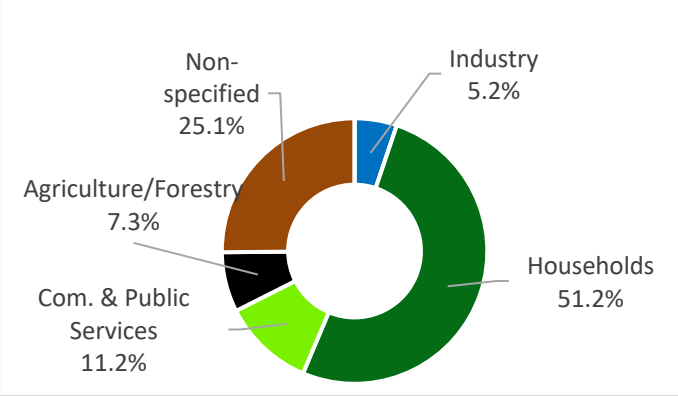
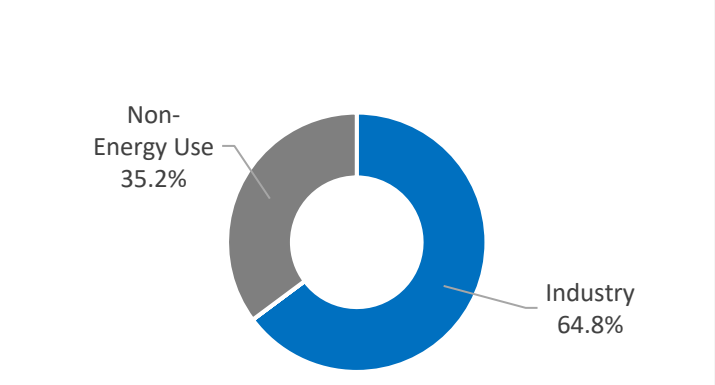


Figure 3.5





Libya

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Solar	Electricity	Total of all energy sources
Production	47205,43		10619,09	0,89		57825,41
Imports (+)		6591,15			70,05	6661,20
Exports (-)	-41540,78	-3235,73	-3675,84			-48452,35
International Marine Bunkers (-)		-302,11				-302,11
International Aviation Bunkers (-)		-35,64				-35,64
Stock Changes (+ draw, - build)	404,13	200,19				604,32
TOTAL PRIMARY ENERGY SUPPLY	**6068,78**	**3217,86**	**6943,25**	**0,89**	**70,05**	**16300,83**
Transfers : Origin (-) and Destination (+)	-453,62	476,52				22,91
Statistical Difference	42,90	151,61	16,76		704,97	916,24
TRANSFORMATION Inputs (-) and Outputs (+)	**-5572,26**	**3274,60**	**-5425,34**	**-0,89**	**3126,11**	**-4597,79**
Electricity plants		-2320,87	-5425,34	-0,89	3126,11	-4621,00
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries	-5572,26	5595,47				23,21
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants						
Transformation not elsewhere specified						
Energy Sector Own Use		**144,66**	**407,37**		**78,98**	**631,01**
Losses			**496,56**		**557,20**	**1053,76**
FINAL CONSUMPTION		**6672,71**	**597,21**		**1855,02**	**9124,94**
Industry		359,72	387,11		95,78	842,62
Transport		5894,11				5894,11
Households		392,49			949,58	1342,07
Commercial and public services					207,77	207,77
Agriculture, Forestry and Fishing					135,46	135,46
Non-specified (HH, Com. & PS., Agri.)					466,42	466,42
Non-Energy Use		26,39	210,10			236,49

Madagascar

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

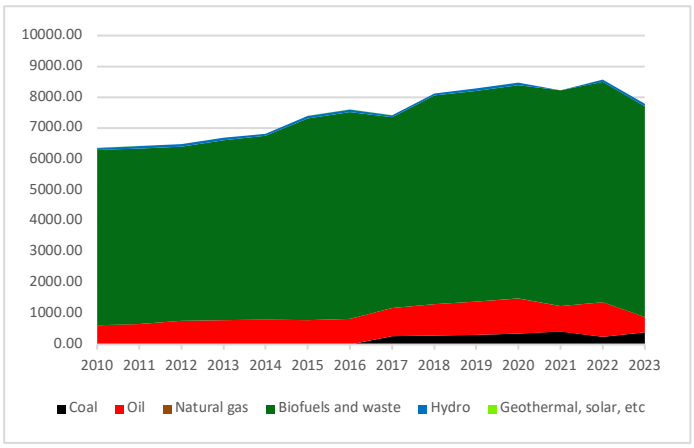


Figure 3.2. - Total Final Consumption (ktoe)

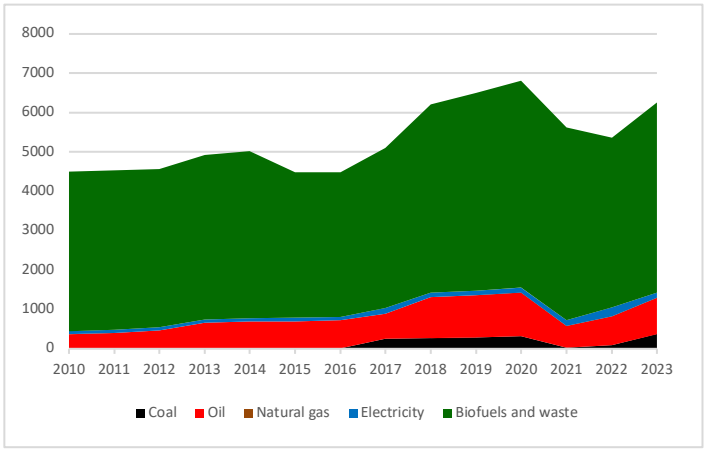
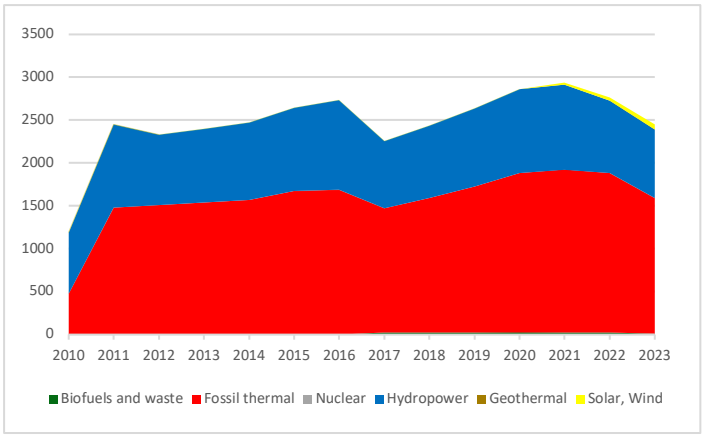


Figure 3



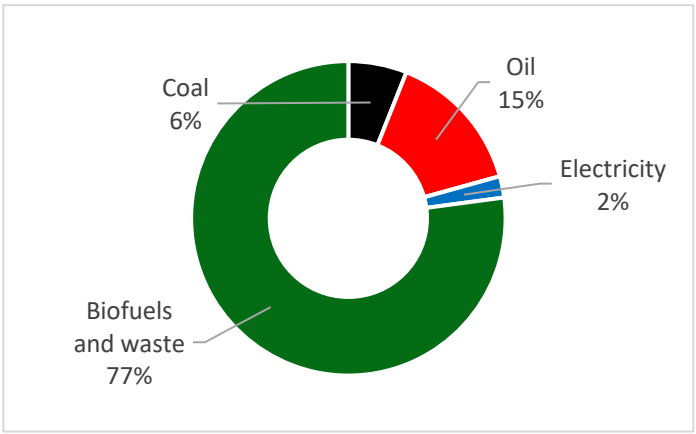
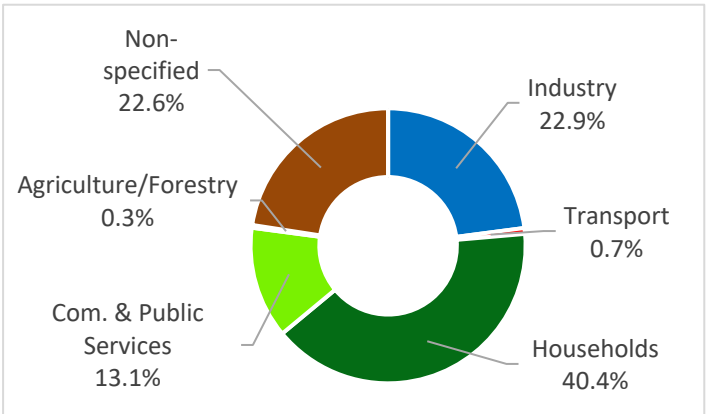
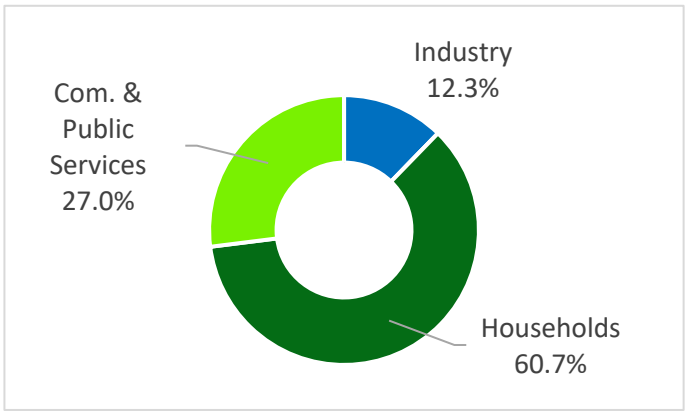


Figure 3





Madagascar

Energy Balance2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Other sources	Electricity	Total of all energy sources
Production			6826,40	68,60	5,06	6,45		6906,51
Imports (+)	394,12	487,01						881,13
Exports (-)		-1,82						-1,82
International Marine Bunkers (-)								
International Aviation Bunkers (-)		-9,28						-9,28
Stock Changes (+ draw, - build)		22,19						22,19
TOTAL PRIMARY ENERGY SUPPLY	**394,12**	**498,10**	**6826,40**	**68,60**	**5,06**	**6,45**		**7798,73**
Transfers : Origin (-) and Destination (+)	-0,03							-0,03
Statistical Difference	32,98	-865,98	13,85				48,10	-771,04
TRANSFORMATION Inputs (-) and Outputs (+)	**16,51**	**-338,89**	**-1980,65**	**-68,60**	**-5,06**	**-6,45**	**217,13**	**-2166,01**
Electricity plants	16,51	-338,89	-54,91	-68,60	-5,00		210,62	-240,28
CHP Plants					-0,06	-6,45	6,51	
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries								
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants			-1925,73					-1925,73
Transformation not elsewhere specified								
Energy Sector Own Use		**105,80**					**31,47**	**137,27**
Losses		**0,69**						**0,69**
FINAL CONSUMPTION	**377,61**	**918,70**	**4831,90**				**137,55**	**6265,76**
Industry	377,61	51,04	592,80				31,54	1052,99
Transport		730,94					0,95	731,89
Households		27,23	2935,38				55,53	3018,13
Commercial and public services		1,81	1303,73				18,05	1323,59
Agriculture, Forestry and Fishing		1,85					0,44	2,29
Non-specified (HH, Com. & PS., Agri.)		105,83					31,05	136,88
Non-Energy Use								

Malawi

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

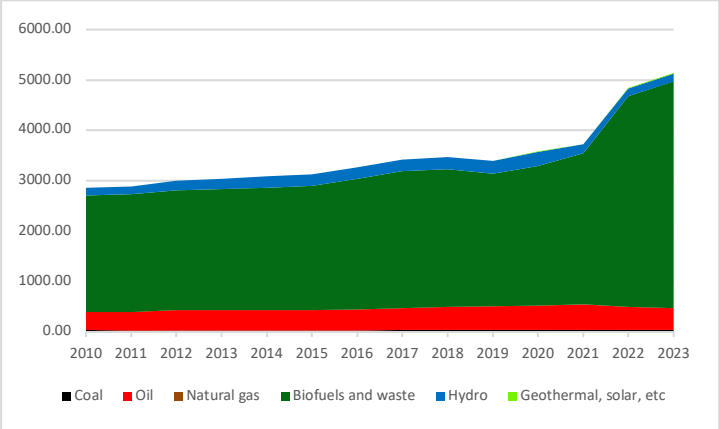
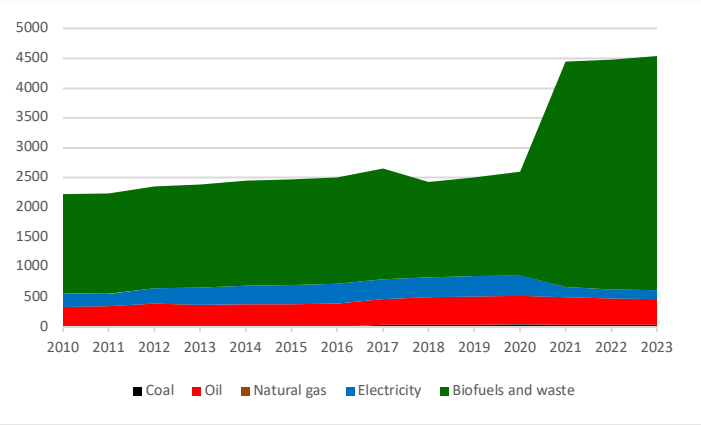
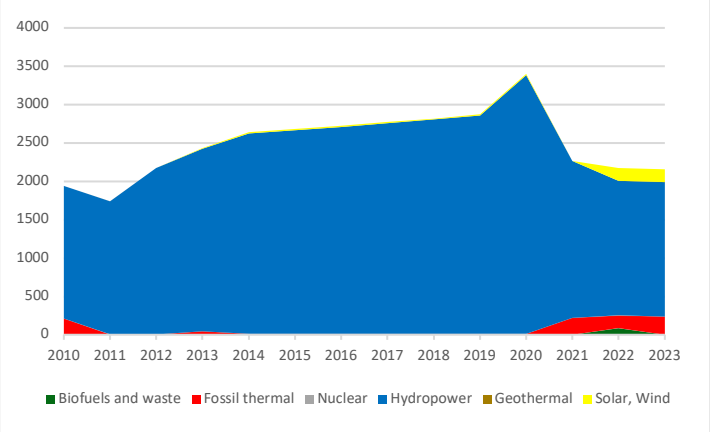
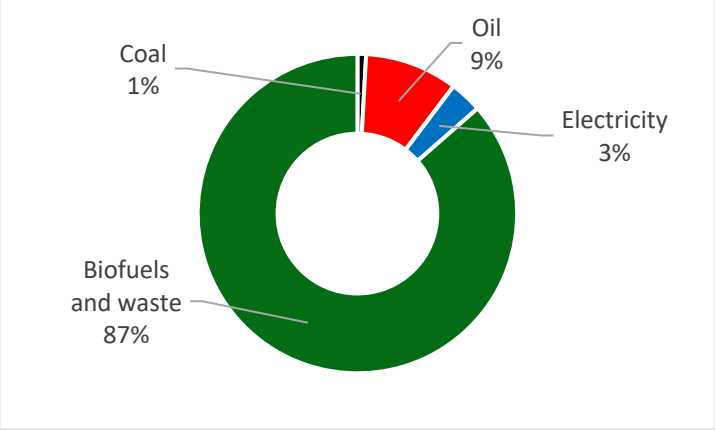
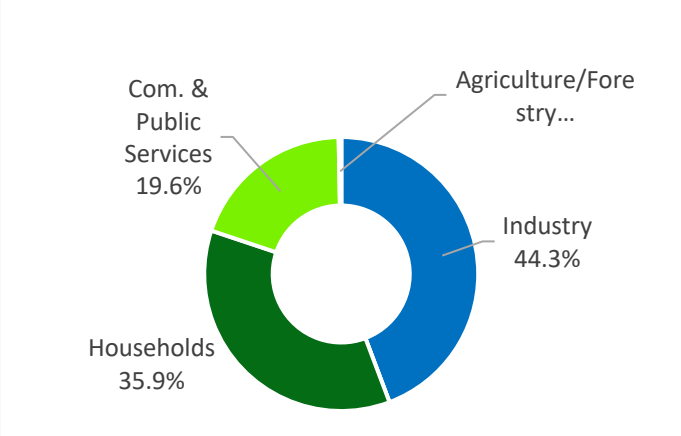


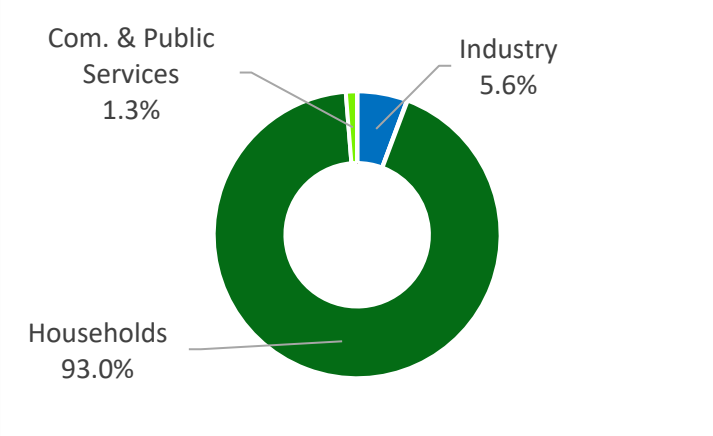
Figure 3.2. - Total Final Consumption (ktoe)











Malawi

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	34,8	-	4 502,5	150,9	14,2	-	4 702,5
Imports (+)	10,1	436,9	-	-	-	1,6	448,6
Exports (-)	-	-	-	-	-	- 1,3	- 1,3
International Marine Bunkers (-)	-	-	-	-	-	-	-
International Aviation Bunkers (-)	-	- 9,6	-	-	-	-	- 9,6
Stock Changes (+ draw, - build)	-	-	-	-	-	-	-
TOTAL PRIMARY ENERGY SUPPLY	**44,9**	**427,3**	**4 502,5**	**150,9**	**14,2**	**0,4**	**5 140,3**
Transfers : Origin (-) and Destination (+)	-	-	-	-	-	-	-
Statistical Difference	0,0	- 15,7	18,1	- 0,0	- 0,0	- 15,0	- 12,7
TRANSFORMATION Inputs (-) and Outputs (+)	**-**	**- 15,7**	**- 561,2**	**- 150,9**	**- 14,2**	**185,6**	**- 556,4**
Electricity plants	-	- 15,7	17,9	- 150,9	- 14,2	178,3	15,5
CHP Plants	-	-	- 31,2	-	-	7,3	- 23,9
Heat Plants	-	-	-	-	-	-	-
Coke ovens	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-
Oil Refineries	-	-	-	-	-	-	-
Coal-to-liquids plants	-	-	-	-	-	-	-
Gas-to-liquids plants	-	-	-	-	-	-	-
Charcoal production plants	-	-	- 547,9	-	-	-	- 547,9
Transformation not elsewhere specified	-	-	-	-	-	-	-
Energy Sector Own Use	**5,2**	**-**	**-**	**-**	**-**	**23,2**	**28,4**
Losses	**-**	**-**	**-**	**-**	**-**	**29,5**	**29,5**
FINAL CONSUMPTION	**39,7**	**427,4**	**3 923,3**	**-**	**-**	**148,3**	**4 538,6**
Industry	39,7	33,0	221,6	-	-	65,6	360,0
Transport	-	364,3	3,2	-	-	-	367,5
Households	-	2,9	3 648,5	-	-	53,2	3 704,7
Commercial and public services	-	20,5	49,9	-	-	29,0	99,4
Agriculture, Forestry and Fishing	-	6,6	-	-	-	0,4	7,0
Non-specified (HH, Com. & PS., Agri.)	-	-	-	-	-	-	-
Non-Energy Use	-	-	-	-	-	-	-

Mali

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

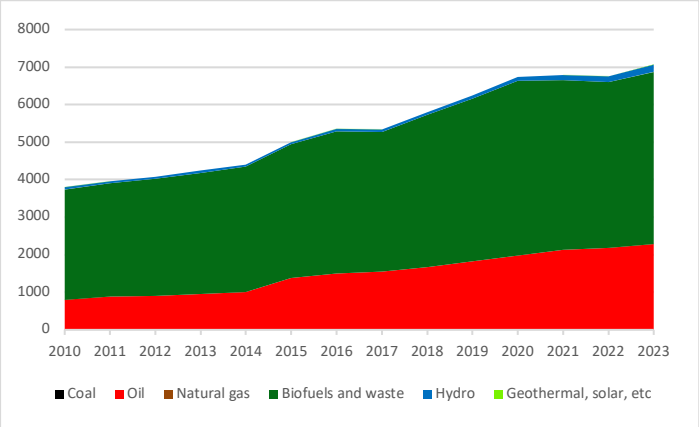


Figure 3.2. - Total Final Consumption (ktoe)

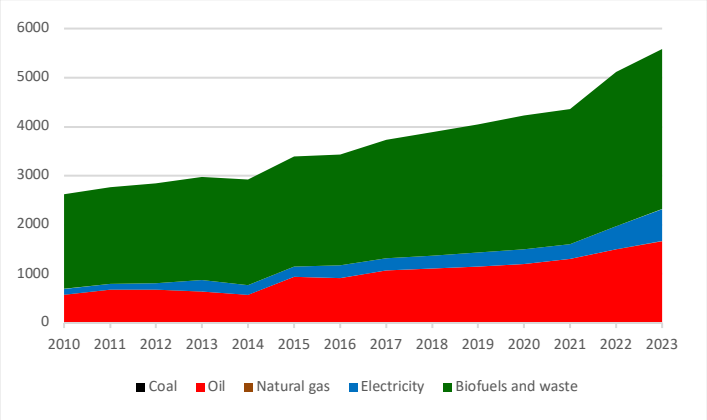


Figure 3.3. - Electricity Generation by Source (GWh)

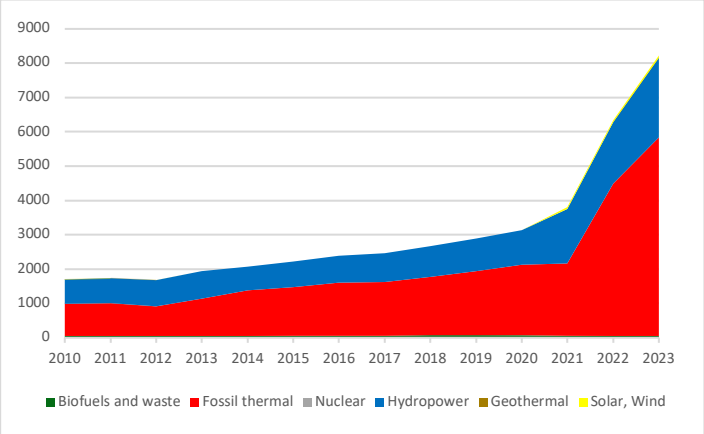


Figure 3.4. - Fuel Shares of Total Final Consumption

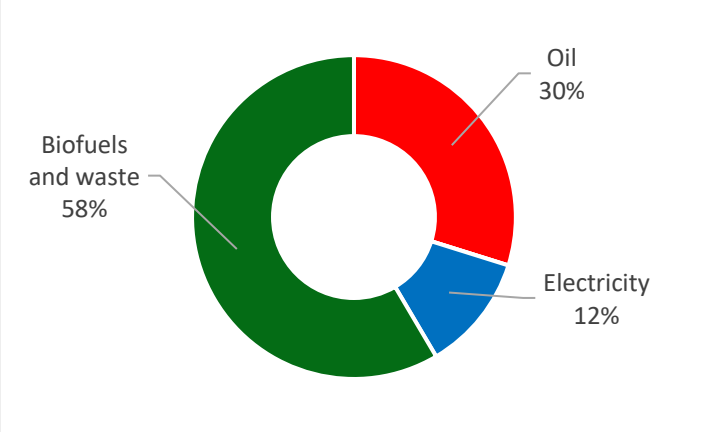
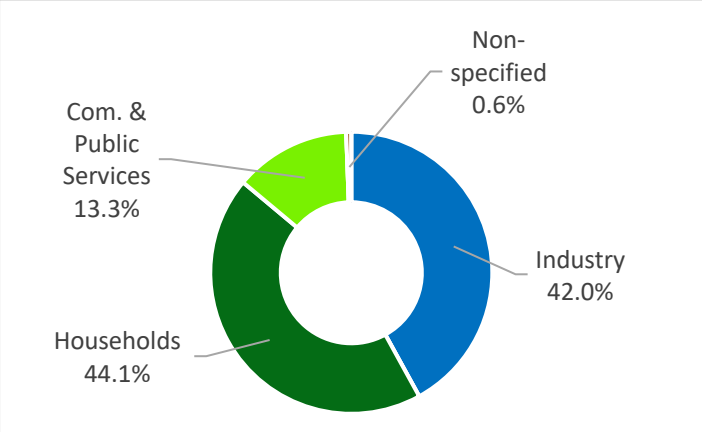
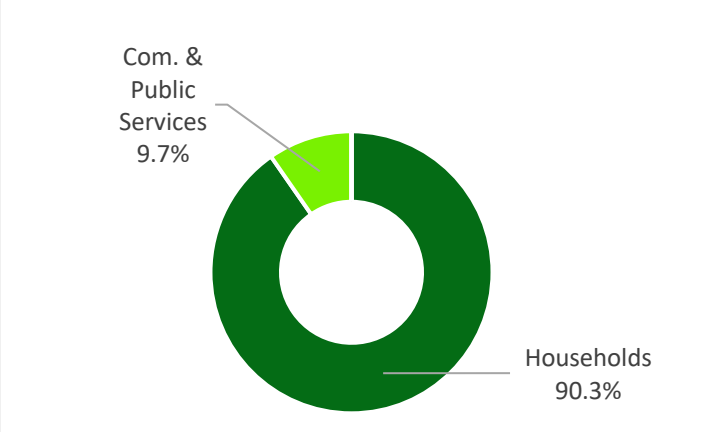


Figure 3





Mali

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production		4581,51	199,58	5,38		4786,47
Imports (+)	2286,21				65,90	2352,11
Exports (-)					-92,95	-92,95
International Marine Bunkers (-)						
International Aviation Bunkers (-)						
Stock Changes (+ draw, - build)						
TOTAL PRIMARY ENERGY SUPPLY	**2286,21**	**4581,51**	**199,58**	**5,38**	**-27,05**	**7045,63**
Transfers : Origin (-) and Destination (+)						
Statistical Difference					0,07	0,07
TRANSFORMATION Inputs (-) and Outputs (+)	**-620,73**	**-1316,59**	**-199,58**	**-5,38**	**707,34**	**-1434,94**
Electricity plants	-620,73	-21,39	-199,58	-5,38	707,34	-139,73
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-1295,20				-1295,20
Transformation not elsewhere specified						
Energy Sector Own Use						
Losses					**27,66**	**27,66**
FINAL CONSUMPTION	**1665,49**	**3264,92**			**652,56**	**5582,97**
Industry	22,64				274,07	296,72
Transport	1544,96					1544,96
Households	12,52	2949,16			287,65	3249,32
Commercial and public services	3,13	315,76			87,05	405,94
Agriculture, Forestry and Fishing	81,20					81,20
Non-specified (HH, Com. & PS., Agri.)					3,78	3,78
Non-Energy Use	1,04					1,04

Mauritania

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

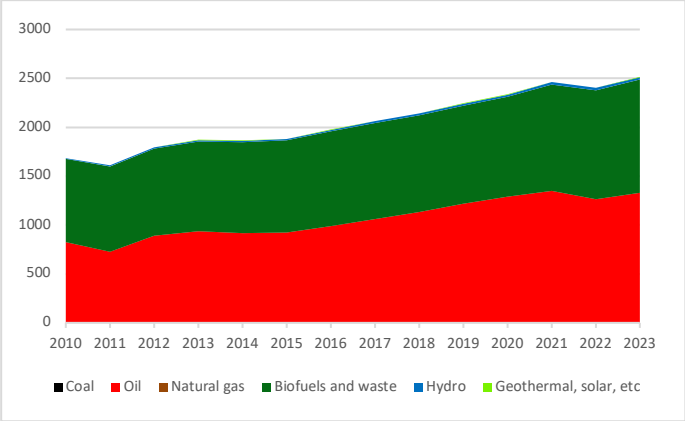


Figure 3.2. - Total Final Consumption (ktoe)

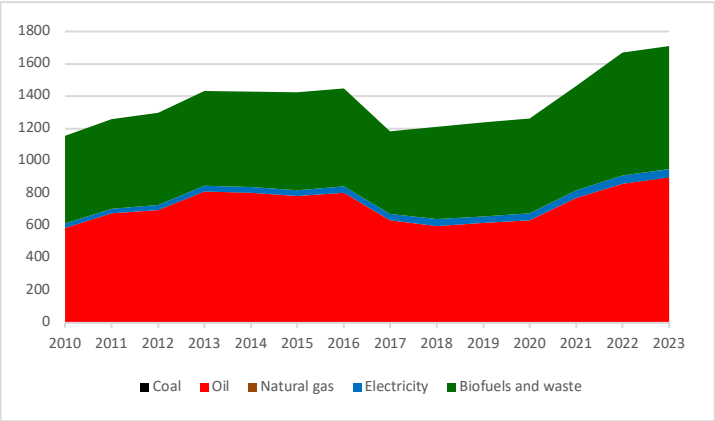


Figure 3.3. - Electricity Generation by Source (GWh)

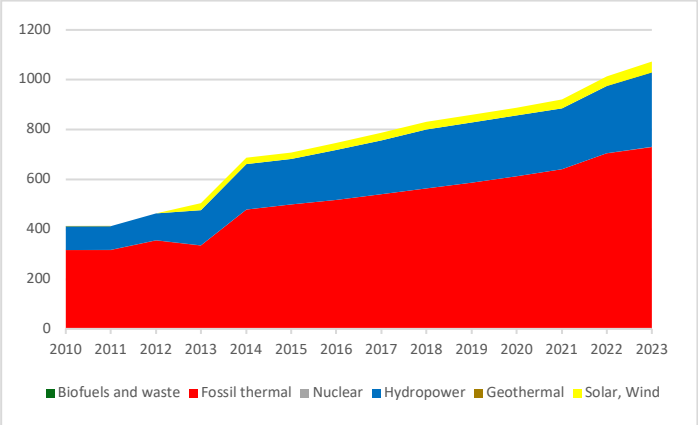
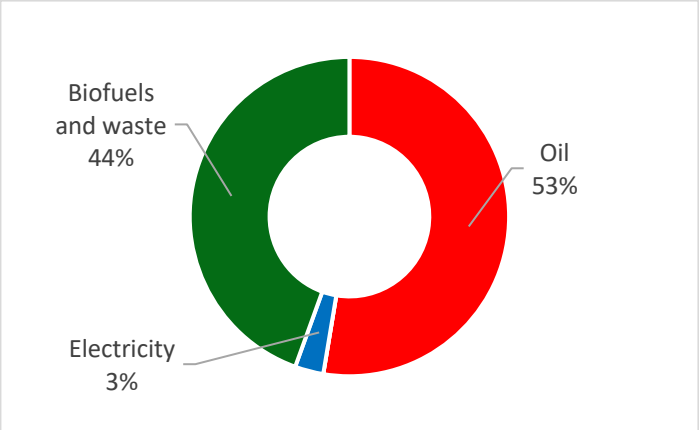


Figure 3.4. - Fuel Shares of Total Final Consumption



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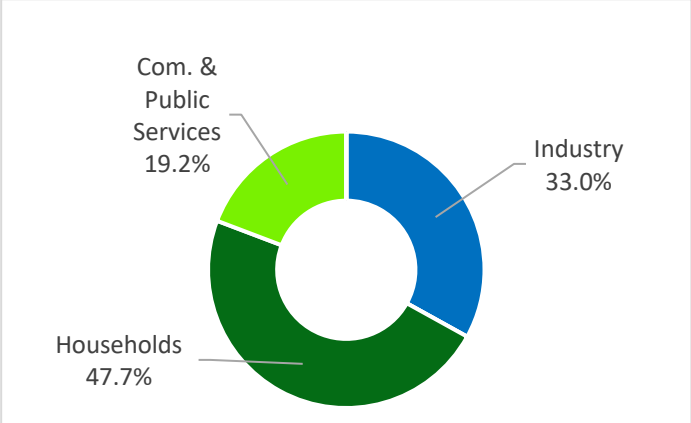
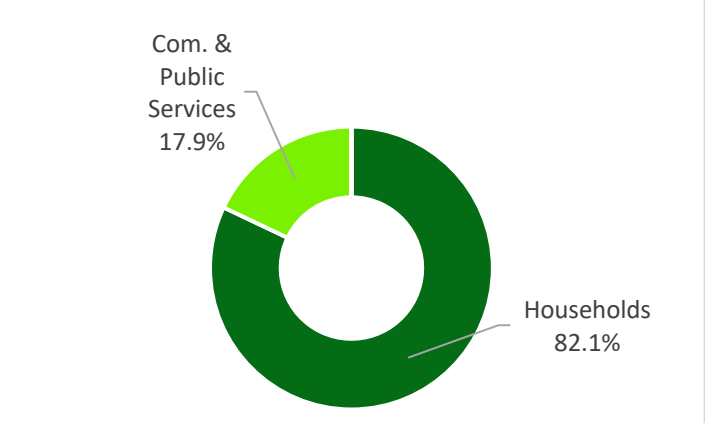




Mauritania

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	362,56		1117,00	23,22	3,34		1506,11
Imports (+)		1311,43					1311,43
Exports (-)	-189,68						-189,68
International Marine Bunkers (-)							
International Aviation Bunkers (-)		-98,38					-98,38
Stock Changes (+ draw, - build)	-171,43	48,08					-123,35
TOTAL PRIMARY ENERGY SUPPLY	**1,45**	**1261,13**	**1117,00**	**23,22**	**3,34**		**2406,13**
Transfers : Origin (-) and Destination (+)							
Statistical Difference	1,45	-3,65	-50,19			0,28	-52,12
TRANSFORMATION Inputs (-) and Outputs (+)		**-404,97**	**-407,79**	**-23,22**	**-3,34**	**87,13**	**-752,18**
Electricity plants		-404,97		-23,22	-3,34	87,13	-344,39
CHP Plants							
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants			-407,79				-407,79
Transformation not elsewhere specified							
Energy Sector Own Use						**12,26**	**12,26**
Losses						**25,54**	**25,54**
FINAL CONSUMPTION		**859,82**	**759,40**			**49,06**	**1668,28**
Industry		275,48				16,21	291,69
Transport		475,38					475,38
Households		32,95	623,10			23,41	679,47
Commercial and public services		17,80	136,30			9,44	163,54
Agriculture, Forestry and Fishing							
Non-specified (HH, Com. & PS., Agri.)		58,21					58,21
Non-Energy Use							

Mauritius

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

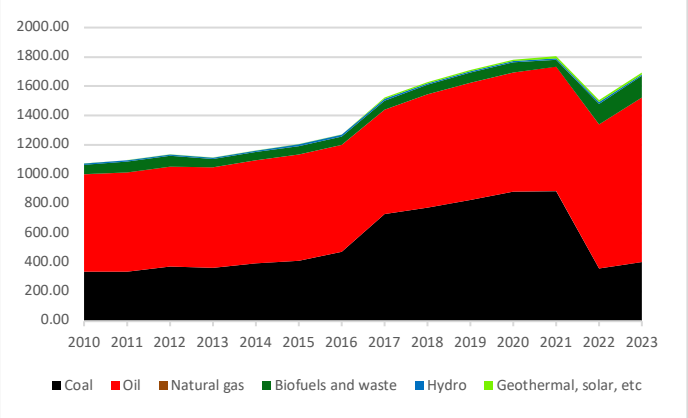


Figure 3.2. - Total Final Consumption (ktoe)

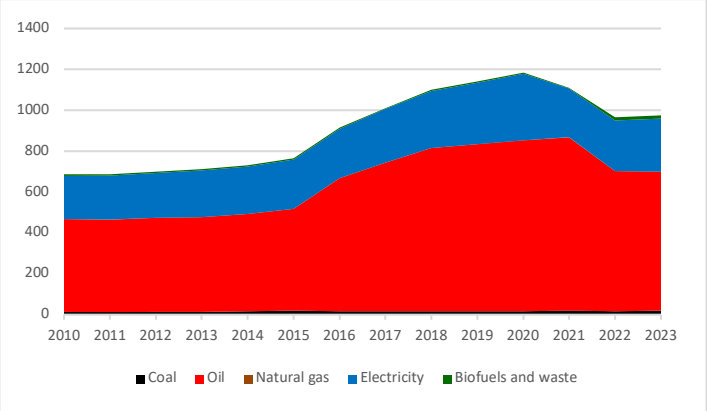


Figure 3.3. - Electricity Generation by Source (GWh)

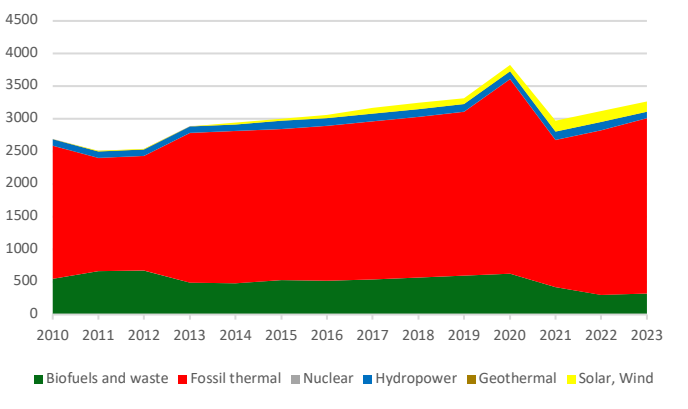


Figure 3.4. - Fuel Shares of Total Final Consumption

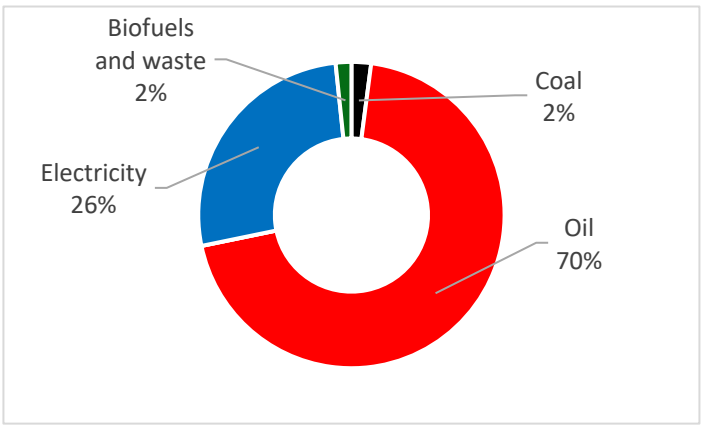
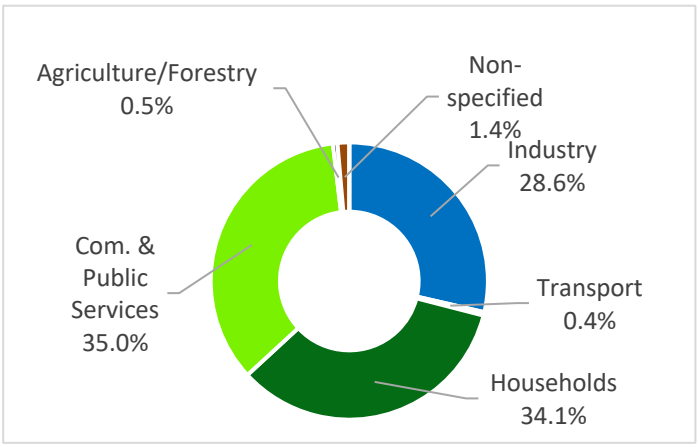
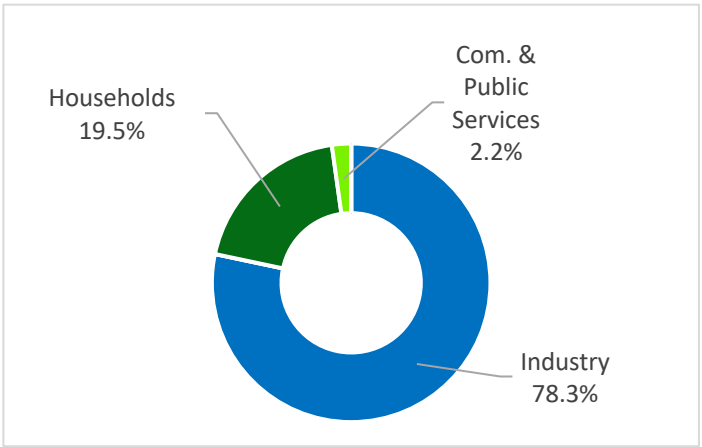


Figure 3





Mauritius

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Wind	Electricity	Total of all energy sources
Production			146,71	8,12	12,79	0,74		168,36
Imports (+)	375,73	1591,78	0,22					1967,73
Exports (-)								
International Marine Bunkers (-)		-498,58						-498,58
International Aviation Bunkers (-)		-0,13						-0,13
Stock Changes (+ draw, - build)	25,59	30,20						55,78
TOTAL PRIMARY ENERGY SUPPLY	**401,32**	**1123,25**	**146,93**	**8,12**	**12,79**	**0,74**		**1693,15**
Transfers : Origin (-) and Destination (+)								
Statistical Difference		133,36	0,00				32,32	165,68
TRANSFORMATION Inputs (-) and Outputs (+)	**-381,16**	**-310,66**	**-130,78**	**-8,12**	**-12,79**	**-0,74**	**280,77**	**-563,48**
Electricity plants	-381,16	-310,66	-130,56	-8,12	-12,79	-0,74	280,77	-563,25
CHP Plants								
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries								
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants								
Transformation not elsewhere specified			-0,22					-0,22
Energy Sector Own Use							**5,65**	**5,65**
Losses							**-16,16**	**-16,16**
FINAL CONSUMPTION	**20,16**	**679,24**	**16,14**				**258,97**	**974,51**
Industry	20,16	86,65	12,64				74,09	193,54
Transport		498,87					1,05	499,92
Households		67,44	3,14				88,39	158,97
Commercial and public services		24,09	0,36				90,53	114,98
Agriculture, Forestry and Fishing		1,64					1,37	3,01
Non-specified (HH, Com. & PS., Agri.)		0,55					3,54	4,09
Non-Energy Use								

Morocco

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

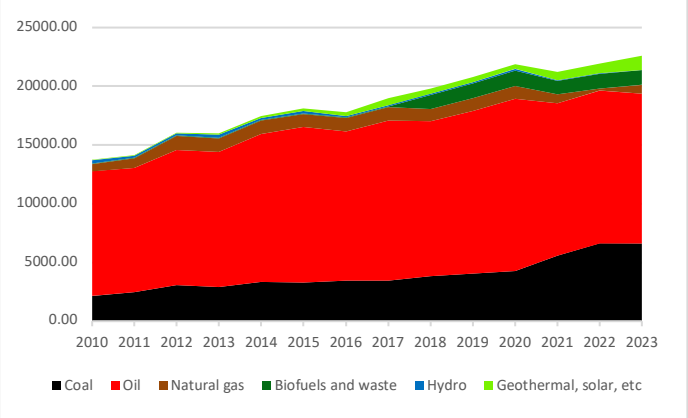


Figure 3.2. - Total Final Consumption (ktoe)

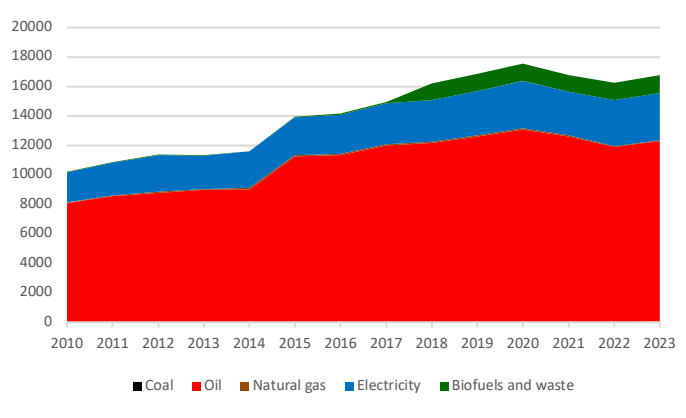


Figure 3.3. - Electricity Generation by Source (GWh)

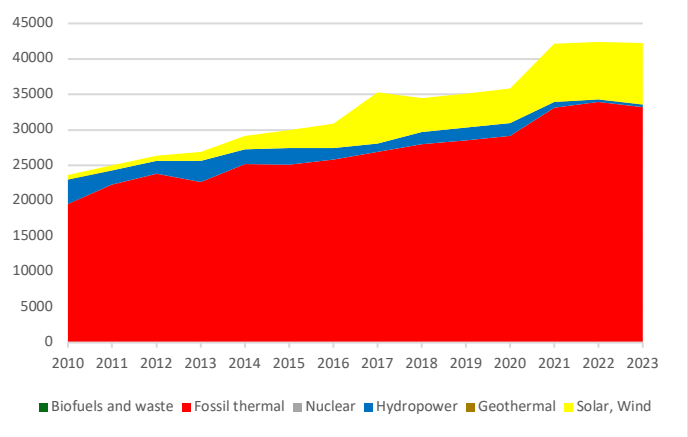
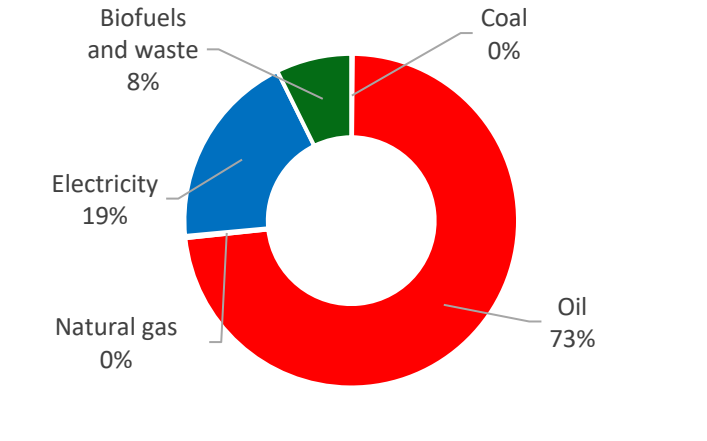
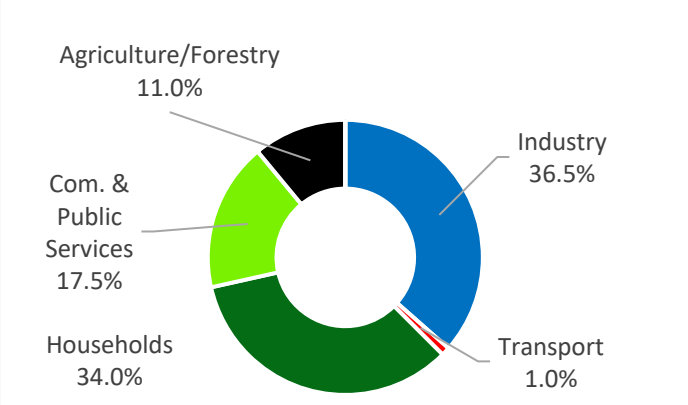
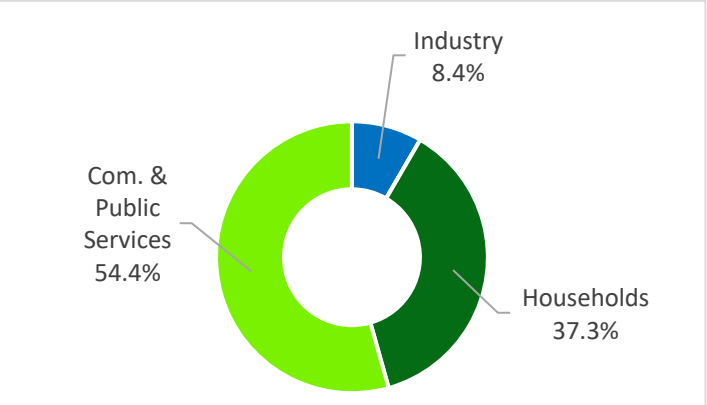


Figure 3.4. - Fuel Shares of Total Final Consumption



Figure





Morocco

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Wind	Other sources	Electricity	Total of all energy sources
Production		2,12		39,18	1265,54	30,36	520,68	562,83	111,96		2532,67
Imports (+)	6698,55		13639,16	724,37						198,72	21260,80
Exports (-)										-39,69	-39,69
International Marine Bunkers (-)			-134,40								-134,40
International Aviation Bunkers (-)			-837,25								-837,25
Stock Changes (+ draw, - build)	-78,64		60,49								-18,15
TOTAL PRIMARY ENERGY SUPPLY	**6619,91**	**2,12**	**12728,01**	**763,55**	**1265,54**	**30,36**	**520,68**	**562,83**	**111,96**	**159,03**	**22763,99**
Transfers : Origin (-) and Destination (+)											
Statistical Difference	0,00		-25,63	3,41	0,87						-21,34
TRANSFORMATION Inputs (-) and Outputs (+)	**-6593,56**		**-488,39**	**-724,37**	**-39,97**	**-30,36**	**-443,11**	**-562,83**	**-111,96**	**3744,51**	**-5250,02**
Electricity plants	-6593,56		-488,39	-724,37		-30,36	-443,11	-562,83		3632,55	-5210,06
CHP Plants									-111,96	111,96	
Heat Plants											
Coke ovens											
Blast furnaces											
Oil Refineries											
Coal-to-liquids plants											
Gas-to-liquids plants											
Charcoal production plants					-39,97						-39,97
Transformation not elsewhere specified											
Energy Sector Own Use		**2,12**								**9,00**	**11,12**
Losses										**683,66**	**683,66**
FINAL CONSUMPTION	**26,35**		**12265,24**	**35,77**	**1224,71**		**77,57**			**3210,87**	**16840,52**
Industry	26,35		1700,93	35,77	102,73					1171,81	3037,59
Transport			5900,79							31,88	5932,67
Households			2989,47		456,21		58,18			1092,30	4596,16
Commercial and public services			191,43		665,77		19,39			561,80	1438,40
Agriculture, Forestry and Fishing			957,02							353,08	1310,10
Non-specified (HH, Com. & PS., Agri.)											
Non-Energy Use			525,60								525,60

Mozambique

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

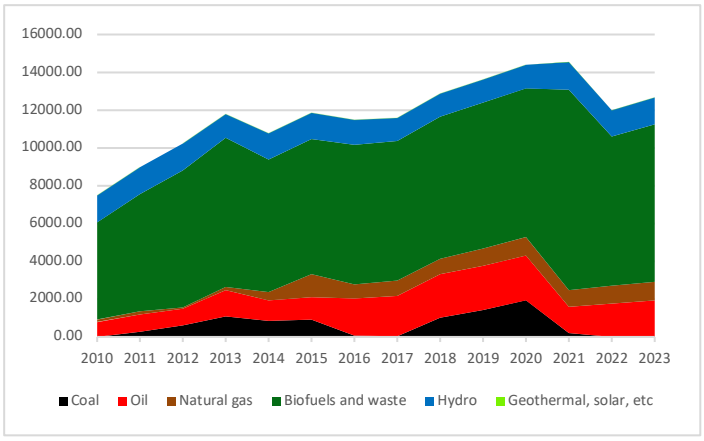


Figure 3.2. - Total Final Consumption (ktoe)

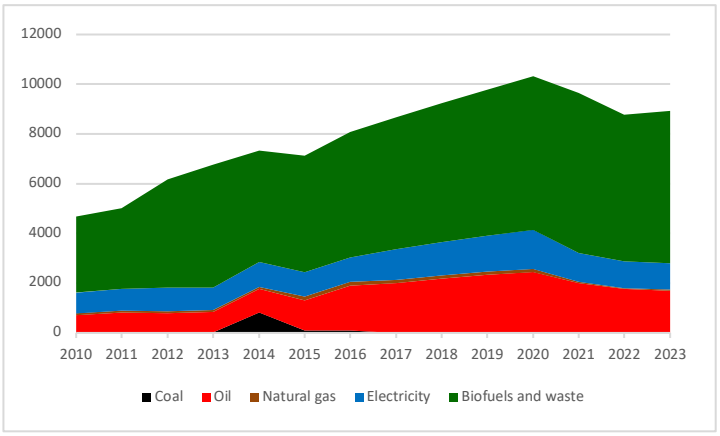
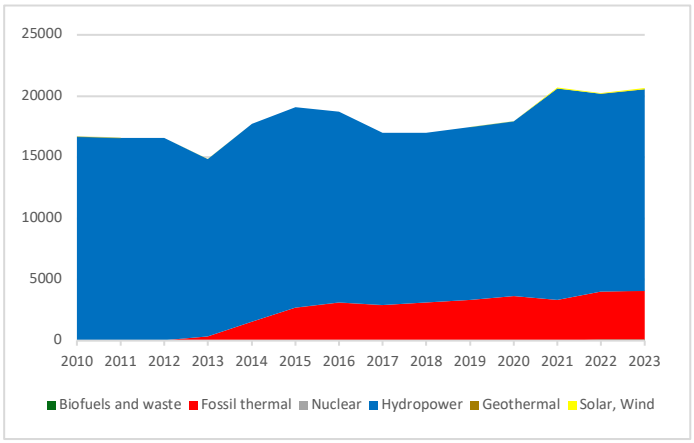
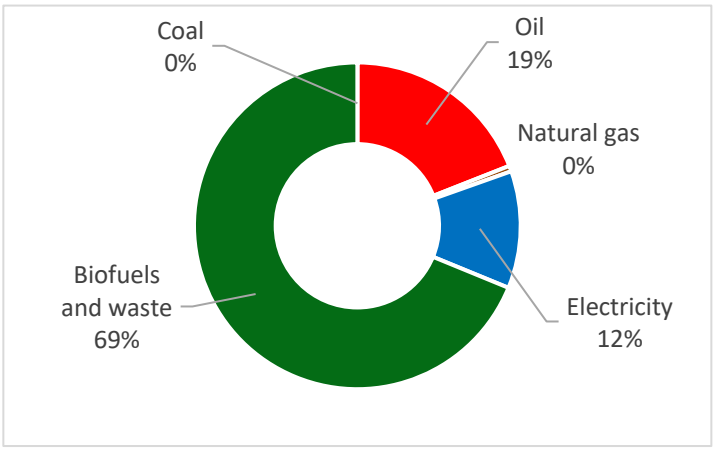
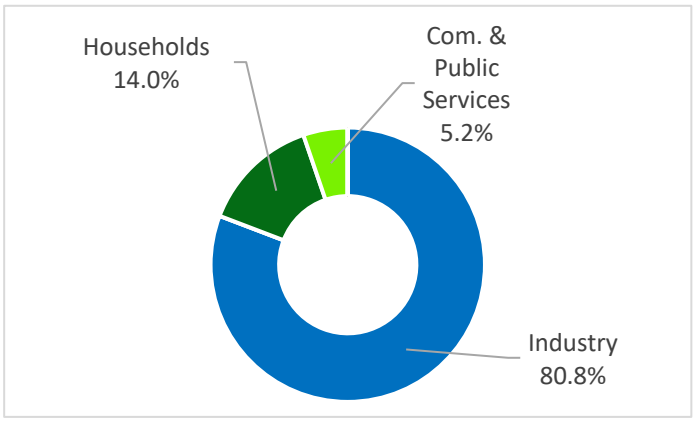


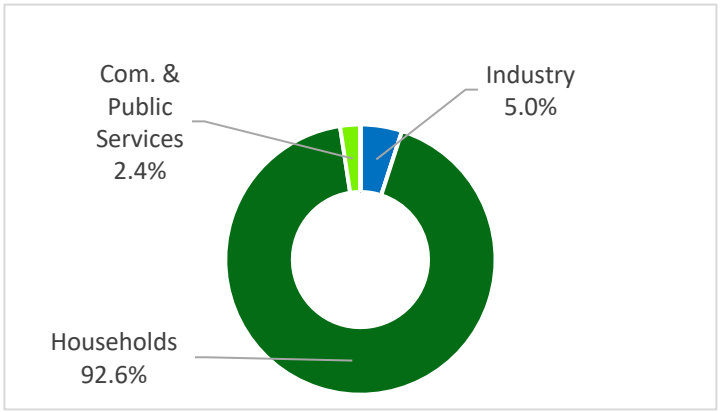
Figure 3





Figure





Mozambique

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	9641,92	5832,10		9479,07	8314,91	1417,41	7,09		34692,50
Imports (+)			1856,14					680,25	2536,39
Exports (-)	-9634,21	-5653,25	-31,60	-8495,88				-977,99	-24792,93
International Marine Bunkers (-)			-12,17						-12,17
International Aviation Bunkers (-)			-41,56						-41,56
Stock Changes (+ draw, - build)		-17,37							-17,37
TOTAL PRIMARY ENERGY SUPPLY	**7,71**	**161,47**	**1770,81**	**983,19**	**8314,91**	**1417,41**	**7,09**	**-297,74**	**12364,85**
Transfers : Origin (-) and Destination (+)			-0,02						-0,02
Statistical Difference	6,01	161,47	37,75	103,37				14,62	323,23
TRANSFORMATION Inputs (-) and Outputs (+)			**-34,09**	**-830,06**	**-2163,89**	**-1417,41**	**-7,09**	**1775,90**	**-2676,64**
Electricity plants			-34,09	-830,06	-71,65	-1417,41	-7,09	1775,90	-584,39
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces									
Oil Refineries									
Coal-to-liquids plants									
Gas-to-liquids plants									
Charcoal production plants					-2092,25				-2092,25
Transformation not elsewhere specified									
Energy Sector Own Use								**140,01**	**140,01**
Losses								**284,66**	**284,66**
FINAL CONSUMPTION	**1,70**		**1698,95**	**49,76**	**6151,02**			**1038,87**	**8940,30**
Industry	1,70		301,51	42,22	306,67			839,35	1491,46
Transport			1316,14	5,10					1321,24
Households			44,96	0,12	5695,39			145,00	5885,47
Commercial and public services			13,32	2,32	148,96			54,48	219,08
Agriculture, Forestry and Fishing			23,02					0,03	23,05
Non-specified (HH, Com. & PS., Agri.)									
Non-Energy Use									

Namibia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

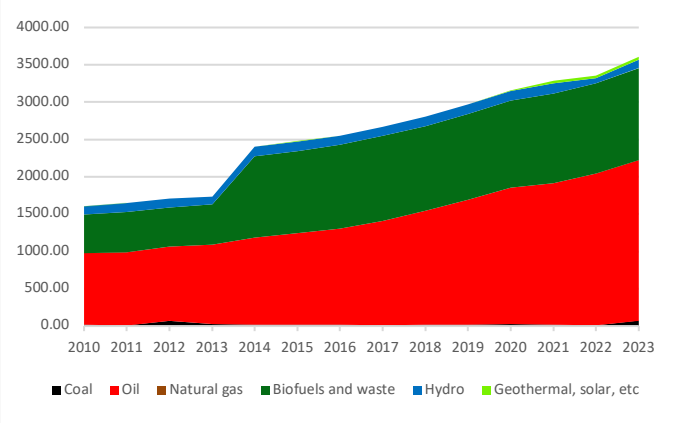


Figure 3.2. - Total Final Consumption (ktoe)

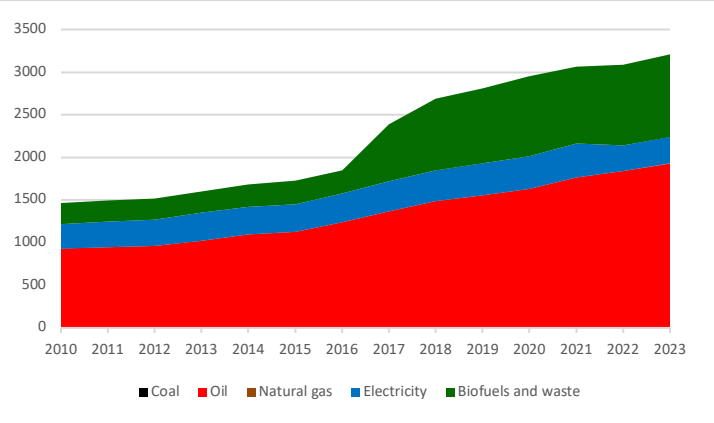


Figure 3.3. - Electricity Generation by Source (GWh)

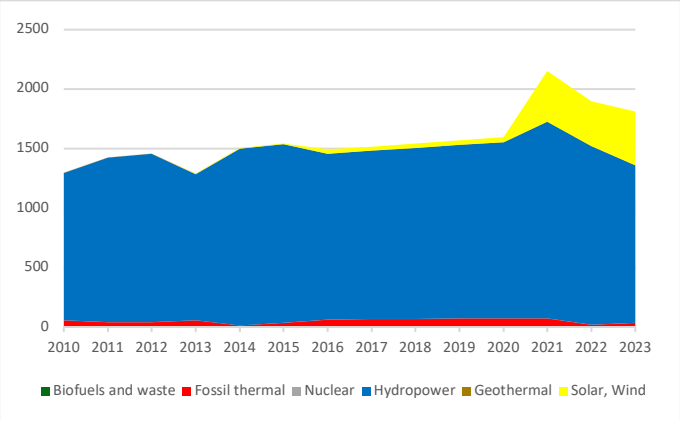


Figure 3.4. - Electricity Production and Consumption (GWh)

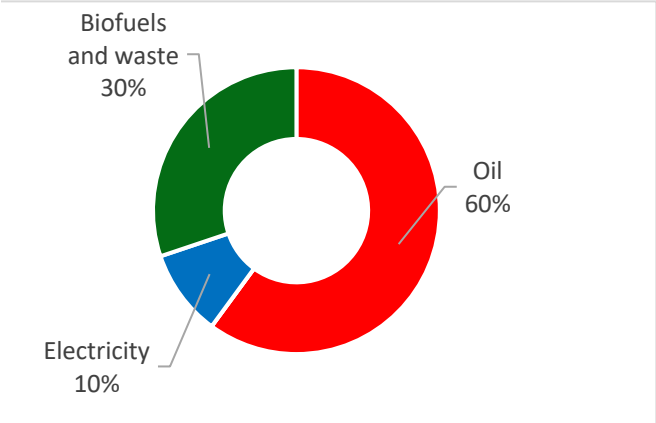


Figure 3.5. - Total Primary Energy Supply by Source (ktoe)

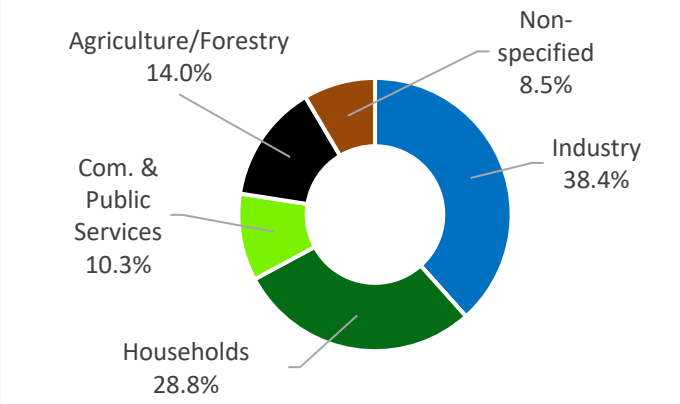
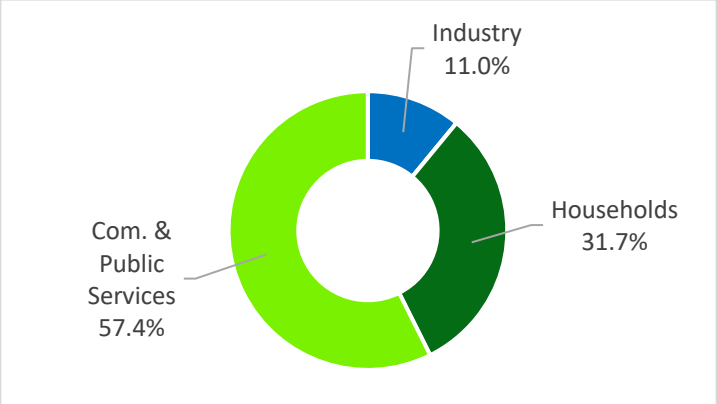


Figure 3.6. - Total Final Consumption by Source (ktoe)



Namibia

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Wind	Other sources	Electricity	Total of all energy sources
Production			741,60	113,78	34,48	1,94	2,58		894,38
Imports (+)	73,81	95,99						213,57	383,36
Exports (-)			-187,56					-17,05	-204,61
International Marine Bunkers (-)									
International Aviation Bunkers (-)									
Stock Changes (+ draw, - build)									
TOTAL PRIMARY ENERGY SUPPLY	**73,81**	**95,99**	**554,04**	**113,78**	**34,48**	**1,94**	**2,58**	**196,52**	**1073,14**
Transfers : Origin (-) and Destination (+)									
Statistical Difference			10,68					38,71	49,39
TRANSFORMATION Inputs (-) and Outputs (+)	**-73,81**	**-1,36**	**-431,23**	**-113,78**	**-34,48**	**-1,94**	**-2,58**	**155,93**	**-503,26**
Electricity plants	-73,81	-1,36		-113,78	-34,48	-1,94	-2,58	155,93	-72,03
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces									
Oil Refineries									
Coal-to-liquids plants									
Gas-to-liquids plants									
Charcoal production plants			-431,23						-431,23
Transformation not elsewhere specified									
Energy Sector Own Use									
Losses									
FINAL CONSUMPTION		**94,62**	**112,13**					**313,74**	**520,49**
Industry			12,30					79,80	92,10
Transport		94,62							94,62
Households			35,49					2,12	37,61
Commercial and public services			64,33					213,02	277,36
Agriculture, Forestry and Fishing								8,57	8,57
Non-specified (HH, Com. & PS., Agri.)								10,23	10,23
Non-Energy Use									

Niger

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

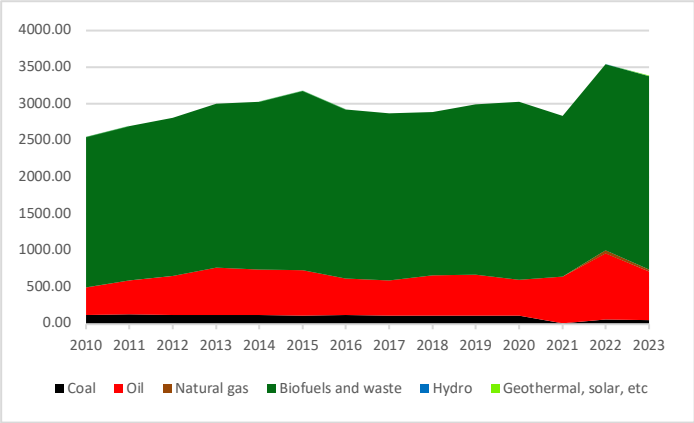


Figure 3.2. - Total Final Consumption (ktoe)

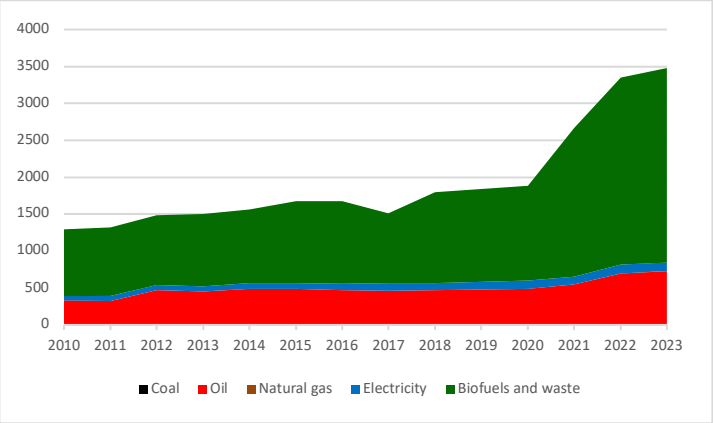
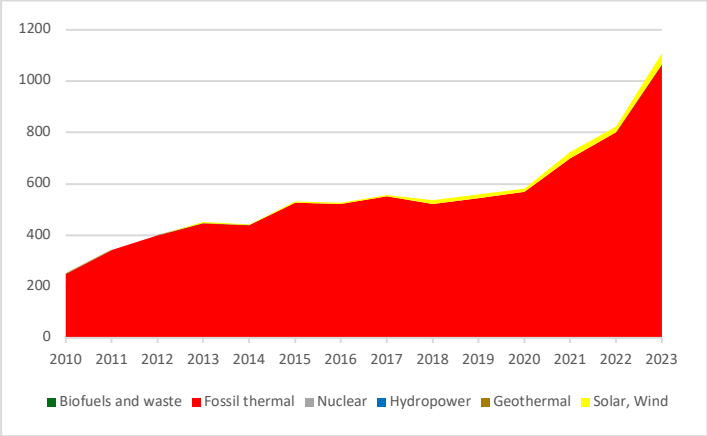
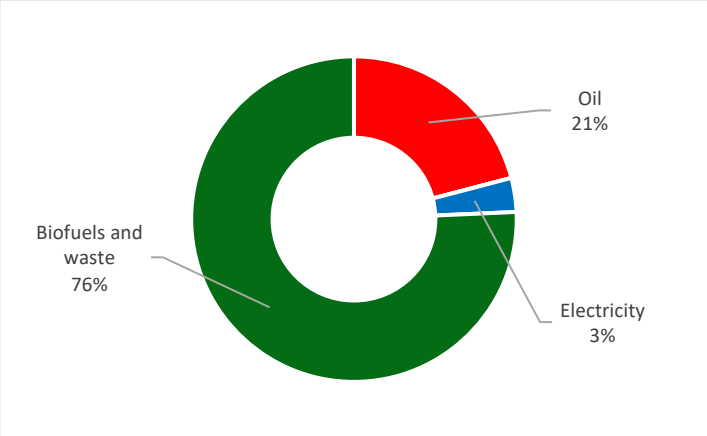
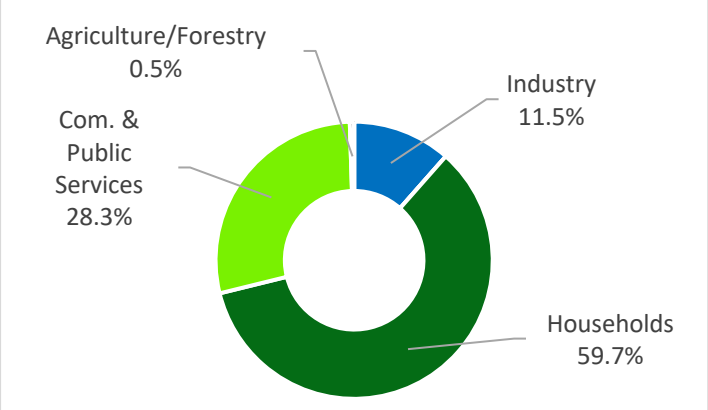
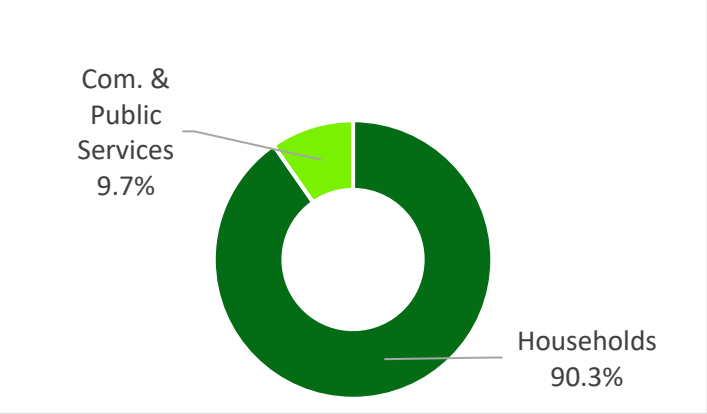


Figure 3.3. - Electricity Generation by Source (GWh)









Niger

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production	56,32	961,41		32,62	2585,45	3,81		3639,61
Imports (+)			148,20		48,12		58,89	255,20
Exports (-)			-95,99					-95,99
International Marine Bunkers (-)								
International Aviation Bunkers (-)			-34,77					-34,77
Stock Changes (+ draw, - build)	-0,06	19,48	-40,70					-21,28
TOTAL PRIMARY ENERGY SUPPLY	**56,26**	**980,89**	**-23,27**	**32,62**	**2633,57**	**3,81**	**58,89**	**3742,77**
Transfers : Origin (-) and Destination (+)								
Statistical Difference	2,80	-4,59	12,33	0,00			1,03	11,58
TRANSFORMATION Inputs (-) and Outputs (+)	**-53,46**	**-985,48**	**763,57**	**-30,09**		**-3,81**	**95,44**	**-213,83**
Electricity plants	-51,94	-54,58	-139,63	-30,09		-3,81	95,44	-184,61
CHP Plants								
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries		-930,90	903,20					-27,70
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants								
Transformation not elsewhere specified	-1,52							-1,52
Energy Sector Own Use			**-0,01**				**11,22**	**11,21**
Losses			**0,11**	**2,53**			**24,71**	**27,36**
FINAL CONSUMPTION			**727,86**		**2633,57**		**117,36**	**3478,80**
Industry			54,00				13,50	67,50
Transport			587,07					587,07
Households			52,93		2381,17		70,01	2504,11
Commercial and public services			32,16		252,40		33,26	317,82
Agriculture, Forestry and Fishing			1,69				0,59	2,28
Non-specified (HH, Com. & PS., Agri.)								
Non-Energy Use								

Nigeria

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

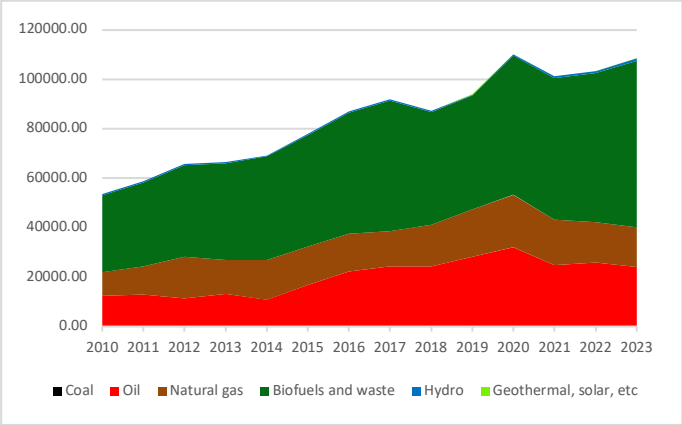


Figure 3.2. - Total Final Consumption (ktoe)

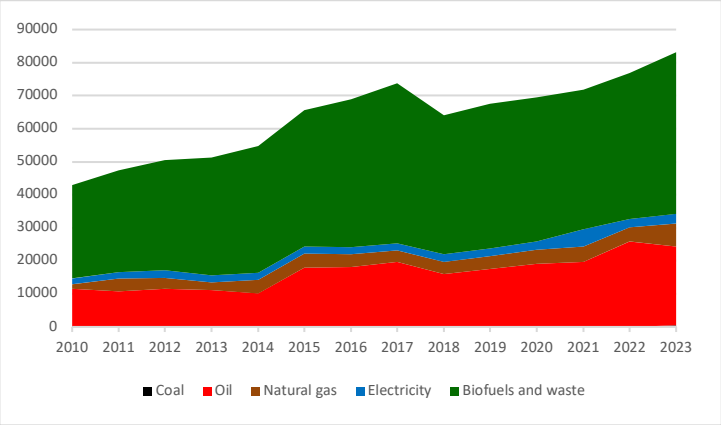
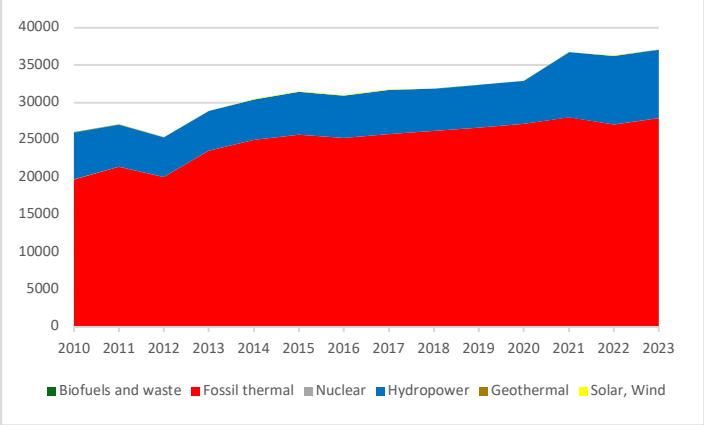


Figure 3



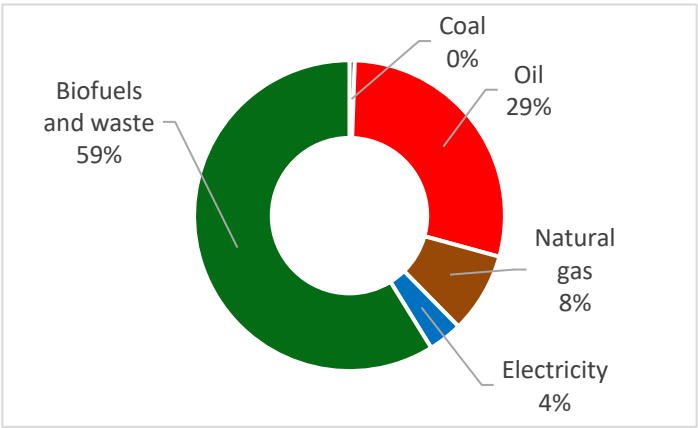
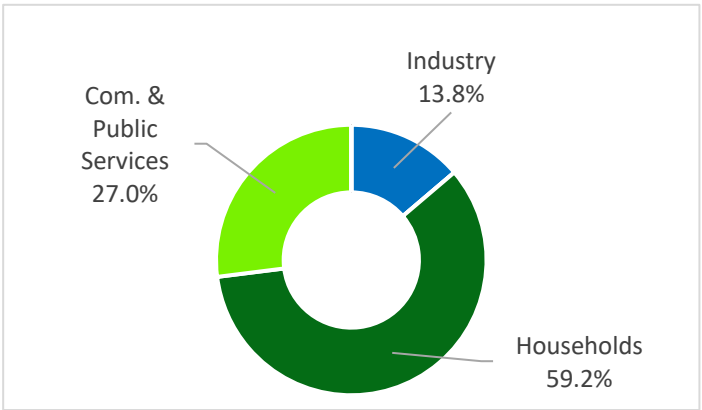
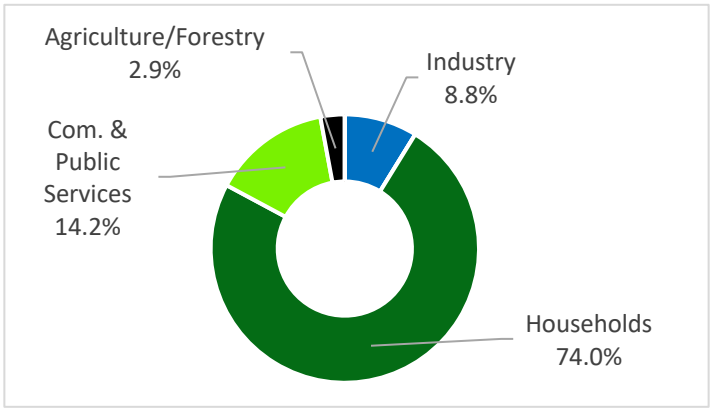


Figure 3





Nigeria

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Electricity	Heat	Total of all energy sources
Production	226,09	72482,89		56,50	28082,90	783,08	2304,78			103936,23
Imports (+)			23625,15							23625,15
Exports (-)	-31,20	-74024,64		-19,23	-767,89			-94,73		-74937,68
International Marine Bunkers (-)										
International Aviation Bunkers (-)			-511,79							-511,79
Stock Changes (+ draw, - build)		-1627,15								-1627,15
TOTAL PRIMARY ENERGY SUPPLY	**194,89**	**-3168,90**	**23113,35**	**37,28**	**27315,01**	**783,08**	**2304,78**	**-94,73**		**50484,76**
Transfers : Origin (-) and Destination (+)										
Statistical Difference	0,00	-4523,03	584,31	37,13	27317,55		-2304,78	-21190,49	-1638,04	-1717,36
TRANSFORMATION Inputs (-) and Outputs (+)		**-1354,13**	**368,14**		**21407,49**	**-783,08**	**-2304,78**	**3280,76**	**1638,04**	**22252,44**
Electricity plants						-783,08	-2304,78	3280,76		192,90
CHP Plants										
Heat Plants									1638,04	1638,04
Coke ovens										
Blast furnaces										
Oil Refineries		-1354,13	368,14							-985,99
Coal-to-liquids plants										
Gas-to-liquids plants										
Charcoal production plants					21407,49					21407,49
Transformation not elsewhere specified										
Energy Sector Own Use								**3321,84**	**1638,04**	**4959,89**
Losses				**0,15**						**0,15**
FINAL CONSUMPTION	**194,89**		**22897,18**		**21404,96**		**2304,78**	**21054,68**	**1638,04**	**69494,53**
Industry	194,89		2037,95		1883,03		1591,20	14535,93	1055,91	21298,91
Transport			16138,62							16138,62
Households			3077,54		15846,09		461,64	4217,15	459,61	24062,02
Commercial and public services			1624,31		3048,31		250,56	2288,96	122,28	7334,43
Agriculture, Forestry and Fishing			18,76		627,53		1,38	12,64	0,23	660,55
Non-specified (HH, Com. & PS., Agri.)										
Non-Energy Use										

Rwanda

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

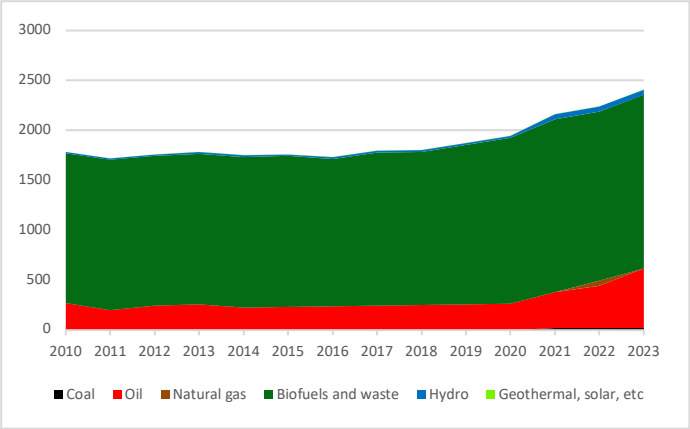


Figure 3.2. - Total Final Consumption (ktoe)

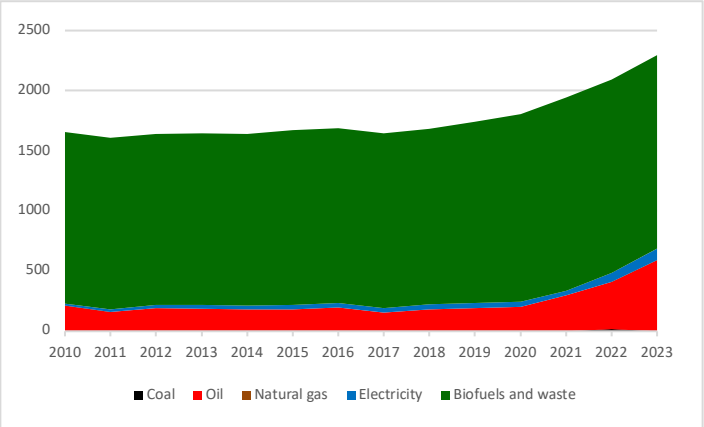
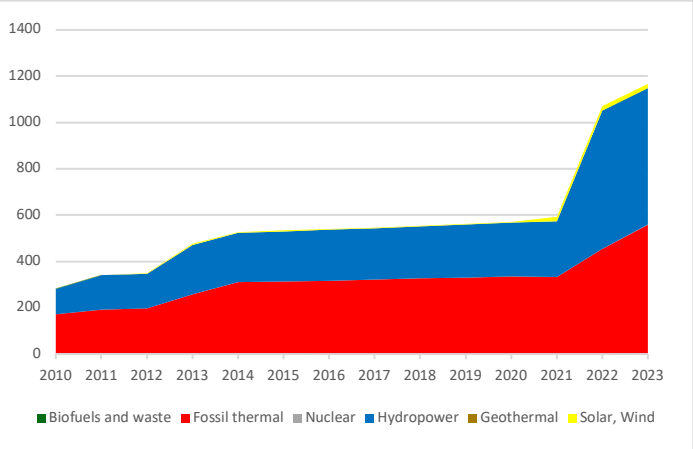
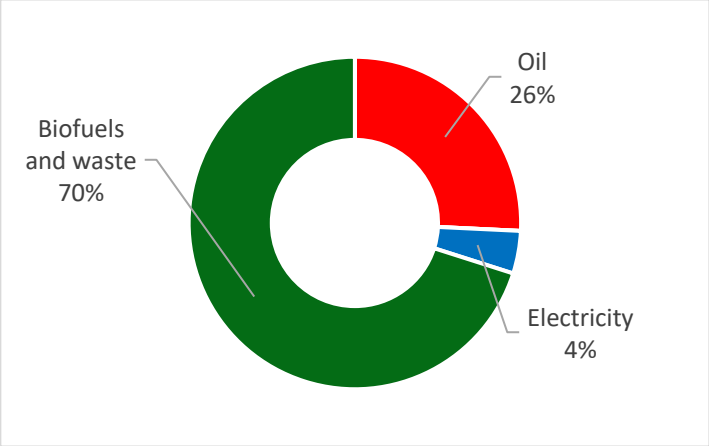


Figure 3.3. - Electricity Generation by Source (GWh)





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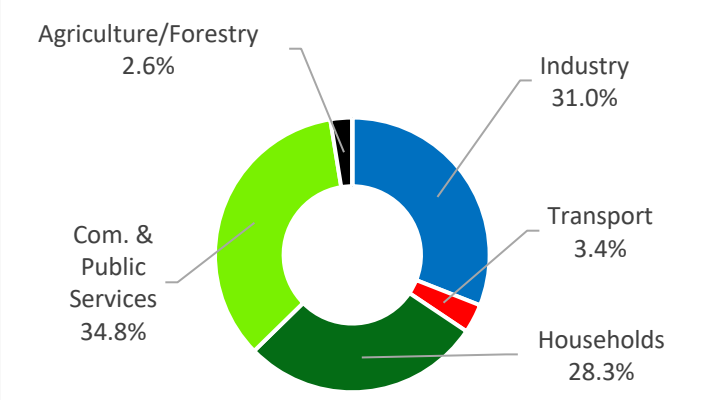
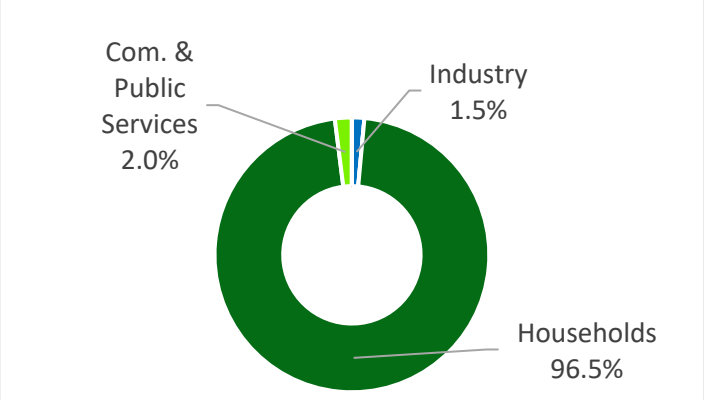




Rwanda

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production			49,36	2080,94	51,45	1,61		2183,36
Imports (+)	19,97	591,75		42,98			2,84	657,53
Exports (-)		-131,58					-0,76	-132,33
International Marine Bunkers (-)								
International Aviation Bunkers (-)		-38,67						-38,67
Stock Changes (+ draw, - build)		3,39						3,39
TOTAL PRIMARY ENERGY SUPPLY	**19,97**	**424,89**	**49,36**	**2123,92**	**51,45**	**1,61**	**2,08**	**2673,27**
Transfers : Origin (-) and Destination (+)								
Statistical Difference	1,00	-5,86		23,31			0,89	19,33
TRANSFORMATION Inputs (-) and Outputs (+)		**-39,65**	**-49,36**	**-81,29**	**-51,45**	**-1,61**	**92,09**	**-131,26**
Electricity plants		-39,65	-49,36	-0,41	-51,45	-1,61	92,09	-50,39
CHP Plants								
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries								
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants				-80,87				-80,87
Transformation not elsewhere specified								
Energy Sector Own Use							**0,79**	**0,79**
Losses							**16,17**	**16,17**
FINAL CONSUMPTION	**18,97**	**391,10**		**2019,33**			**76,33**	**2505,72**
Industry	18,97	71,94		49,45			24,21	164,57
Transport		233,41						233,41
Households		25,00		1597,62			14,47	1637,09
Commercial and public services		30,96		372,26			37,64	440,87
Agriculture, Forestry and Fishing								
Non-specified (HH, Com. & PS., Agri.)		3,44						3,44
Non-Energy Use		26,35						26,35

Sao Tome and Principe

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

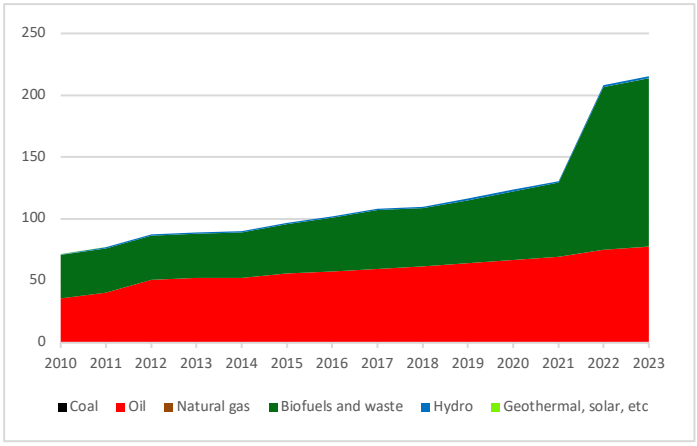


Figure 3.2. - Total Final Consumption (ktoe)

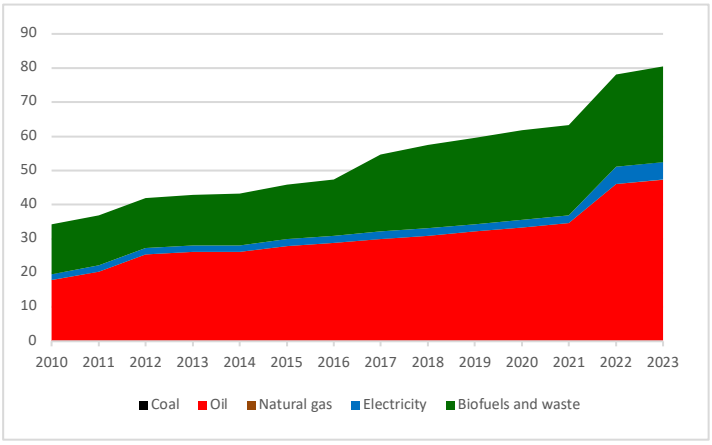
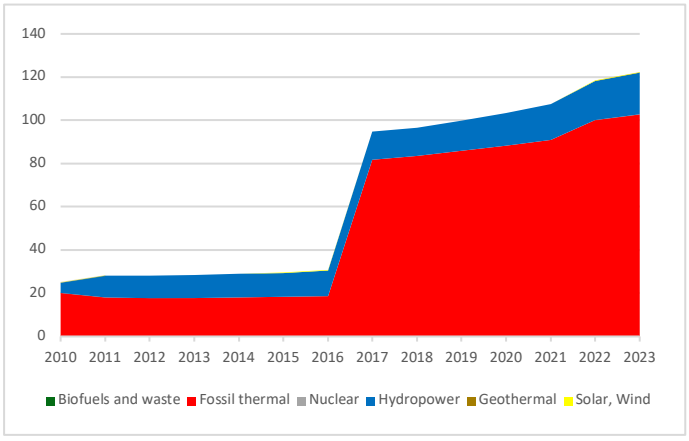
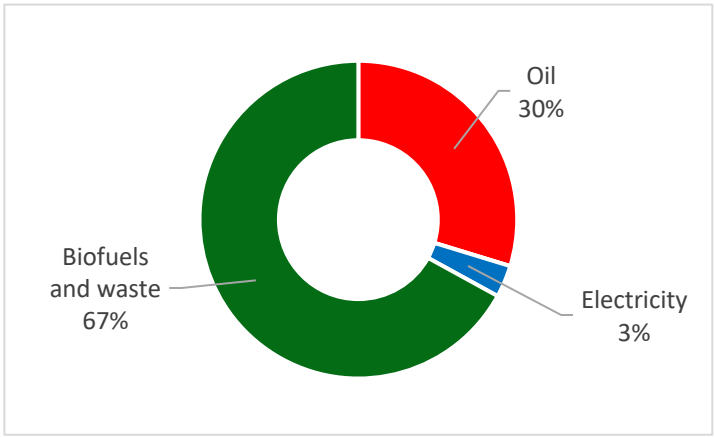


Figure 3





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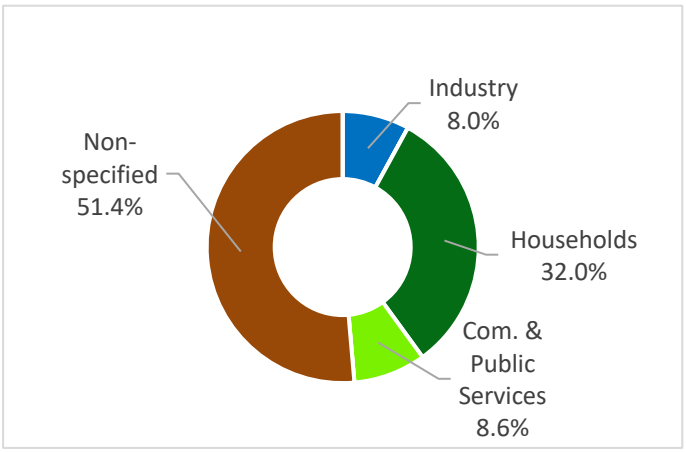
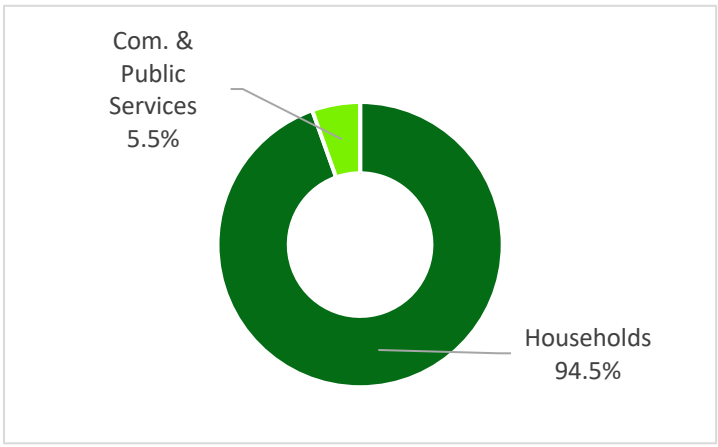




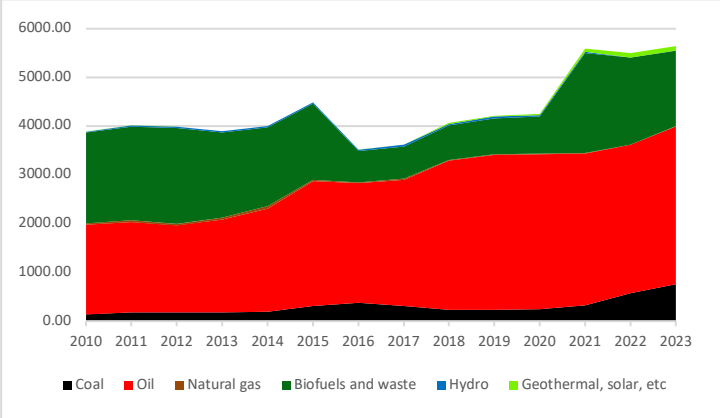
Sao Tome and Principe

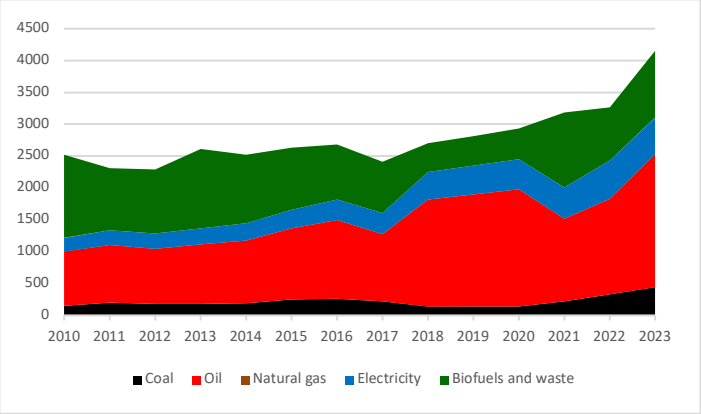
Energy Balance 2023

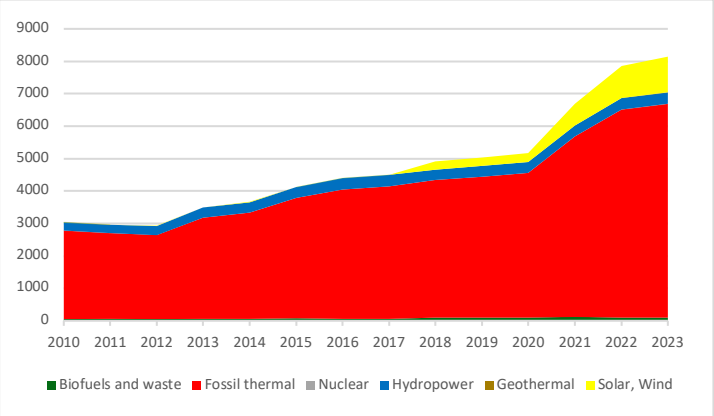
Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production		131,64	1,56	0,01		133,21
Imports (+)	80,98					80,98
Exports (-)						
International Marine Bunkers (-)	-2,05					-2,05
International Aviation Bunkers (-)	-5,24					-5,24
Stock Changes (+ draw, - build)	1,37					1,37
TOTAL PRIMARY ENERGY SUPPLY	**75,06**	**131,64**	**1,56**	**0,01**		**208,27**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	1,29	0,48			0,30	2,07
TRANSFORMATION Inputs (-) and Outputs (+)	**-27,78**	**-25,05**	**-1,56**	**-0,01**	**10,18**	**-44,22**
Electricity plants	-27,78		-1,56	-0,01	10,18	-19,17
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-25,05				-25,05
Transformation not elsewhere specified						
Energy Sector Own Use					**0,90**	**0,90**
Losses					**3,83**	**3,83**
FINAL CONSUMPTION	**46,00**	**106,10**			**5,15**	**157,25**
Industry	9,69				0,41	10,10
Transport	22,14					22,14
Households	9,98	100,32			1,65	111,94
Commercial and public services	0,28	5,78			0,44	6,50
Agriculture, Forestry and Fishing	0,04					0,04
Non-specified (HH, Com. & PS., Agri.)	3,88				2,65	6,52
Non-Energy Use						

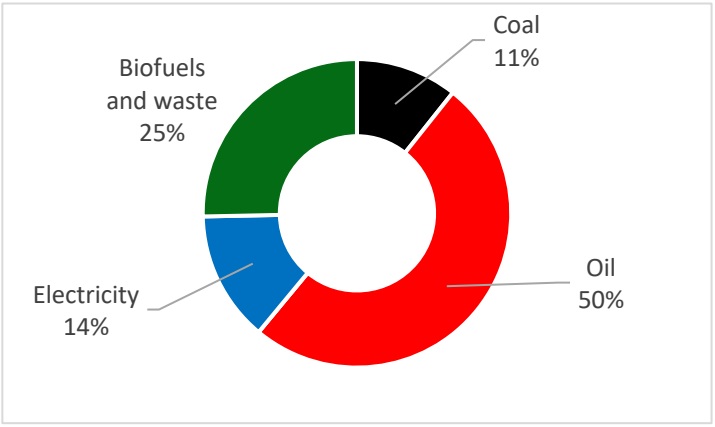
Senegal

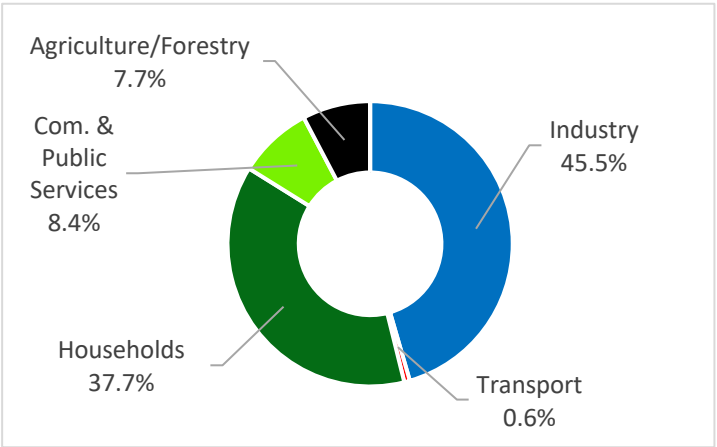
Indicators

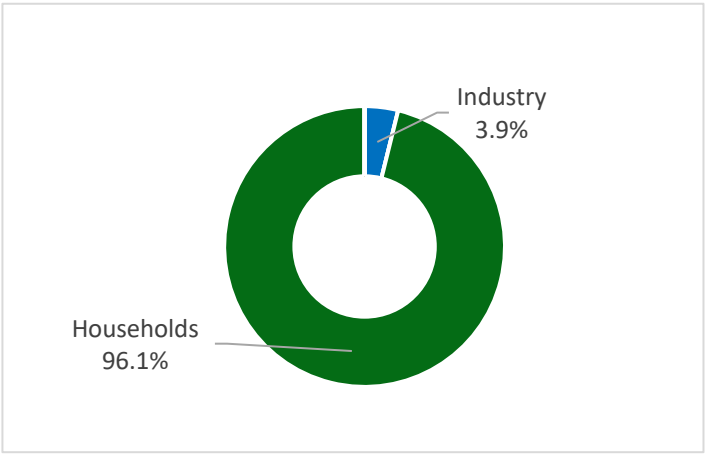












Senegal

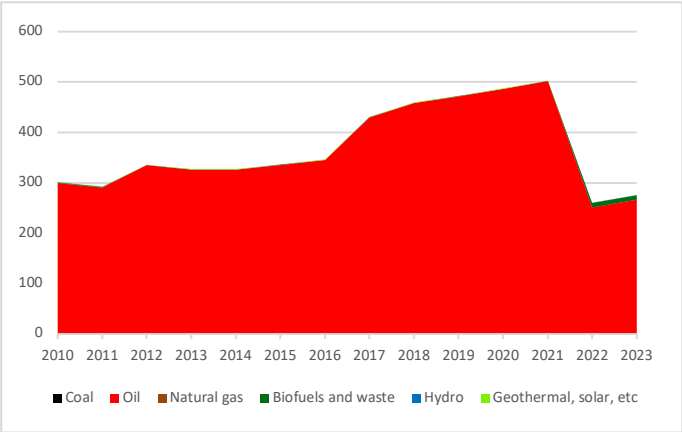
Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Biofuels and waste	Solar	Wind	Electricity	Total of all energy sources
Production				3,06	1551,45	62,19	32,89		1649,58
Imports (+)	757,78	1326,18	2461,17					46,46	4591,59
Exports (-)			-55,54						-55,54
International Marine Bunkers (-)			-216,34						-216,34
International Aviation Bunkers (-)			-189,21						-189,21
Stock Changes (+ draw, - build)		-76,95	-13,22						-90,18
TOTAL PRIMARY ENERGY SUPPLY	**757,78**	**1249,22**	**1986,86**	**3,06**	**1551,45**	**62,19**	**32,89**	**46,46**	**5689,91**
Transfers : Origin (-) and Destination (+)			5,02						5,02
Statistical Difference	0,00	0,00	-31,52		0,00			4,02	-27,50
TRANSFORMATION Inputs (-) and Outputs (+)	**-314,03**	**-1249,22**	**65,99**	**-3,06**	**-500,00**	**-62,19**	**-32,89**	**670,13**	**-1425,27**
Electricity plants	-314,03		-1137,16	-3,06	-73,04	-62,19	-32,89	670,13	-952,23
CHP Plants									
Heat Plants									
Coke ovens									
Blast furnaces									
Oil Refineries		-1249,22	1201,57						-47,65
Coal-to-liquids plants									
Gas-to-liquids plants									
Charcoal production plants					-426,96				-426,96
Transformation not elsewhere specified			1,57						1,57
Energy Sector Own Use								**39,91**	**39,91**
Losses								**105,01**	**105,01**
FINAL CONSUMPTION	**443,75**		**2089,39**		**1051,45**			**567,65**	**4152,23**
Industry	443,75		94,76		40,56			258,30	837,37
Transport			1630,05					3,63	1633,69
Households			226,01		1010,89			214,09	1450,99
Commercial and public services			10,17					47,89	58,06
Agriculture, Forestry and Fishing								43,73	43,73
Non-specified (HH, Com. & PS., Agri.)			128,40						128,40
Non-Energy Use									

Seychelles

Indicators

Figure 3.1



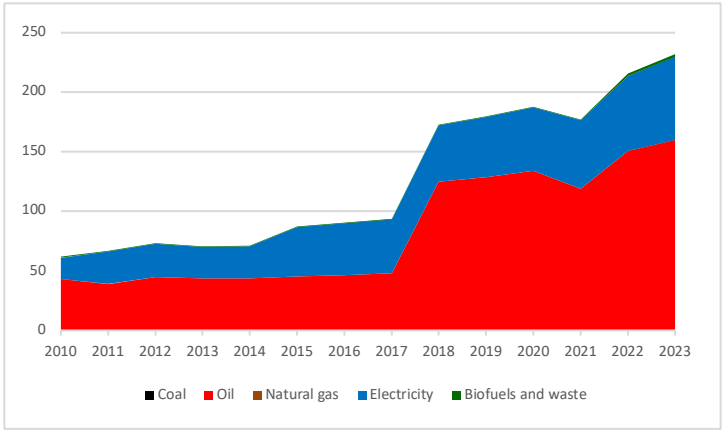
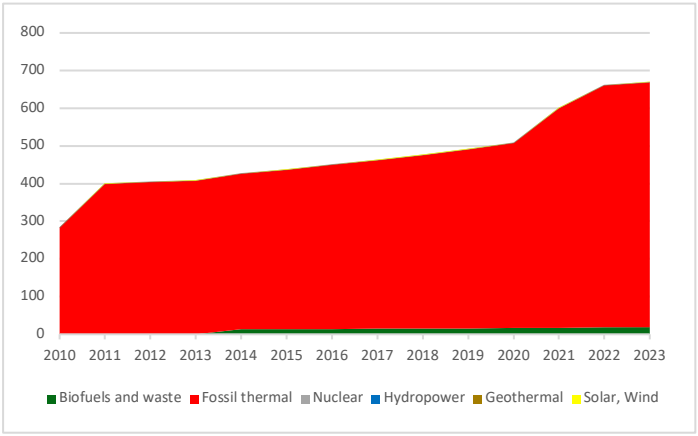


Figure 3.3



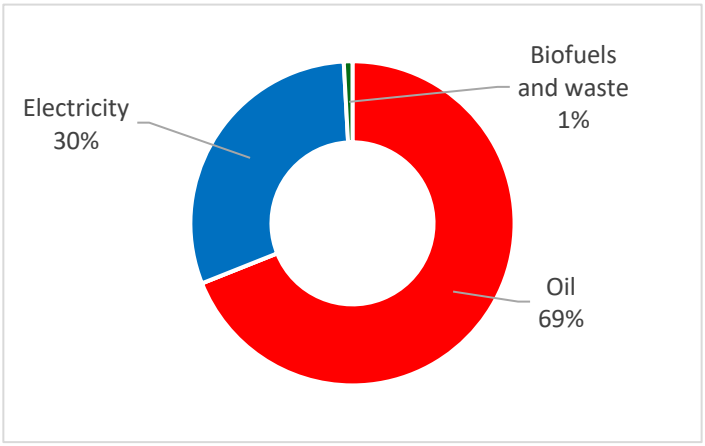
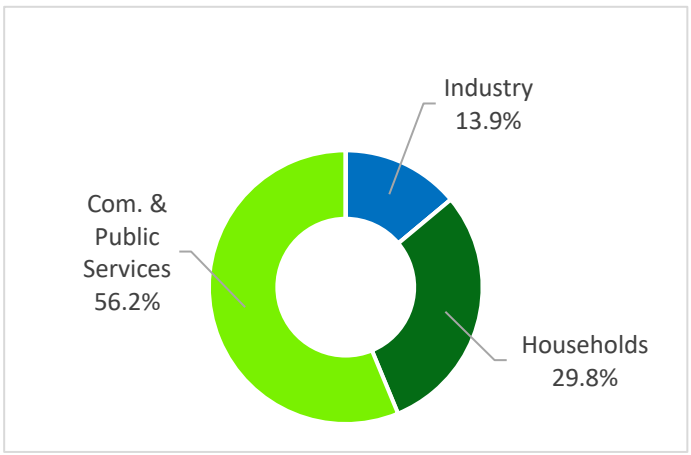
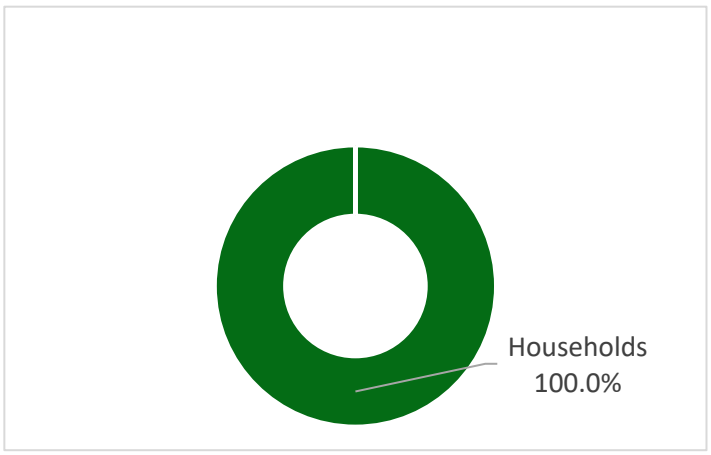


Figure 3





Seychelles

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production		6,99	0,10		7,09
Imports (+)	509,27	2,11			511,39
Exports (-)					
International Marine Bunkers (-)	-210,15				-210,15
International Aviation Bunkers (-)	-68,18				-68,18
Stock Changes (+ draw, - build)	20,05				20,05
TOTAL PRIMARY ENERGY SUPPLY	**250,99**	**9,10**	**0,10**		**260,19**
Transfers : Origin (-) and Destination (+)					
Statistical Difference	-1,98			-10,14	-12,12
TRANSFORMATION Inputs (-) and Outputs (+)	**-102,38**	**-6,99**	**-0,10**	**56,89**	**-52,57**
Electricity plants	-102,38	-6,08	-0,10	56,89	-51,67
CHP Plants					
Heat Plants					
Coke ovens					
Blast furnaces					
Oil Refineries					
Coal-to-liquids plants					
Gas-to-liquids plants					
Charcoal production plants					
Transformation not elsewhere specified		-0,91			-0,91
Energy Sector Own Use				**1,15**	**1,15**
Losses				**3,06**	**3,06**
FINAL CONSUMPTION	**150,58**	**2,11**		**62,83**	**215,53**
Industry	9,41			11,25	20,66
Transport	95,38				95,38
Households	7,90	2,11		17,28	27,29
Commercial and public services				34,31	34,31
Agriculture, Forestry and Fishing					
Non-specified (HH, Com. & PS., Agri.)	37,79				37,79
Non-Energy Use	0,11				0,11

Sierra Leone

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

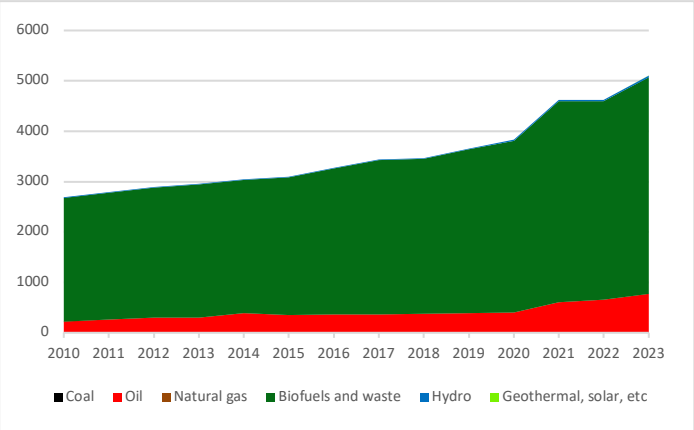


Figure 3.2. - Total Final Consumption (ktoe)

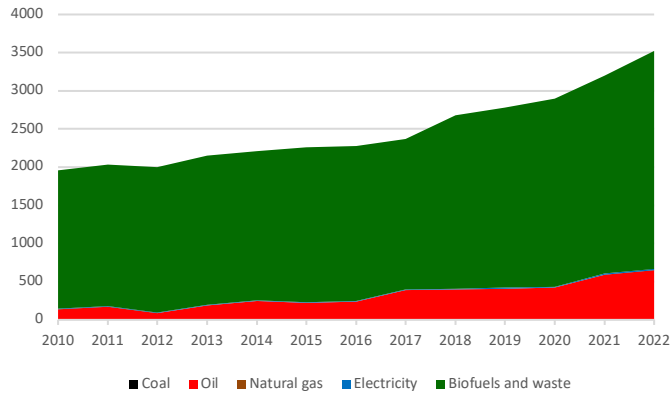


Figure 3.3. - Electricity Generation by Source (GWh)

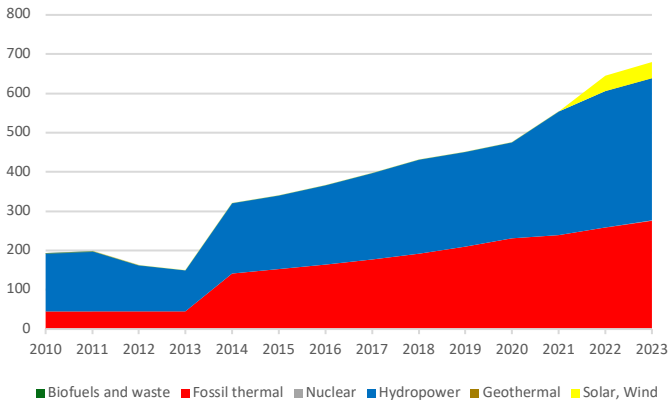
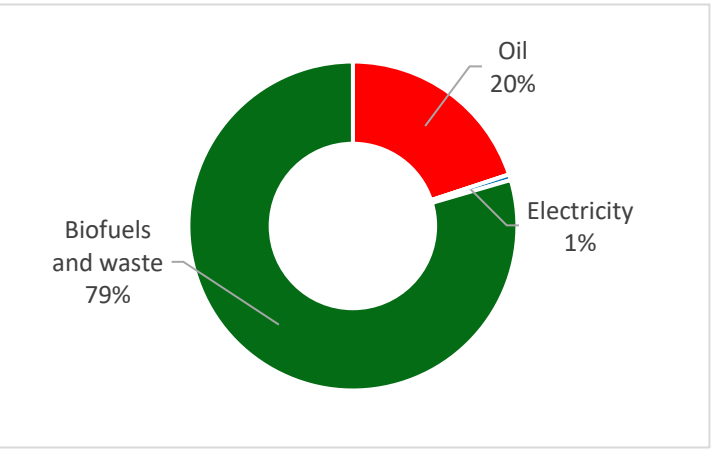
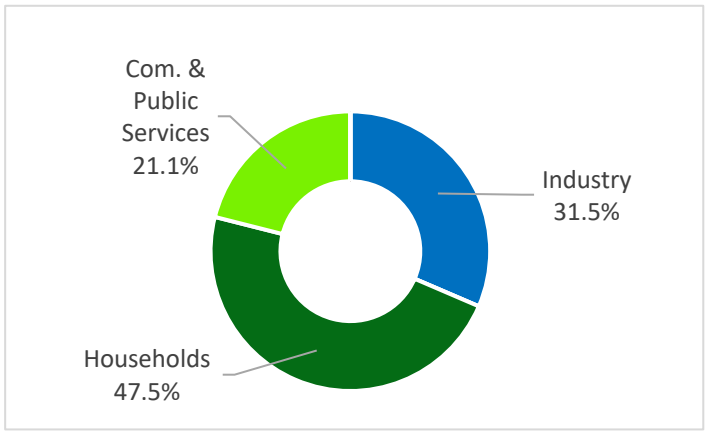
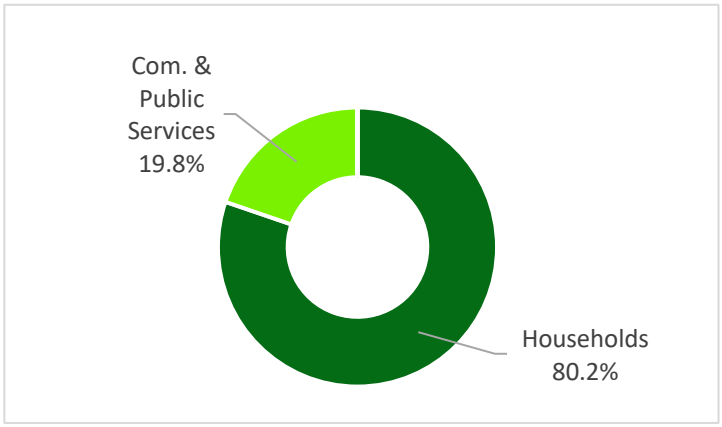


Figure 3.4. - Fuel Shares of Total Final Consumption







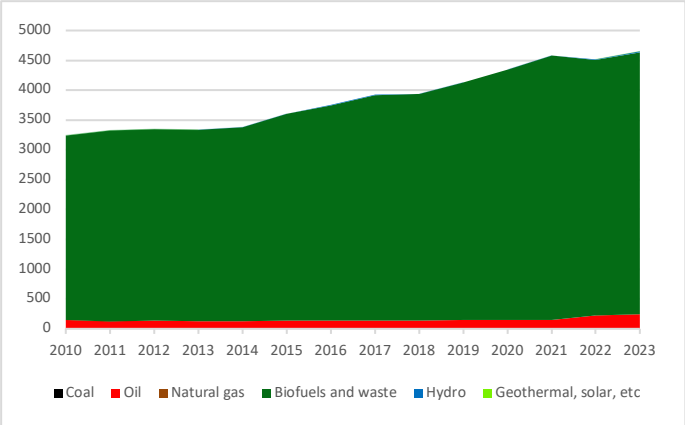
Sierra Leone

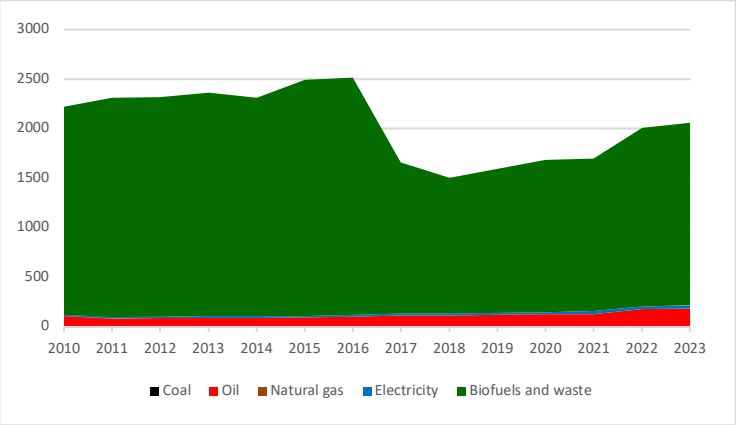
Energy Balance 2023

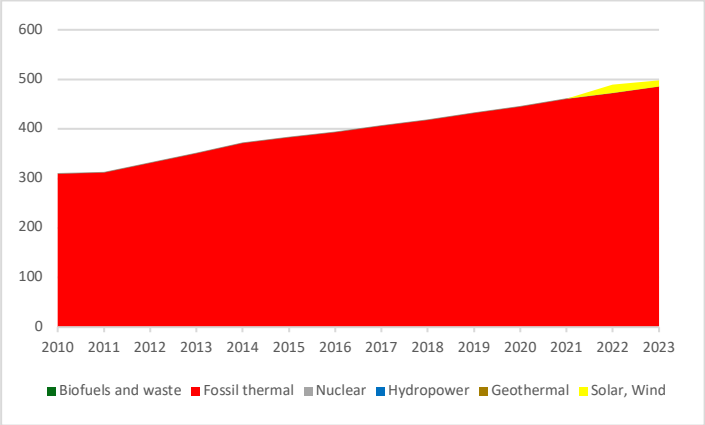
Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Other sources	Electricity	Total of all energy sources
Production		3932,44	29,74	3,36		3965,55
Imports (+)	694,51					694,51
Exports (-)						
International Marine Bunkers (-)						
International Aviation Bunkers (-)	-4,20					-4,20
Stock Changes (+ draw, - build)	-27,42					-27,42
TOTAL PRIMARY ENERGY SUPPLY	**662,89**	**3932,44**	**29,74**	**3,36**		**4628,43**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	-1,14	171,26			-0,51	169,61
TRANSFORMATION Inputs (-) and Outputs (+)	**-12,71**	**-908,57**	**-29,74**	**-3,36**	**39,23**	**-915,15**
Electricity plants	-12,71		-29,74	-3,36	39,23	-6,58
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-908,57				-908,57
Transformation not elsewhere specified						
Energy Sector Own Use						
Losses					**21,12**	**21,12**
FINAL CONSUMPTION	**651,32**	**2852,61**			**18,62**	**3522,56**
Industry	322,78				5,86	328,64
Transport	319,35					319,35
Households	3,78	2289,11			8,84	2301,74
Commercial and public services	0,01	563,50			3,92	567,43
Agriculture, Forestry and Fishing						
Non-specified (HH, Com. & PS., Agri.)	5,41					5,41
Non-Energy Use						

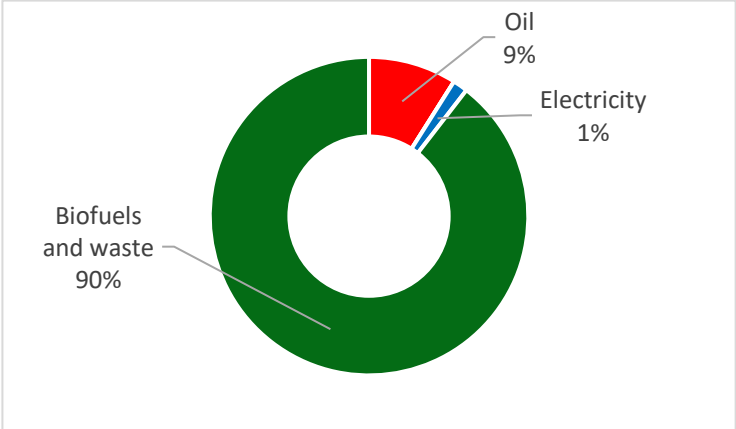
Somalia

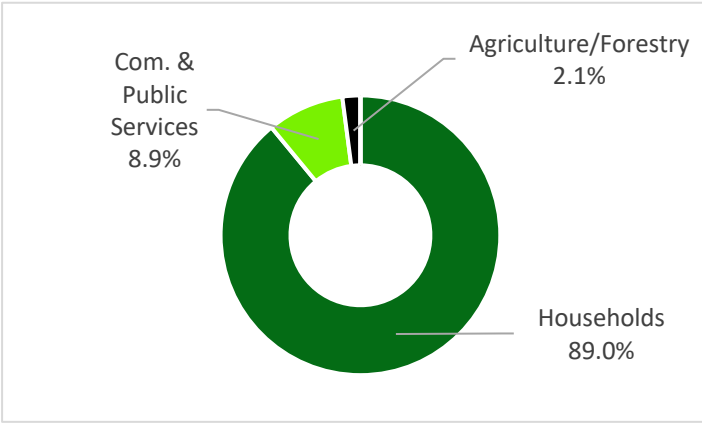
Indicators

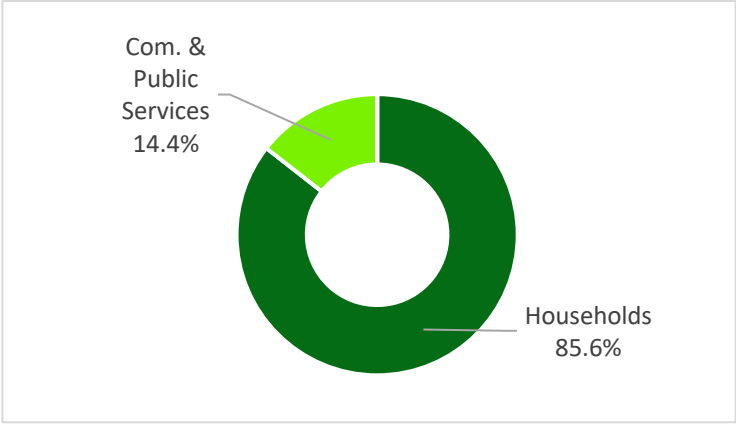












Somalia

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production		4283,98	15,19		4299,17
Imports (+)	248,64				248,64
Exports (-)					
International Marine Bunkers (-)					
International Aviation Bunkers (-)	-29,28				-29,28
Stock Changes (+ draw, - build)	-0,23				-0,23
TOTAL PRIMARY ENERGY SUPPLY	**219,13**	**4283,98**	**15,19**		**4518,30**
Transfers : Origin (-) and Destination (+)					
Statistical Difference	-0,57	-132,90		-0,43	-133,90
TRANSFORMATION Inputs (-) and Outputs (+)	**-37,43**	**-2614,95**	**-15,19**	**107,70**	**-2559,87**
Electricity plants	-37,43		-15,19	107,70	55,08
CHP Plants					
Heat Plants					
Coke ovens					
Blast furnaces					
Oil Refineries					
Coal-to-liquids plants					
Gas-to-liquids plants					
Charcoal production plants		-2614,95			-2614,95
Transformation not elsewhere specified					
Energy Sector Own Use				**69,00**	**69,00**
Losses				**12,90**	**12,90**
FINAL CONSUMPTION	**182,28**	**1801,92**		**26,23**	**2010,42**
Industry	75,45				75,45
Transport	57,67				57,67
Households	31,62	1541,72		24,08	1597,42
Commercial and public services	6,88	260,20		1,72	268,80
Agriculture, Forestry and Fishing				0,43	0,43
Non-specified (HH, Com. & PS., Agri.)					
Non-Energy Use	10,66				10,66

South Africa

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

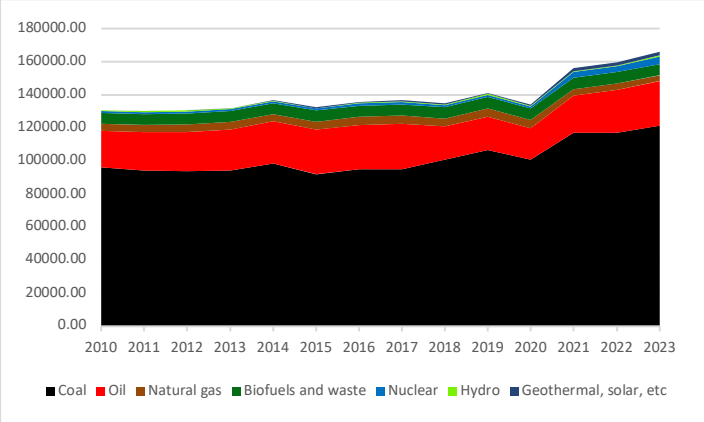


Figure 3.2. - Total Final Consumption (ktoe)

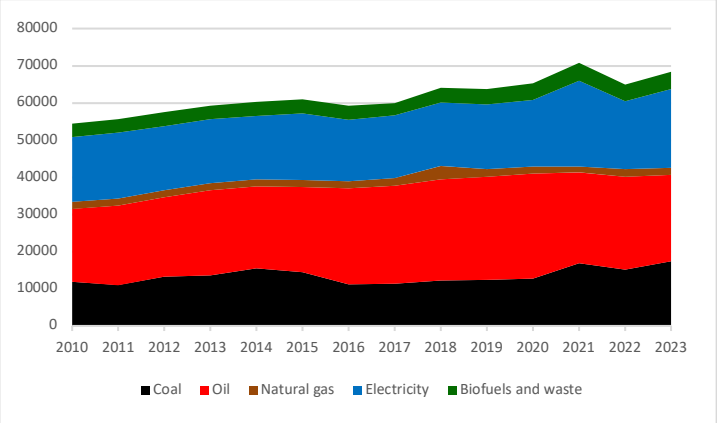


Figure 3.3. - Electricity Generation by Source (GWh)

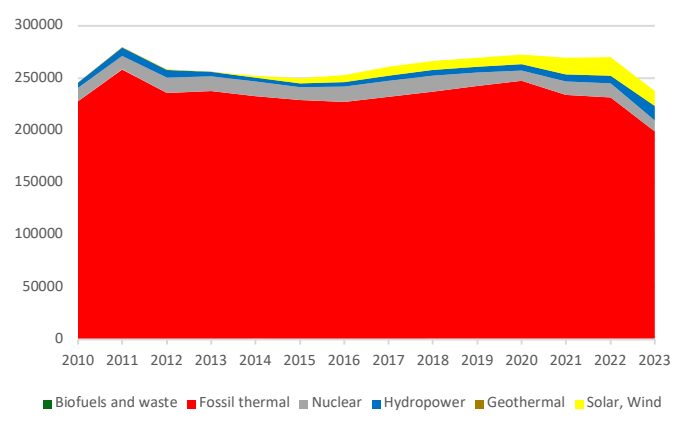
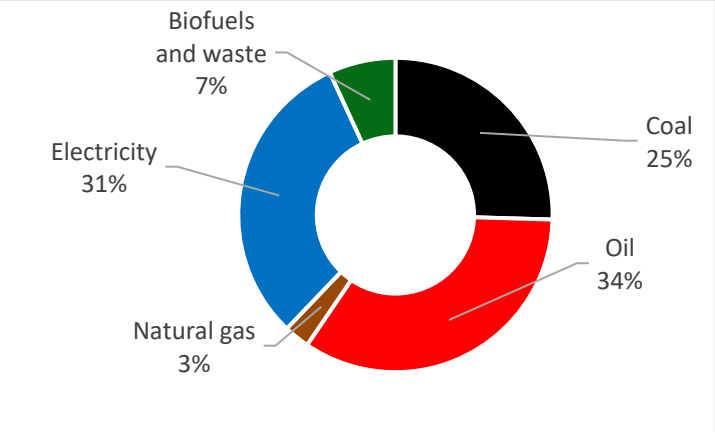
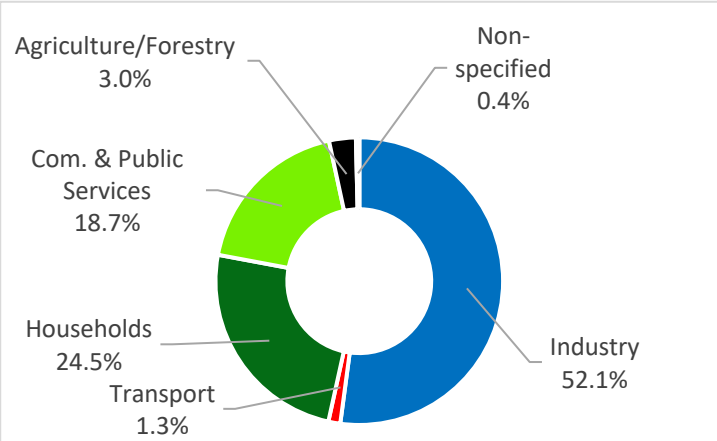
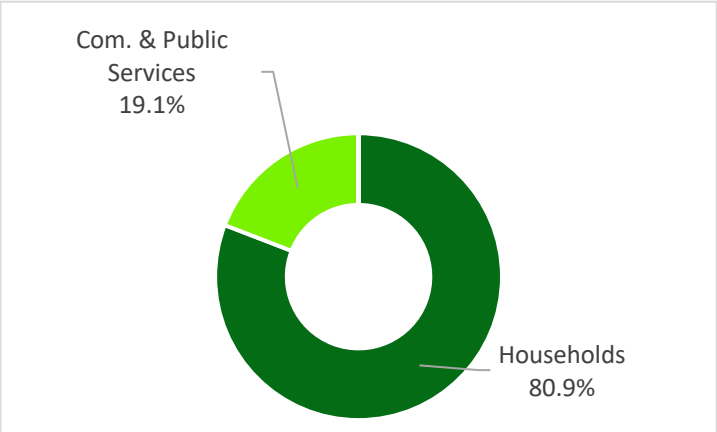


Figure 3.4. - Fuel Shares of Total Final Consumption







South Africa

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Biofuels and waste	Nuclear	Hydro	Solar	Wind	Electricity	Total of all energy sources
Production	142304,03	5113,97		34,48	6658,76	3541,13	641,65	961,08	790,34		160045,43
Imports (+)	471,68	8423,80	17631,50	4030,20						958,79	31515,96
Exports (-)	-46756,02		-2268,36							-1296,26	-50320,64
International Marine Bunkers (-)			-2633,24								-2633,24
International Aviation Bunkers (-)			-832,36								-832,36
Stock Changes (+ draw, - build)	-28245,27	2091,36	-1647,70								-27801,62
TOTAL PRIMARY ENERGY SUPPLY	**67774,42**	**15629,12**	**10249,84**	**4064,67**	**6658,76**	**3541,13**	**641,65**	**961,08**	**790,34**	**-337,47**	**109973,54**
Transfers : Origin (-) and Destination (+)		-5063,07	5066,89								3,82
Statistical Difference	0,02	-0,84	3,58	-135,47	2,88					-1074,99	-1204,82
TRANSFORMATION Inputs (-) and Outputs (+)	**-67787,10**	**-10566,90**	**9983,25**	**-1949,45**	**-2234,08**	**-3541,13**	**-641,65**	**-961,08**	**-790,34**	**23214,47**	**-55274,00**
Electricity plants	-59543,66		94,40		-486,79	-3541,13	-641,65	-961,08	-790,34	23214,47	-42655,78
CHP Plants											
Heat Plants											
Coke ovens											
Blast furnaces											
Oil Refineries		-10566,90	9888,85								-678,04
Coal-to-liquids plants											
Gas-to-liquids plants											
Charcoal production plants					-1747,29						-1747,29
Transformation not elsewhere specified	-8243,44			-1949,45							-10192,89
Energy Sector Own Use	**-15179,46**		**384,18**	**96,73**						**3295,84**	**-11402,71**
Losses				**105,33**						**2363,44**	**2468,77**
FINAL CONSUMPTION	**15166,77**		**24912,22**	**2048,63**	**4421,80**					**18292,70**	**64842,12**
Industry	9439,35		2231,34	2013,50						9533,91	23218,10
Transport			17000,81	0,19						244,71	17245,71
Households	2886,36		424,41	5,76	3575,19					4479,00	11370,71
Commercial and public services	1372,19		167,64	29,19	846,61					3415,35	5830,98
Agriculture, Forestry and Fishing	271,77		72,96							550,88	895,60
Non-specified (HH, Com. & PS., Agri.)	64,11		810,18							68,86	943,14
Non-Energy Use	1133,00		4204,87								5337,87

South Sudan

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

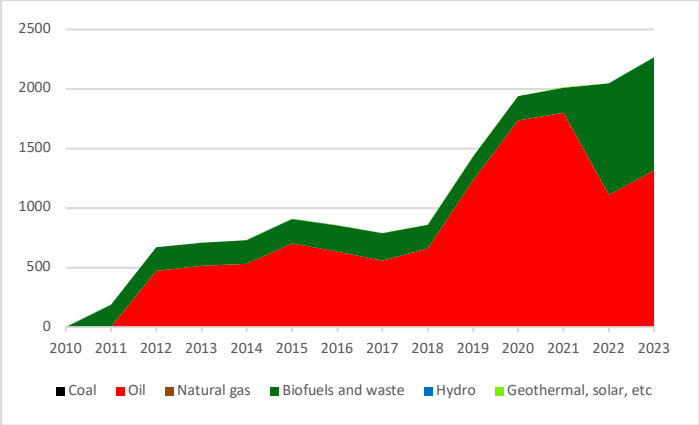


Figure 3.2. - Total Final Consumption (ktoe)

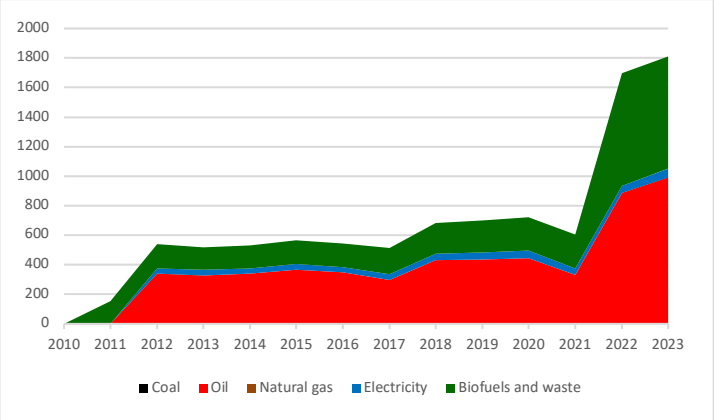


Figure 3.3. - Electricity Generation by Source (GWh)

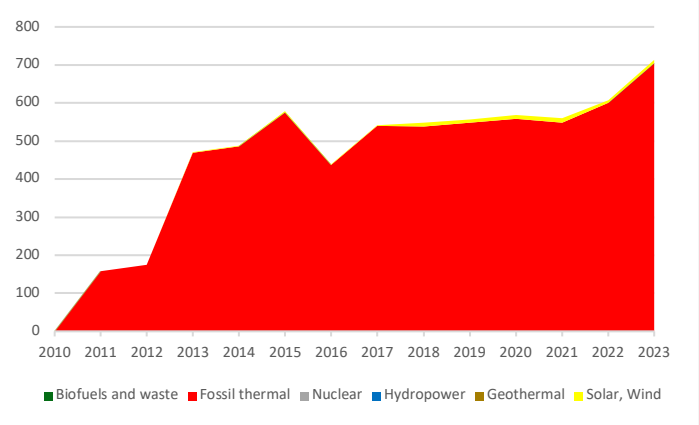
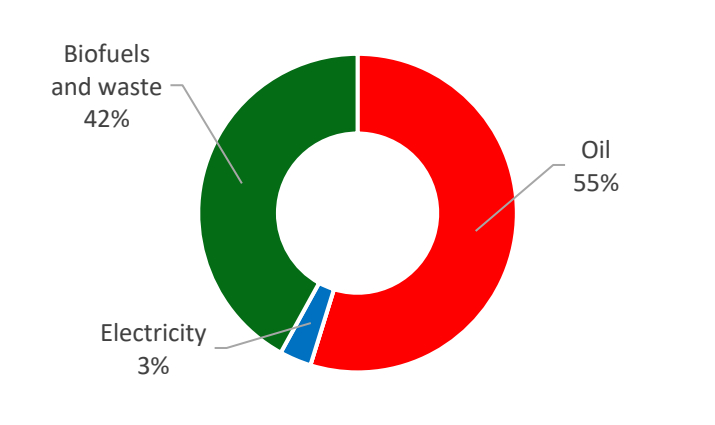
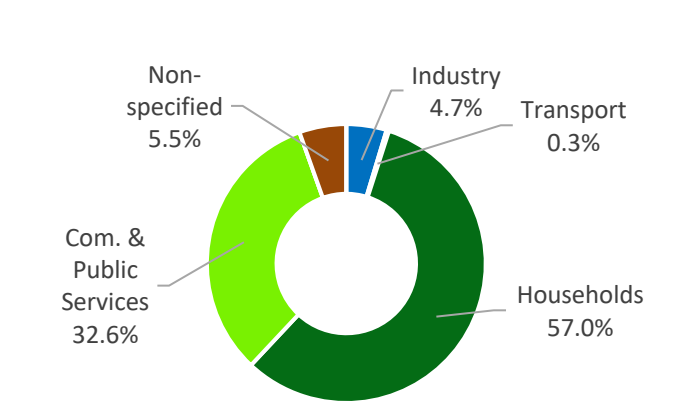
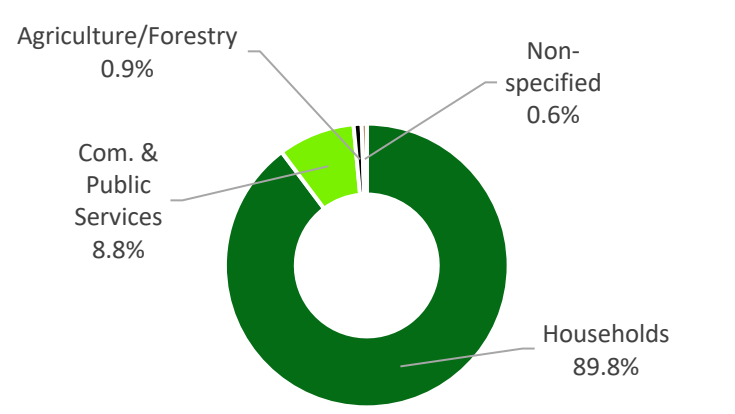


Figure 3.4. - Fuel Shares of Total Final Consumption







South Sudan

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Biofuels and waste	Solar	Electricity	Total of all energy sources
Production	8566,49		947,90	0,75		9515,14
Imports (+)		1260,95				1260,95
Exports (-)	-8508,90					-8508,90
International Marine Bunkers (-)						
International Aviation Bunkers (-)						
Stock Changes (+ draw, - build)						
TOTAL PRIMARY ENERGY SUPPLY	**57,59**	**1260,95**	**947,90**	**0,75**		**2267,19**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	-0,40	4,04	8,89		2,47	15,00
TRANSFORMATION Inputs (-) and Outputs (+)		**-258,06**	**-178,67**	**-0,75**	**61,34**	**-376,14**
Electricity plants		-258,06		-0,75	61,34	-197,47
CHP Plants						
Heat Plants			-5,81			-5,81
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants			-172,86			-172,86
Transformation not elsewhere specified						
Energy Sector Own Use	**56,27**	**1,21**			**0,52**	**58,00**
Losses	**1,72**	**5,56**				**7,27**
FINAL CONSUMPTION		**992,08**	**760,34**		**58,36**	**1810,77**
Industry		16,13			2,73	18,86
Transport		920,72			0,17	920,89
Households		11,20	682,44		33,28	726,92
Commercial and public services		6,29	66,55		19,00	91,84
Agriculture, Forestry and Fishing		37,31	6,97			44,28
Non-specified (HH, Com. & PS., Agri.)		0,42	4,38		3,18	7,98
Non-Energy Use						

Sudan

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

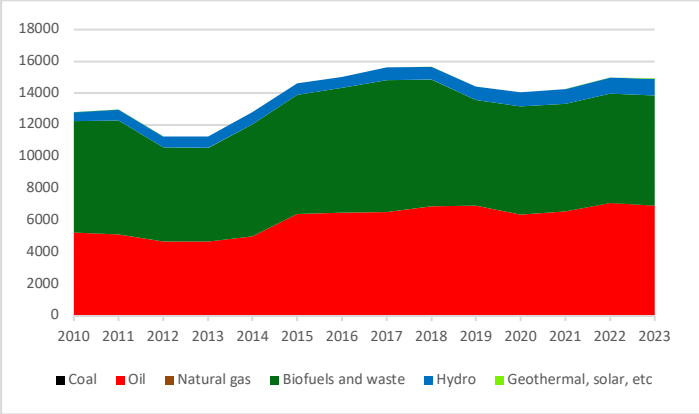


Figure 3.2. - Total Final Consumption (ktoe)

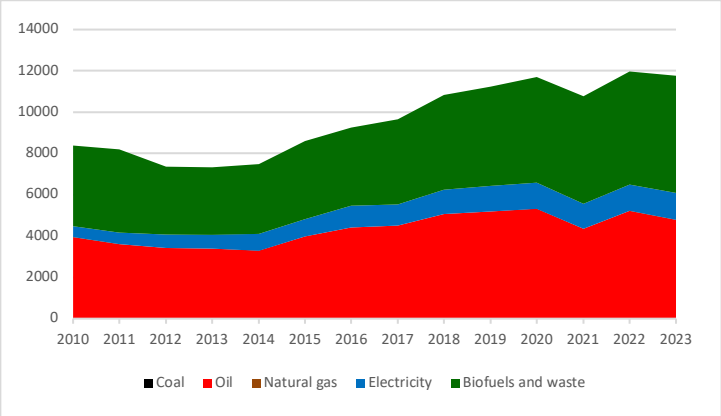


Figure 3.3. - Electricity Generation by Source (GWh)

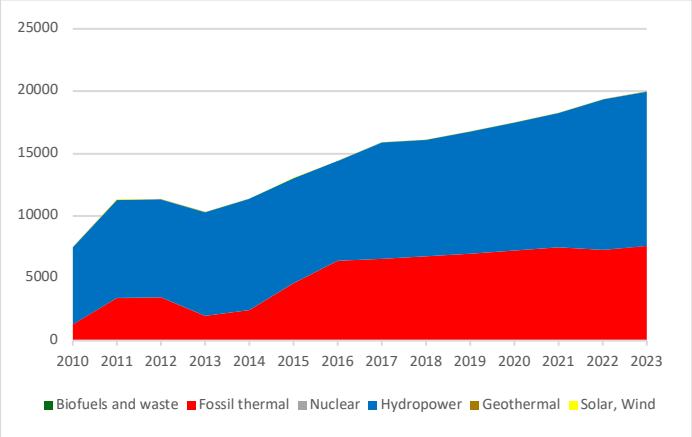


Figure 3.4. - Fuel Shares of Total Final Consumption

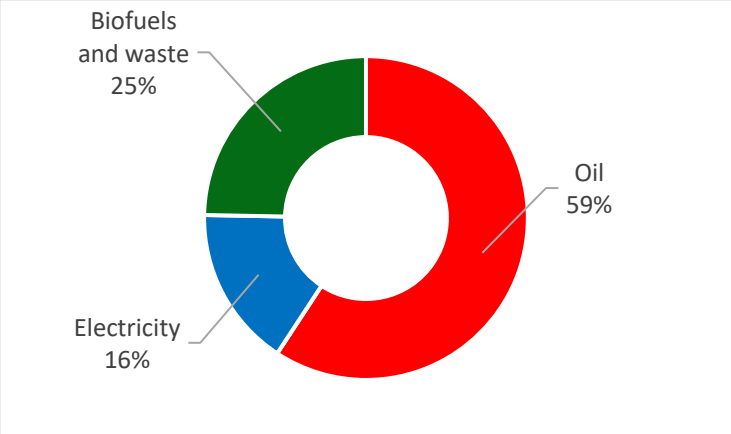
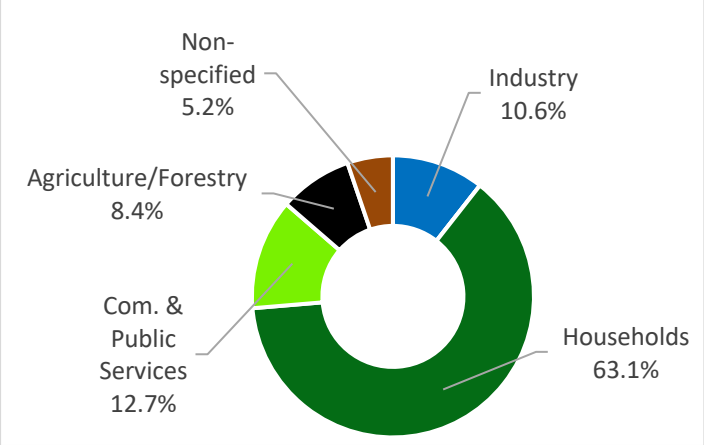
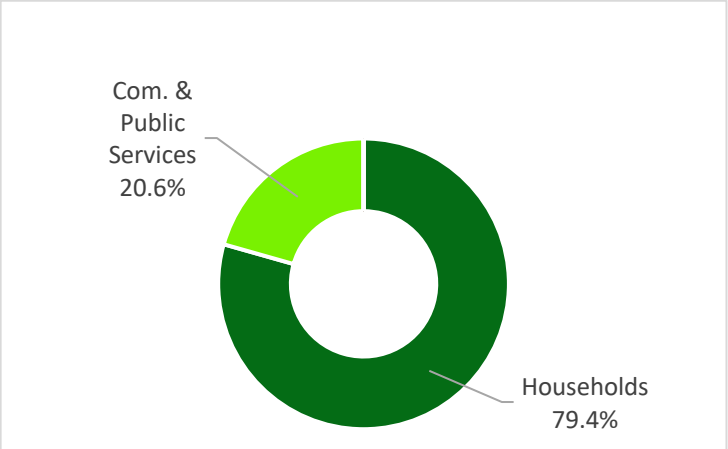


Figure 3





Sudan

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Biofuels and waste	Hydro	Electricity	Total of all energy sources
Production	2878,08		1906,20	1035,59		5819,87
Imports (+)	1192,38	3333,34			88,25	4613,96
Exports (-)		-1273,95				-1273,95
International Marine Bunkers (-)		-18,31				-18,31
International Aviation Bunkers (-)		-183,33				-183,33
Stock Changes (+ draw, - build)	147,51	1028,68				1176,19
TOTAL PRIMARY ENERGY SUPPLY	**4217,96**	**2886,42**	**1906,20**	**1035,59**	**88,25**	**10134,42**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	-0,57	-0,96	19,58		22,70	40,75
TRANSFORMATION Inputs (-) and Outputs (+)	**-4218,53**	**2349,76**	**-78,53**	**-1035,59**	**1661,16**	**-1321,73**
Electricity plants	-920,48	-900,14		-1035,59	1661,16	-1195,05
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries	-3298,06	3249,90				-48,16
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants			-78,53			-78,53
Transformation not elsewhere specified						
Energy Sector Own Use		**29,61**			**64,41**	**94,02**
Losses					**366,70**	**366,70**
FINAL CONSUMPTION		**5207,54**	**1808,09**		**1295,60**	**8311,23**
Industry		434,53			137,15	571,68
Transport		4292,54				4292,54
Households		183,60	1435,44		817,20	2436,23
Commercial and public services		113,11	372,65		164,48	650,24
Agriculture, Forestry and Fishing		94,29			109,05	203,35
Non-specified (HH, Com. & PS., Agri.)		48,58			67,72	116,30
Non-Energy Use		40,89				40,89

Tanzania

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

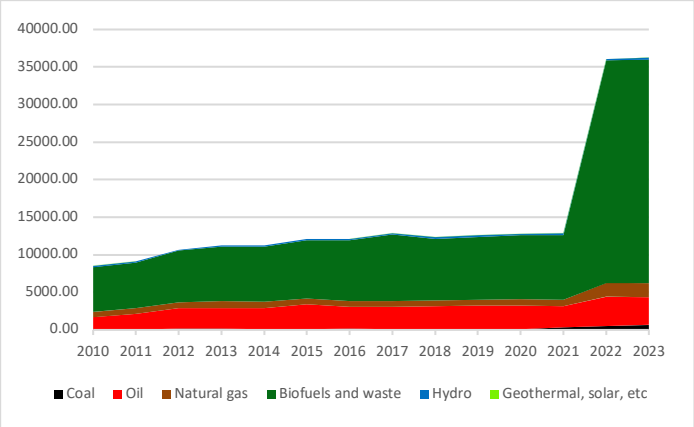


Figure 3.2. - Total Final Consumption (ktoe)

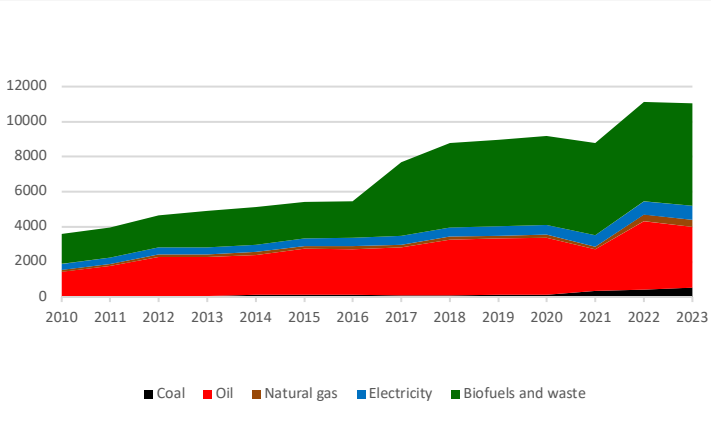


Figure 3.3. - Electricity Generation by Source (GWh)

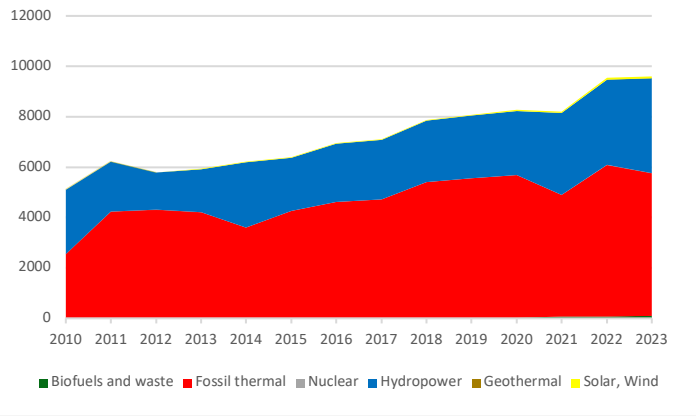
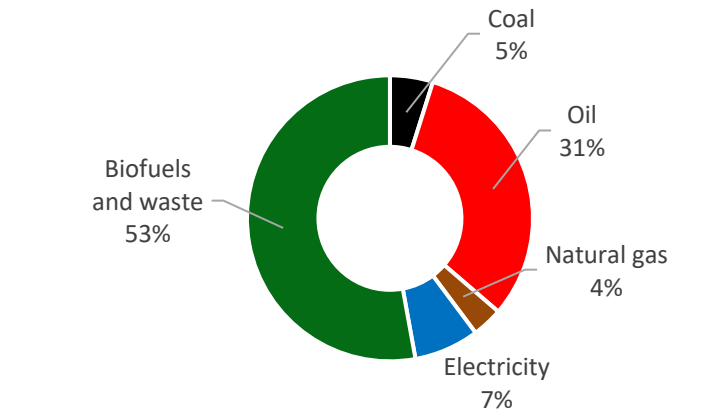
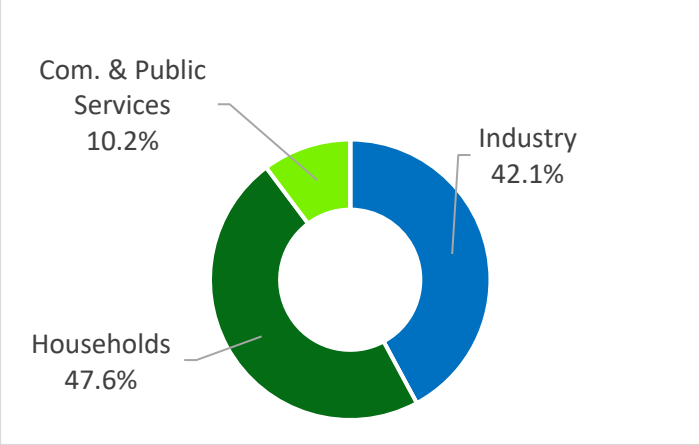
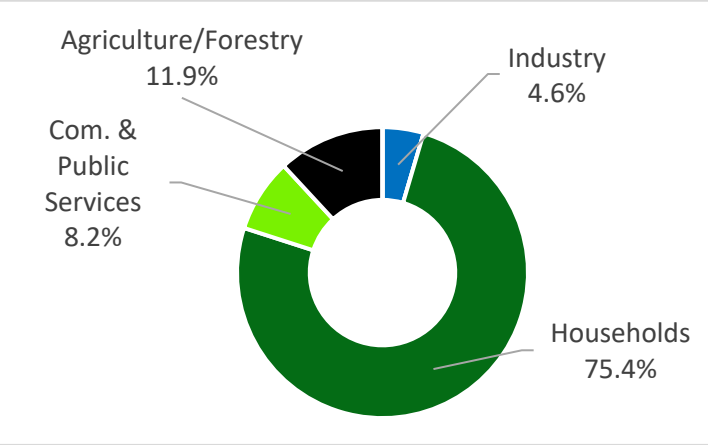


Figure 3.4. - Fuel Shares of Total Final Consumption







Tanzania

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Wind	Electricity	Total of all energy sources
Production	1 701,4	3,2		1 858,4	29 615,8	219,7	2,4	0,4		33 401,2
Imports (+)	0,0		4 014,3						13,5	4 027,7
Exports (-)	-1 160,3									-1 160,3
International Marine Bunkers (-)										
International Aviation Bunkers (-)			-150,0							-150,0
Stock Changes (+ draw, - build)										
TOTAL PRIMARY ENERGY SUPPLY	**541,1**	**3,2**	**3 865,0**	**1 858,4**	**29 615,8**	**219,7**	**2,4**	**0,4**	**13,5**	**36 119,4**
Transfers : Origin (-) and Destination (+)										
Statistical Difference	0,0	0,0	-14,8	-6,3	1,0				129,6	109,5
TRANSFORMATION Inputs (-) and Outputs (+)	**-16,1**		**-192,5**	**-1 532,2**	**-12 478,0**	**-219,7**	**-2,4**	**-0,4**	**902,2**	**-13 539,1**
Electricity plants	-16,1		-192,5	-1 532,2	-25,0	-219,7	-2,4	-0,4	902,2	-1 086,1
CHP Plants										
Heat Plants										
Coke ovens										
Blast furnaces										
Oil Refineries										
Coal-to-liquids plants										
Gas-to-liquids plants										
Charcoal production plants					-12 453,0					-12 453,0
Transformation not elsewhere specified										
Energy Sector Own Use				**3,7**					**9,0**	**12,7**
Losses									**120,5**	**120,5**
FINAL CONSUMPTION	**525,0**	**3,3**	**3 687,2**	**328,9**	**17 136,7**				**656,5**	**22 337,5**
Industry	525,0		771,0	260,0	1 822,9				276,6	3 655,4
Transport			2 674,9	56,1						2 731,0
Households			101,5	3,2	13 763,4				312,8	14 180,9
Commercial and public services			90,4	9,6	288,5				67,2	455,6
Agriculture, Forestry and Fishing					981,5					981,5
Non-specified (HH, Com. & PS., Agri.)					280,4					280,4
Non-Energy Use		3,3	49,4							52,7

Togo

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

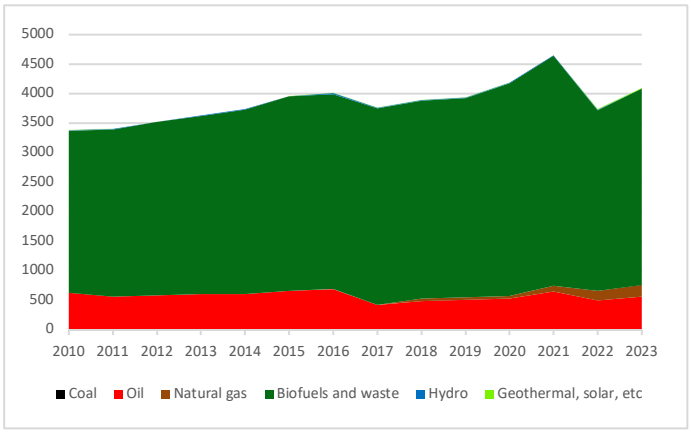


Figure 3.2. - Total Final Consumption (ktoe)

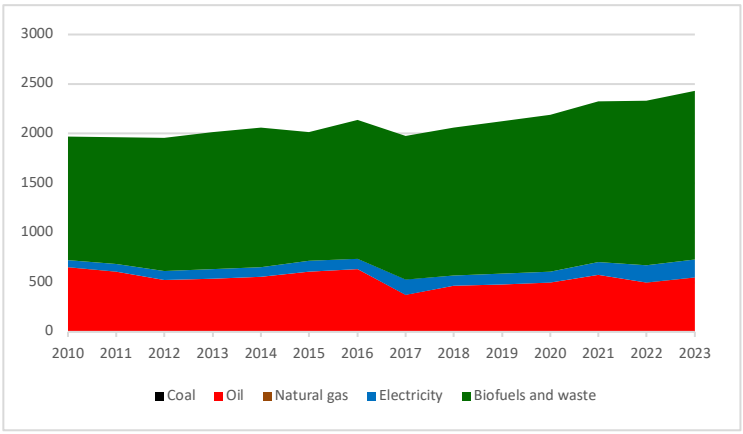
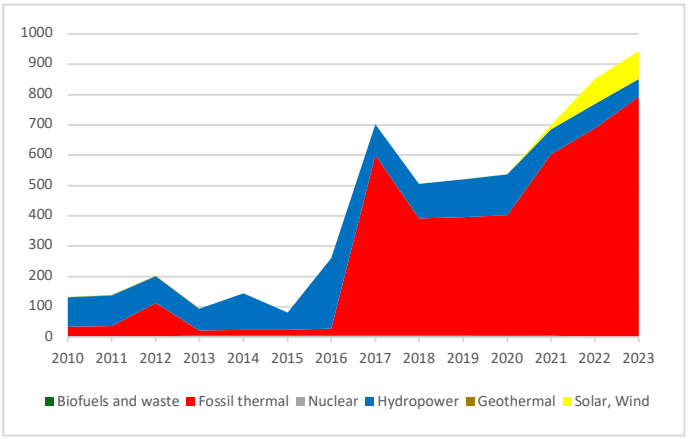


Figure 3



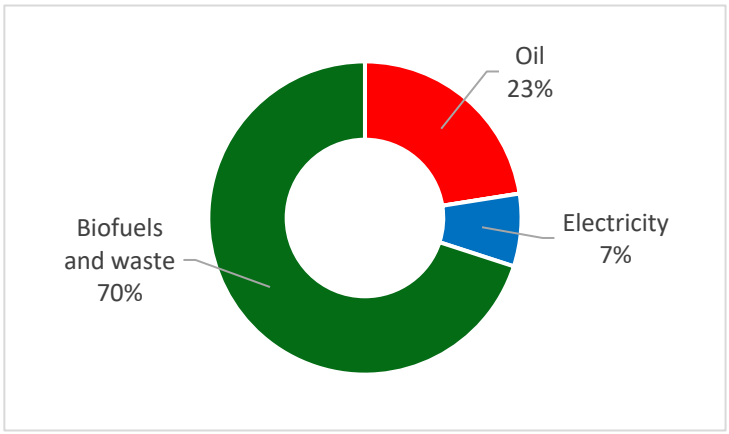
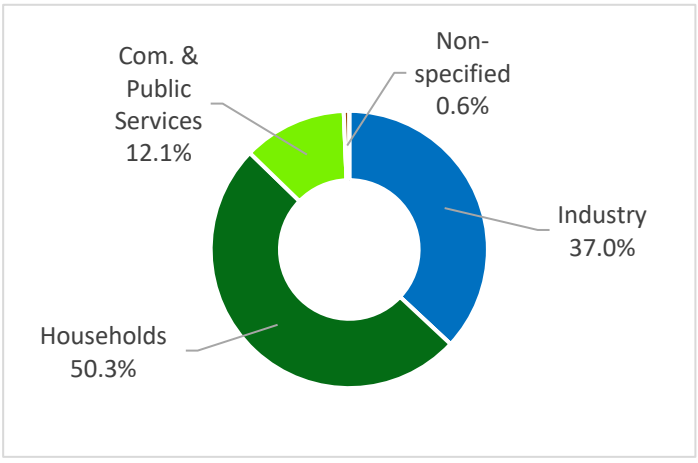
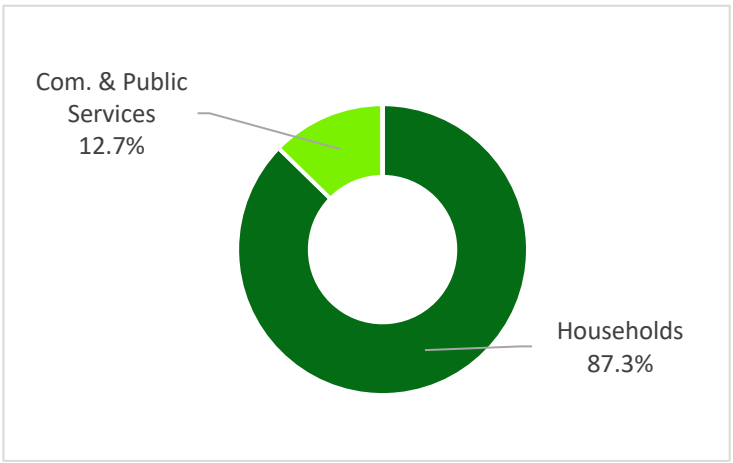


Figure 3.5





Togo

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production			3055,45	6,74	7,24		3069,43
Imports (+)	599,04	164,41				96,82	860,26
Exports (-)							
International Marine Bunkers (-)	-7,19						-7,19
International Aviation Bunkers (-)	-96,90						-96,90
Stock Changes (+ draw, - build)	7,37						7,37
TOTAL PRIMARY ENERGY SUPPLY	**502,31**	**164,41**	**3055,45**	**6,74**	**7,24**	**96,82**	**3832,96**
Transfers : Origin (-) and Destination (+)							
Statistical Difference	1,24					-22,09	-20,86
TRANSFORMATION Inputs (-) and Outputs (+)	**-2,35**	**-164,41**	**-1396,71**	**-6,74**	**-7,24**	**73,28**	**-1504,16**
Electricity plants	-2,35	-164,41		-6,74	-7,24	73,28	-107,45
CHP Plants							
Heat Plants							
Coke ovens							
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants			-1396,71				-1396,71
Transformation not elsewhere specified							
Energy Sector Own Use						**1,07**	**1,07**
Losses						**17,39**	**17,39**
FINAL CONSUMPTION	**498,73**		**1658,74**			**173,73**	**2331,20**
Industry	25,15					64,21	89,36
Transport	408,48						408,48
Households	41,10		1448,24			87,39	1576,74
Commercial and public services	18,81		210,50			21,02	250,33
Agriculture, Forestry and Fishing							
Non-specified (HH, Com. & PS., Agri.)						1,11	1,11
Non-Energy Use	5,18						5,18

Tunisia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

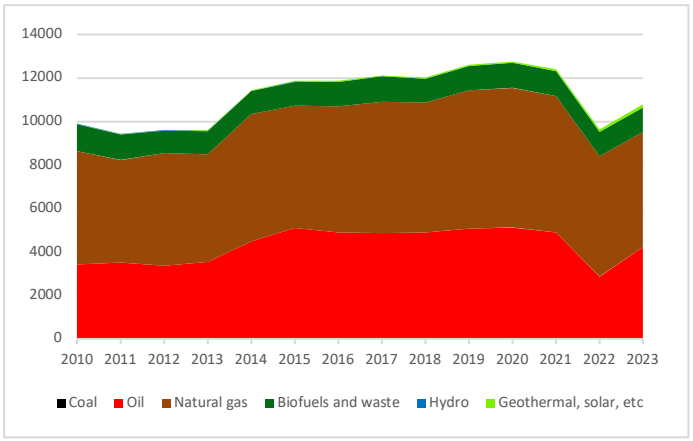


Figure 3.2. - Total Final Consumption (ktoe)

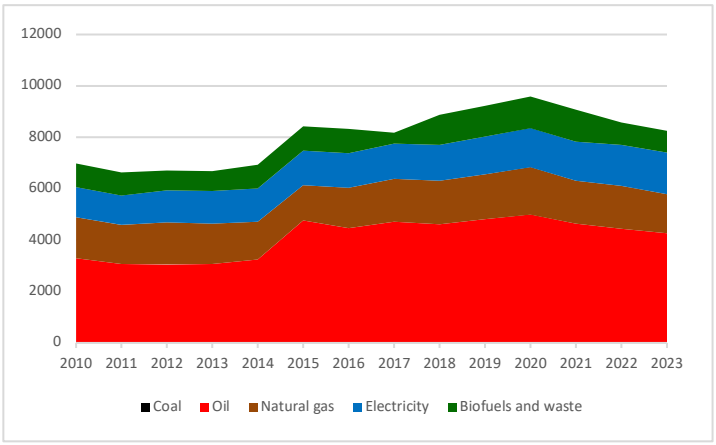
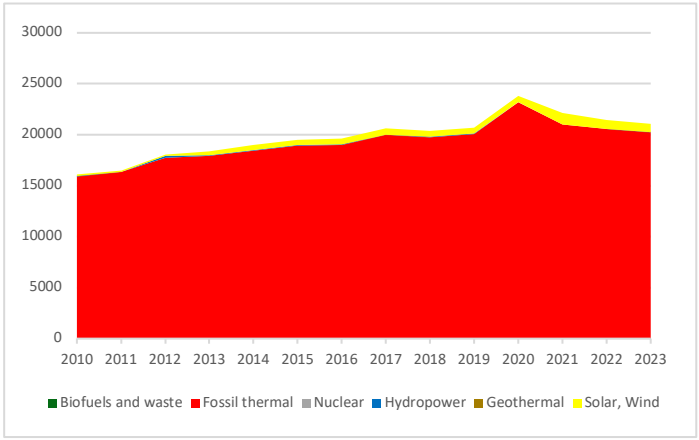
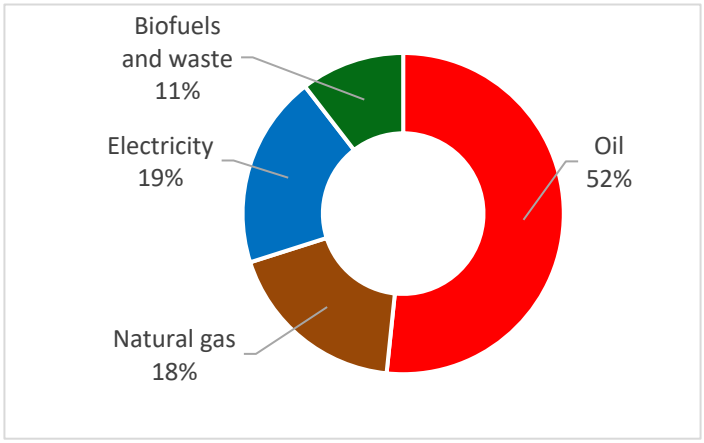


Figure 3





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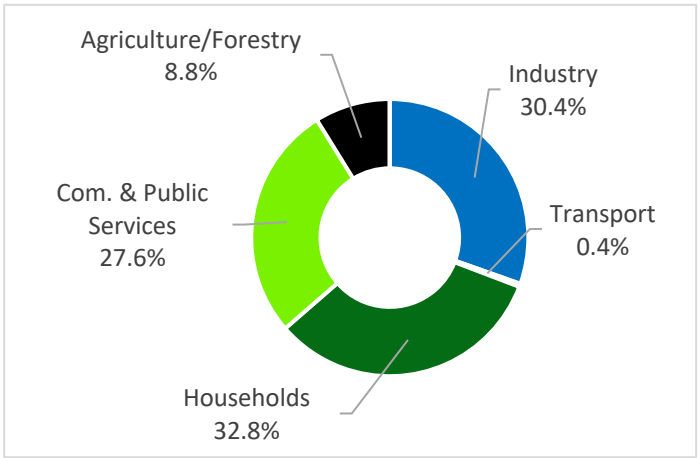
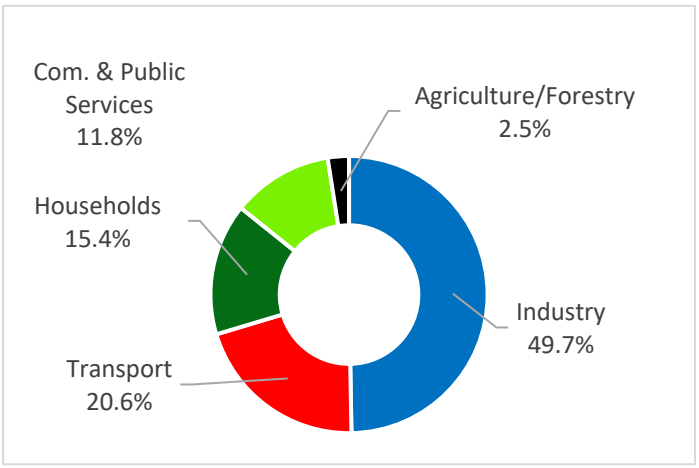




Tunisia

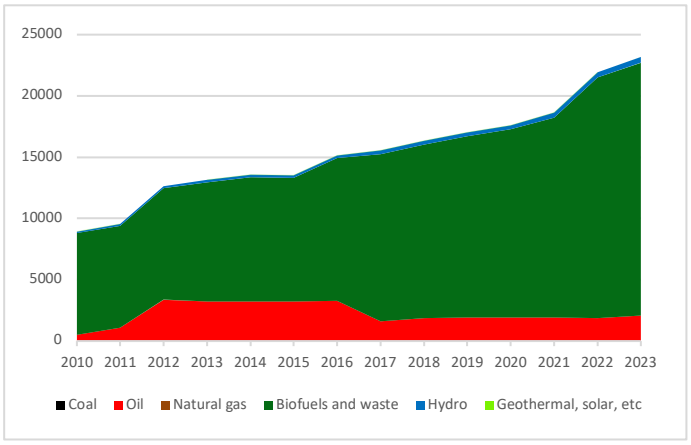
Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Crude oil	Oil products	Natural Gas	Biofuels and waste	Hydro	Solar	Wind	Other sources	Electricity	Heat	Total of all energy sources
Production	1760,00		1892,36	1116,75	0,79	105,60	29,10	15,72		64,09	4984,41
Imports (+)	795,55	3786,64	3402,28						221,50		8205,96
Exports (-)	-1391,19	-495,74							-6,86		-1893,79
International Marine Bunkers (-)		-6,05									-6,05
International Aviation Bunkers (-)		-253,71									-253,71
Stock Changes (+ draw, - build)	-20,04	41,36									21,33
TOTAL PRIMARY ENERGY SUPPLY	**1144,49**	**3072,50**	**5294,64**	**1116,75**	**0,79**	**105,60**	**29,10**	**15,72**	**214,64**	**64,09**	**11058,32**
Transfers : Origin (-) and Destination (+)	-98,03	105,60									7,56
Statistical Difference	-43,98	-95,19	52,59	0,10		-1,57			5,32		-82,72
TRANSFORMATION Inputs (-) and Outputs (+)	**-1084,83**	**1044,47**	**-3552,28**	**-251,92**	**-0,79**	**-41,87**	**-29,10**	**-15,72**	**1829,38**	**-64,09**	**-2166,76**
Electricity plants		-12,00	-3485,20		-0,79	-41,87	-29,10	-15,72	1763,42	-64,09	-1885,36
CHP Plants			-67,08						65,97		-1,12
Heat Plants											
Coke ovens											
Blast furnaces											
Oil Refineries	-1084,83	1056,47									-28,36
Coal-to-liquids plants											
Gas-to-liquids plants											
Charcoal production plants				-251,92							-251,92
Transformation not elsewhere specified											
Energy Sector Own Use	**3,73**	**49,21**	**165,35**						**65,72**		**284,02**
Losses	**1,87**								**366,47**		**368,33**
FINAL CONSUMPTION		**4268,54**	**1524,41**	**864,73**		**65,29**			**1606,52**		**8329,49**
Industry		744,11	757,96	2,85					488,54		1993,46
Transport		2297,05	314,72						6,05		2617,82
Households		628,50	234,56	844,15		62,13			527,41		2296,75
Commercial and public services		92,23	179,46	17,74		3,16			442,75		735,34
Agriculture, Forestry and Fishing		344,55	37,70						141,77		524,03
Non-specified (HH, Com. & PS., Agri.)											
Non-Energy Use		162,10									162,10

Uganda

Indicators

Figure 3.1



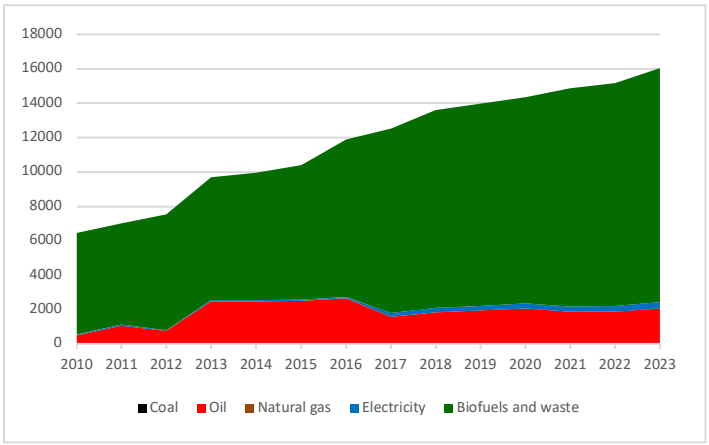
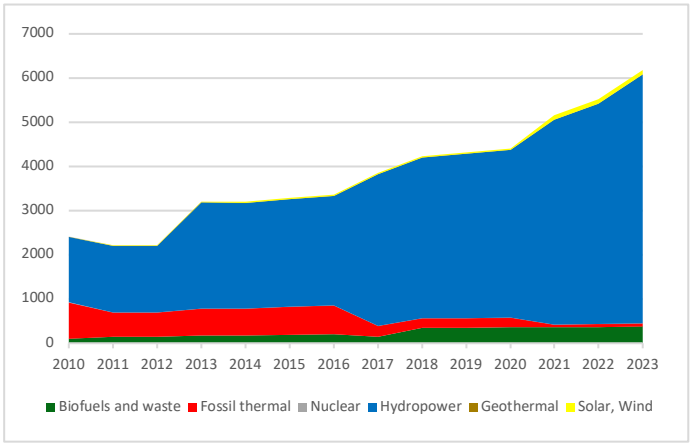


Figure 3.3



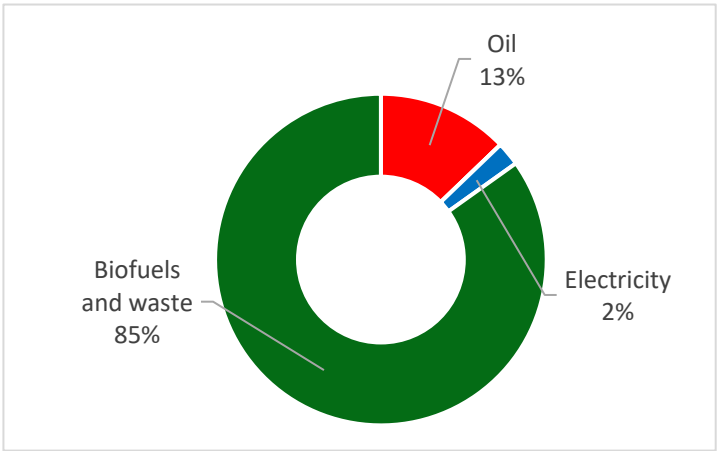
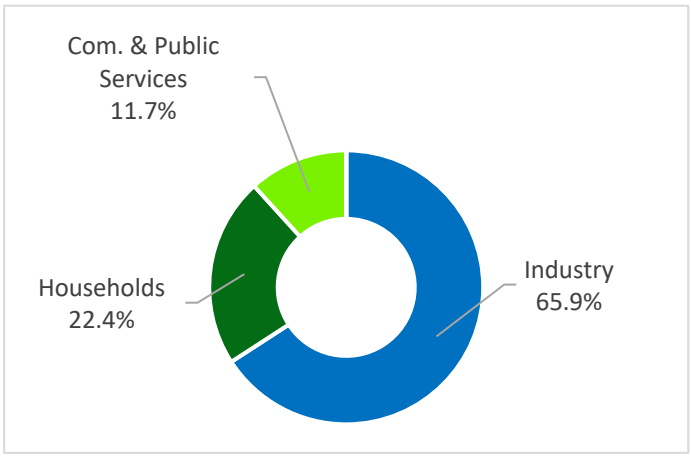
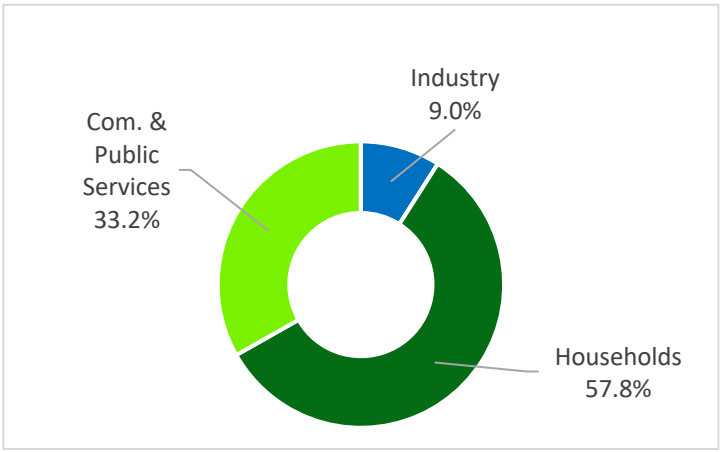


Figure 3





Uganda

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production		20602,12	484,40	8,53		21095,06
Imports (+)	2216,69				3,54	2220,24
Exports (-)					-41,69	-41,69
International Marine Bunkers (-)						
International Aviation Bunkers (-)	-124,75					-124,75
Stock Changes (+ draw, - build)	0,97					0,97
TOTAL PRIMARY ENERGY SUPPLY	**2092,91**	**20602,12**	**484,40**	**8,53**	**-38,14**	**23149,82**
Transfers : Origin (-) and Destination (+)						
Statistical Difference	6,16	-7,69			1,91	0,38
TRANSFORMATION Inputs (-) and Outputs (+)	**-29,59**	**-6993,58**	**-484,40**	**-8,53**	**531,53**	**-6984,58**
Electricity plants	-29,59	-201,74	-484,40	-8,53	531,53	-192,74
CHP Plants						
Heat Plants						
Coke ovens						
Blast furnaces						
Oil Refineries						
Coal-to-liquids plants						
Gas-to-liquids plants						
Charcoal production plants		-5713,32				-5713,32
Transformation not elsewhere specified		-1078,52				-1078,52
Energy Sector Own Use					**16,78**	**16,78**
Losses					**102,05**	**102,05**
FINAL CONSUMPTION	**2057,16**	**13616,22**			**372,65**	**16046,03**
Industry	426,54	1229,67			245,41	1901,62
Transport	1385,82					1385,82
Households	33,17	7867,23			83,50	7983,90
Commercial and public services	15,38	4519,32			43,74	4578,44
Agriculture, Forestry and Fishing	196,25					196,25
Non-specified (HH, Com. & PS., Agri.)						
Non-Energy Use						

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. - Fuel Shares of Total Final Consumption

Figure 3.5. – Electricity Consumption by Sector

Figure 3.6. – Biofuels and Waste Consumption by Sector

Western Sahara

Energy Balance

Zambia

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

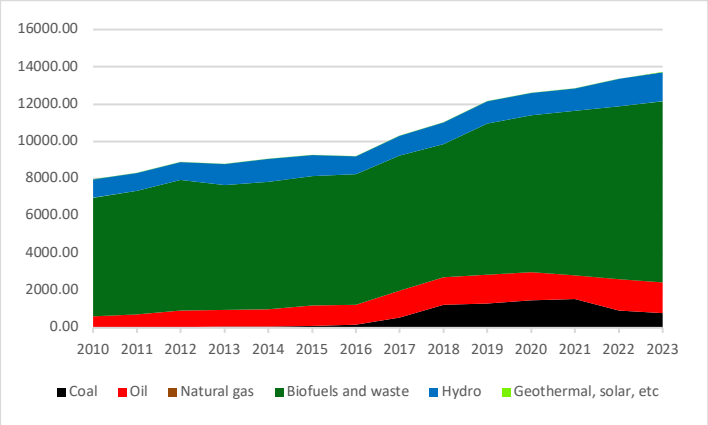


Figure 3.2. - Total Final Consumption (ktoe)

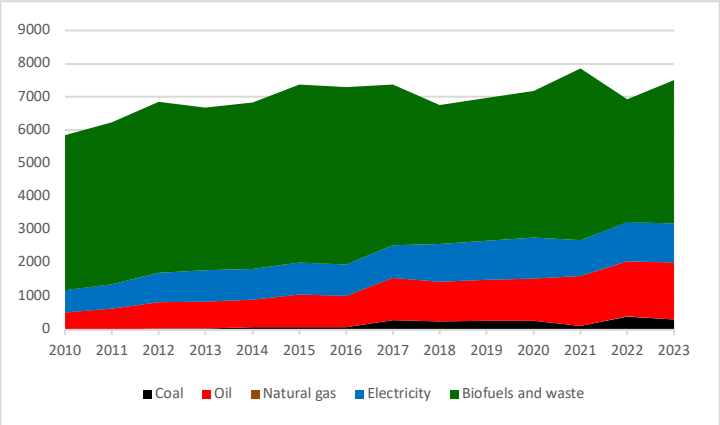


Figure 3.3. - Electricity Generation by Source (GWh)

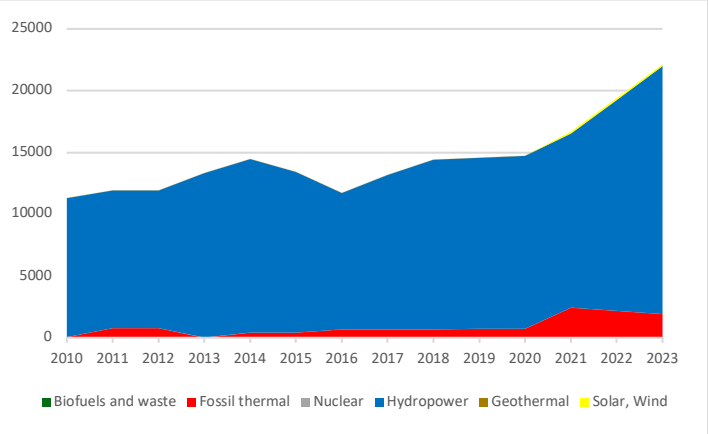
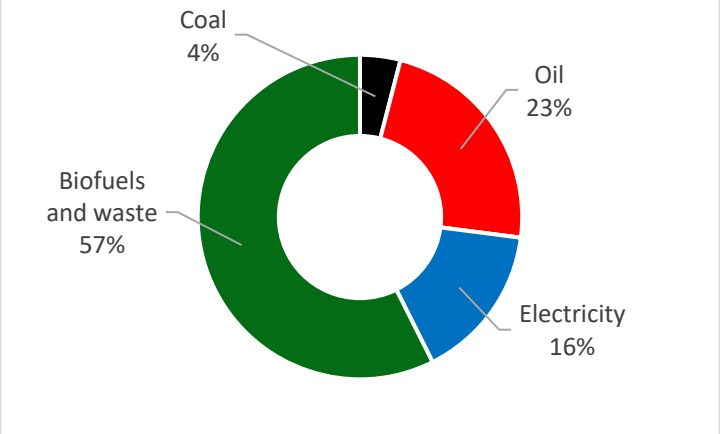
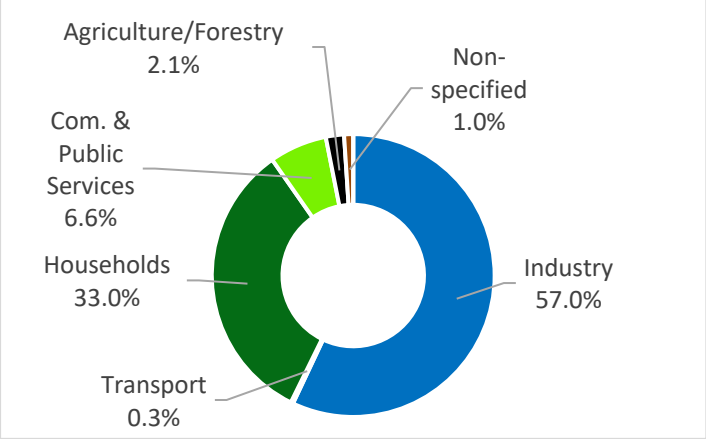
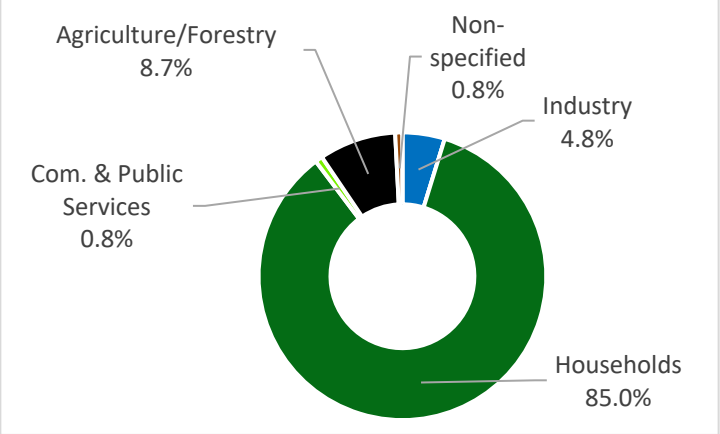


Figure 3.4. - Fuel Shares of Total Final Consumption







Zambia

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Crude oil	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	961,36			2666,64	1469,38	12,31		5109,68
Imports (+)	76,85	46,58	1639,04				1,55	1764,02
Exports (-)	-55,28						-251,33	-306,61
International Marine Bunkers (-)			-2631,72					-2631,72
International Aviation Bunkers (-)			-24,20					-24,20
Stock Changes (+ draw, - build)	-54,84	15,15	2645,56	1522,63				4128,50
TOTAL PRIMARY ENERGY SUPPLY	**928,08**	**61,74**	**1628,69**	**4189,27**	**1469,38**	**12,31**	**-249,79**	**8039,68**
Transfers : Origin (-) and Destination (+)								
Statistical Difference	0,01	-0,58	-2,35	-1742,60			39,47	-1706,05
TRANSFORMATION Inputs (-) and Outputs (+)	**-530,77**	**-62,32**	**30,76**	**-2234,08**	**-1469,38**	**-12,31**	**1668,02**	**-2610,07**
Electricity plants	-530,77		-28,16	-486,79	-1469,38	-12,31	1668,02	-859,38
CHP Plants								
Heat Plants								
Coke ovens								
Blast furnaces								
Oil Refineries		-62,32	58,92					-3,40
Coal-to-liquids plants								
Gas-to-liquids plants								
Charcoal production plants				-1747,29				-1747,29
Transformation not elsewhere specified								
Energy Sector Own Use			**1,12**				**23,24**	**24,36**
Losses							**170,89**	**170,89**
FINAL CONSUMPTION	**397,30**		**1660,67**	**3697,79**			**1184,64**	**6940,41**
Industry	397,30		576,61	176,02			675,33	1825,27
Transport			895,54				3,18	898,72
Households			7,38	3141,43			391,10	3539,92
Commercial and public services			9,33	30,55			78,10	117,98
Agriculture, Forestry and Fishing			35,71	319,97			24,63	380,31
Non-specified (HH, Com. & PS., Agri.)			56,81	29,81			12,31	98,93
Non-Energy Use			79,29					79,29

Zimbabwe

Indicators

Figure 3.1. - Total Primary Energy Supply (ktoe)

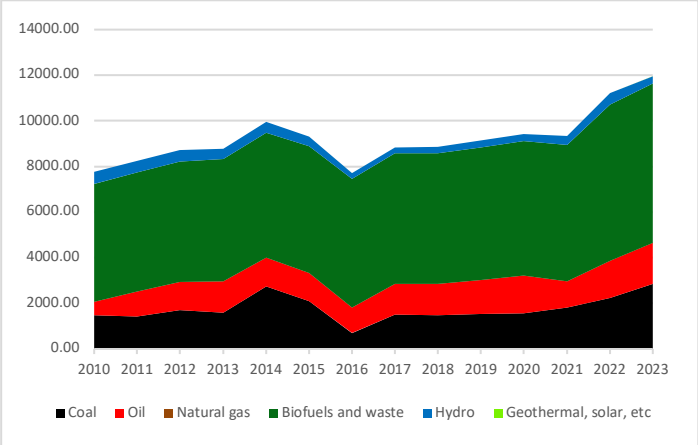


Figure 3.2. - Total Final Consumption (ktoe)

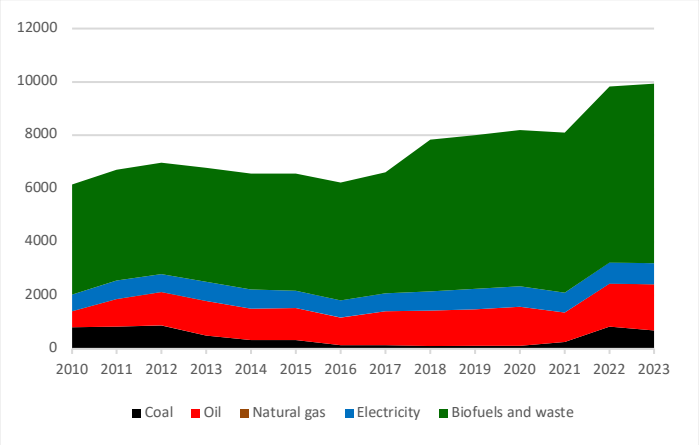
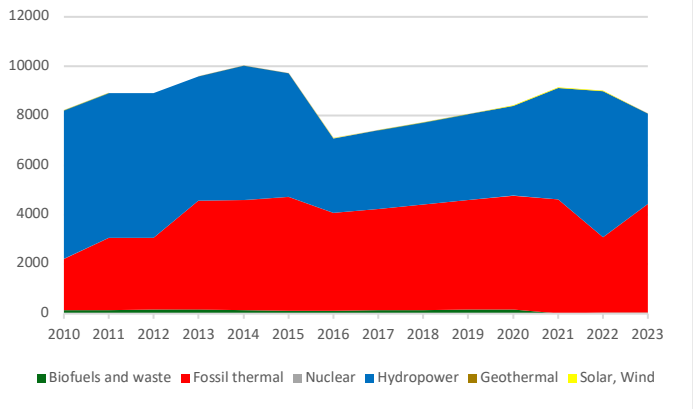


Figure 3



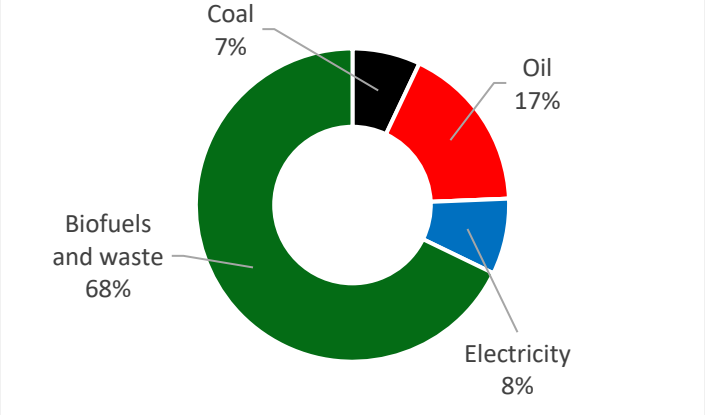
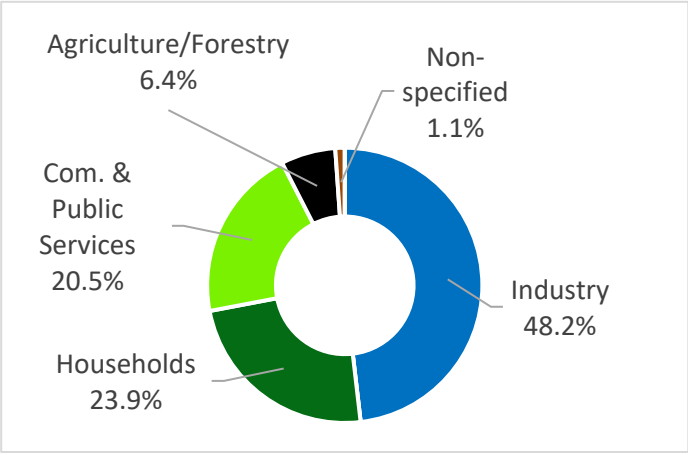
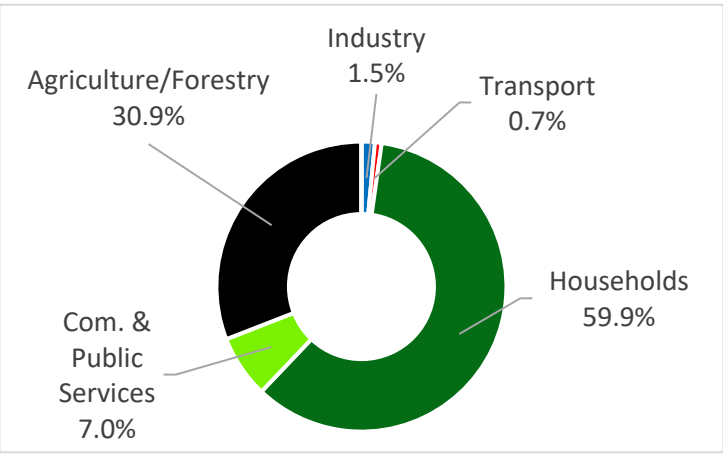


Figure 3





Zimbabwe

Energy Balance 2023

Thousand Tonnes of Oil Equivalent (ktoe)	Coal and Coal Products	Oil products	Biofuels and waste	Hydro	Solar	Electricity	Total of all energy sources
Production	3154,78		6986,63	312,96	1,40		10455,77
Imports (+)	0,39	1863,17				175,45	2039,01
Exports (-)	-303,05	-0,19				-30,33	-333,57
International Marine Bunkers (-)							
International Aviation Bunkers (-)		-60,25					-60,25
Stock Changes (+ draw, - build)		-0,86	-2,05				-2,91
TOTAL PRIMARY ENERGY SUPPLY	**2852,12**	**1801,86**	**6984,58**	**312,96**	**1,40**	**145,13**	**12098,04**
Transfers : Origin (-) and Destination (+)							
Statistical Difference	12,32	79,85	-84,01			28,58	36,75
TRANSFORMATION Inputs (-) and Outputs (+)	**-2142,04**		**-329,78**	**-312,96**	**-1,40**	**758,25**	**-2027,93**
Electricity plants	-1418,32		-25,40	-312,96	-1,40	758,25	-999,83
CHP Plants							
Heat Plants							
Coke ovens	-723,66						-723,66
Blast furnaces							
Oil Refineries							
Coal-to-liquids plants							
Gas-to-liquids plants							
Charcoal production plants			-304,39				-304,39
Transformation not elsewhere specified	-0,06						-0,06
Energy Sector Own Use		**0,83**				**3,27**	**4,10**
Losses						**93,44**	**93,44**
FINAL CONSUMPTION	**697,76**	**1721,18**	**6738,80**			**778,09**	**9935,83**
Industry	642,73	416,16	100,55			374,69	1534,13
Transport	7,58	812,00	50,23				869,81
Households	8,26	90,04	4034,83			185,63	4318,76
Commercial and public services	3,20	312,38	470,41			159,18	945,17
Agriculture, Forestry and Fishing	35,98	90,60	2082,79			49,97	2259,35
Non-specified (HH, Com. & PS., Agri.)						8,61	8,61
Non-Energy Use							

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 plan basis. However, if data are not available on a unit basis, the convention for defining a CHP plan 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 note 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	Ft^3	l	m^3
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

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