Ministry of Water, Irrigation and Energy
Ethiopia

Energy Balance 2017/18

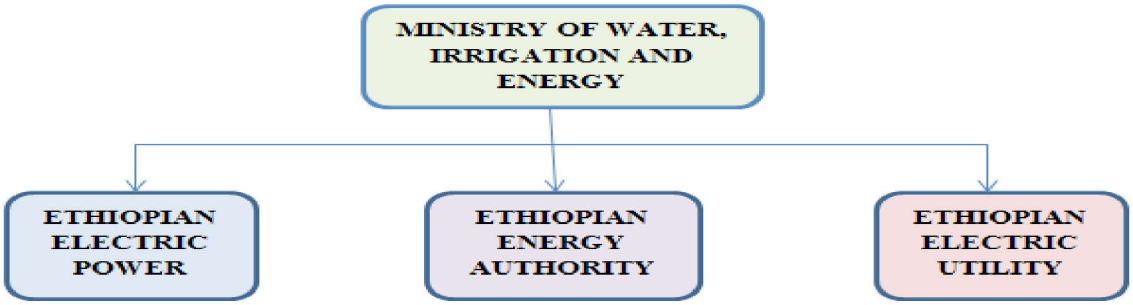
August 2019, Addis Ababa, Ethiopia

Table of Contents

ENERGY SECTOR OVERVIEW

1.1 Institutional Structure

Under the auspices of Ministry of Water, Irrigation and Energy, there are three supervised Energy institutions and three Energy related directorates within the Ministry:



The Ethiopian Electric Power Corporation (EEPCO), formerly known as the Ethiopian Electric Light and Power Authority (EELPA), was established as a public enterprise under Regulations No. 18/1997 on July 7, 1997. Recently, EEPCo restructured again as two separate institutions namely: Ethiopian Electric Power (EEP) and Ethiopian Electric Utility (EEU) and established as a public enterprise by the Council of Ministers regulation No, 302/2013 for EEP & regulation No, 303/2013 for EEU. These Ethiopian Electric institutions shall be governed by the Public Enterprise Proclamation No, 25/1992.

Ethiopian Energy Authority (EEA)

The Ethiopian Energy Authority (EEA) was previously, established as a regulatory body for the electric sector by the Proclamation Number 86/1997, and was then called the Ethiopian Electricity Agency. And it has now been re-organized as Ethiopian Energy Authority by proclamation number 810/2013.

The Energy Authority is mandated to issue license, set and regulate grid and off grid tariffs and supervise the generation, transmission, distribution, sales, import and export of electricity; formulate and promote energy efficiency and conservation strategy; approve electric power purchase and network service agreements; issue different energy codes and standards and supervise the implementation.

Ethiopian Electric Power (EEP)

The Ethiopian Electric Power (EEP), formerly known as the Ethiopian Electric Light and Power Authority (EELPA), was established as a public enterprise under Regulations No. 18/1997 on July 7, 1997.

The Corporation is an institution engaged in the business of generating, transmitting, distributing and selling of electricity, in accordance with economic and social development policies and priorities of the Federal Democratic Republic of Ethiopia /FDRE/.

The Corporation draws its development program and secures finance to execute viable power projects. It is run by Management Board and reports to the Ministry of water and Energy.

Ethiopian Electric Utility (EEU)

The Ethiopian Electric Utility (EEU) is one of the public enterprises assigned both to widen and modernize universal access to electricity. As part of its responsibility of expanding the service with utmost suitability and simplicity, it has introduced the prepaid card billing system for electric power consumption. The enterprise is an institution engaged in the business of distributing and selling of electricity; Both enterprises draw their development program and secure finance to execute viable projects. They still run by Management Board and reports to the Ministry of Water, Irri gation and Electricity.

Other governmental institutions engaged in the energy business are

- ✓ Ethiopian Petroleum Supply Enterprise /EPSE/
- ✓ Ministry of Mines, Petroleum and Natural Gas
- ✓ Geological Survey of Ethiopia

1.2 The Energy Balance

The Energy Balance which is shown in the section 2 tables describes the Supply and Final uses of Energy and different types of fuels. Total primary energy requirement also known as Total Primary Energy Supply, is obtained as the sum of indigenous production (Fuel wood, Hydro and Charcoal) and Imports of fossil fuel product (MGR, Diesel/ Gasoil, Jet Fuel, Kerosene, Heavy and Light Fuel Oil HFO & LFO).

Final energy consumption is the total amount of energy required (including biomass, petroleum and electricity) by end user as a final product. End users are mainly categorized into four sectors, namely Industry and construction, Transportation, Household and Service sectors. The biomass data for 2008/9 to 2017/18 EC were projected from the available Woody Biomass Inventory data. The import and stock changes data received from Ethiopian Petroleum supply Enterprise regarding jet fuel and Kerosene was integrated and provided as Jet/Kero. So, for the energy balance accounting purpose assumed Consumption plus up to 5% lose for jet fuel and for Kerosene of total import of Jet/Kero. According to the Ethiopian calendar the fiscal year is from July 8 to July 7 (Hamle 1st to Sene 30).

To generate the Energy Balance and Electricity Statistics for these years, the Ministry of Water, Irrigation and Electricity, used the International Atomic Energy Agency (IAEA) Energy Balance Studio (EBS) Tool.

Traditional fuels /Biomass energy sources (primary and derived)/ are the predominant, representing 87 percent of total energy sources in 2018.

Modern fuels contributed about 13% of total energy consumed in 2018, of which, 85% Hydrocarbon products (light petroleum products 26% and heavy petroleum products 49%,petroleum coke 3% and Coal 7%) and 15% electricity.

2. Units

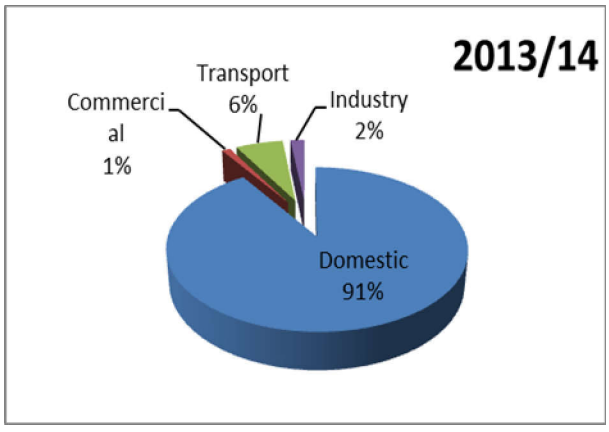
In order to compare the energy content of the different fuels, a common accounting unit, namely Kilo tone of oil equivalent /Ktoe/ is used.

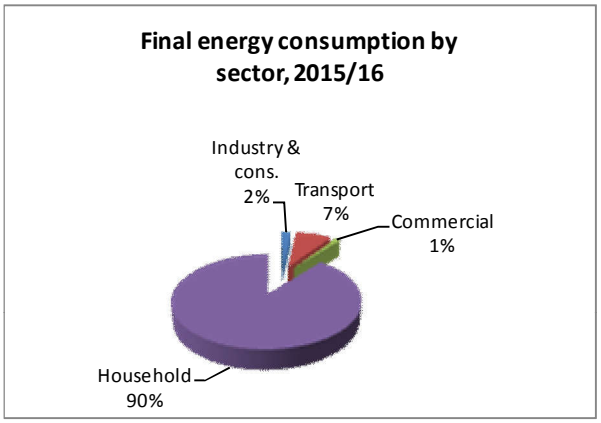
2.1 Total primary energy requirement.

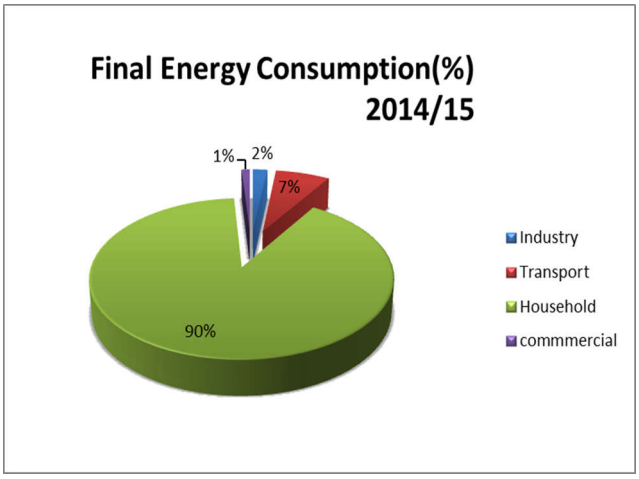
Total energy requirement of the country increased slightly by 2% from 41,461 in 2017 to 42,459 Ktoe in 2018. In 2018 imported fossil fuel products accounted 4430Ktoe of which coal import 363Ktoe accounts 1%, while locally available renewables such as biomass and electricity supplied the remaining 99% (42046Ktoe). In 2018, petroleum products which amounted to 4067 ktoe is imported.

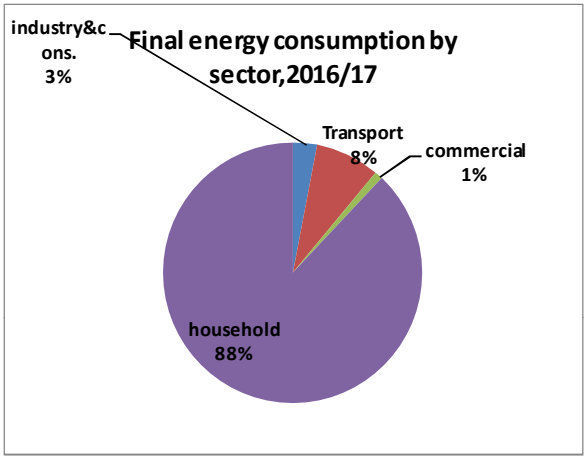
The total final energy consumption by all sectors of the economy in 2018 is 40039Ktoe of which 3% (1306Ktoe) light petroleum products (MGR, LFO, Jet fuel, LPG, Ethanol and kerosene), 6% (2524Ktoe) heavy petroleum products (ADO and HFO), 1 % (365Ktoe) hard coal, 2% (749Ktoe) electricity and 87% (34890Ktoe) biomass.

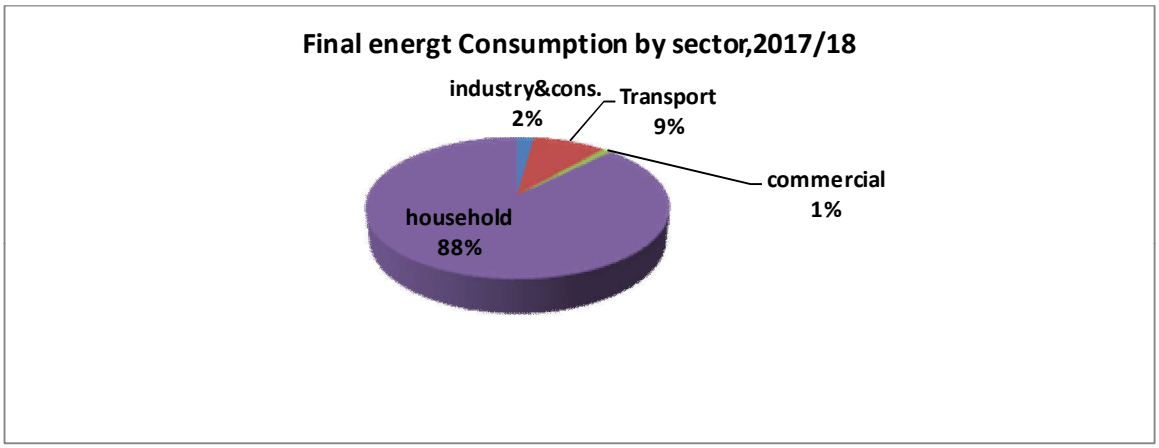
Final energy consumption by Sector

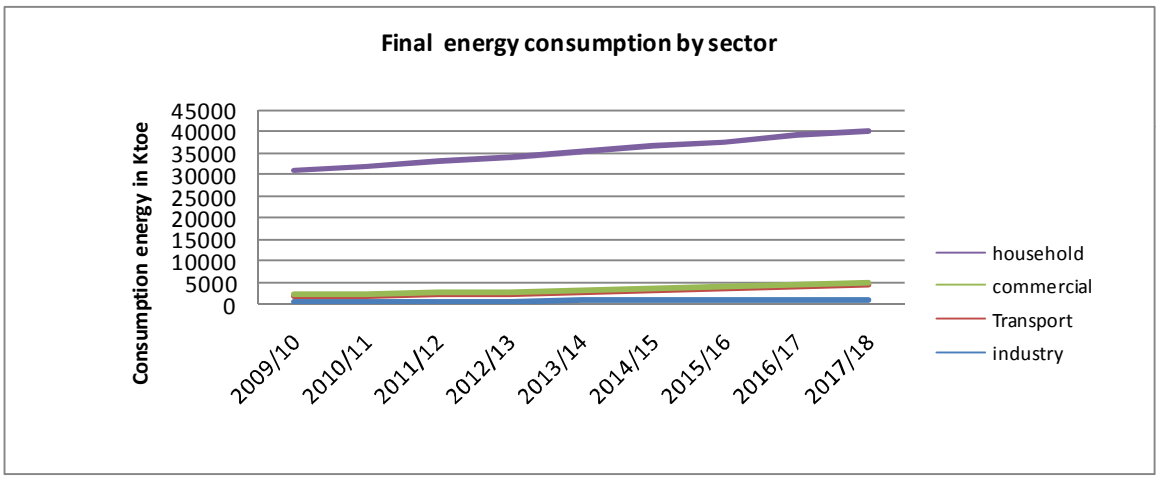


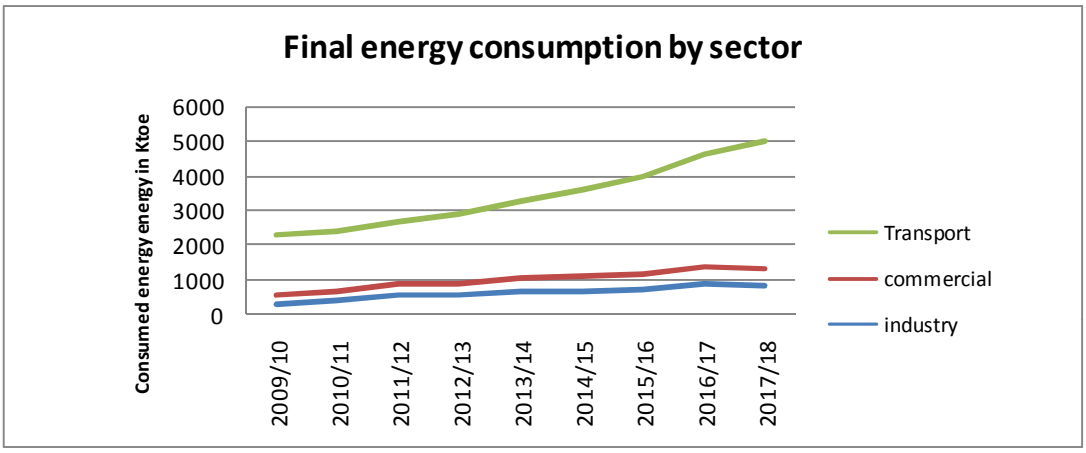


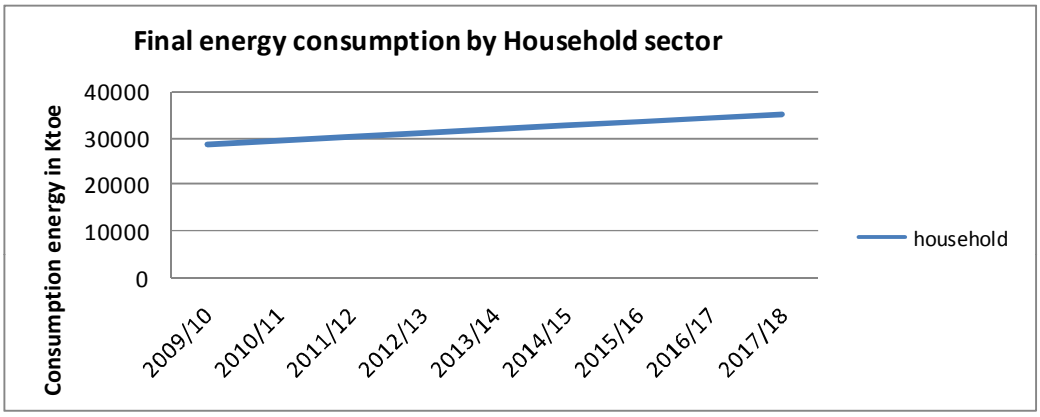

Final Energy Consumption(%)
2014/15
1%
2%
7%
90%
Industry
Transport
Household
commmercial


Final energy consumption by sector,2016/17
industry&cons.
3%
Transport
8%
commercial
1%
household
88%

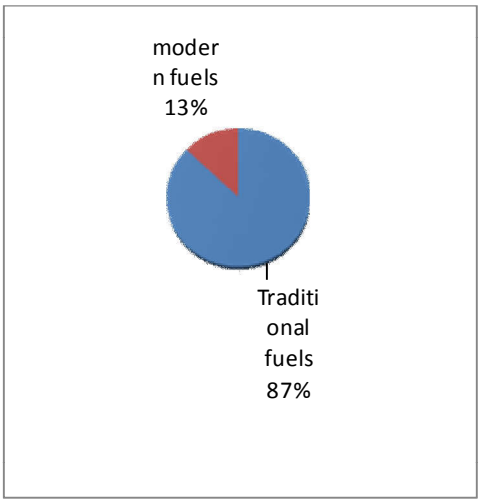

Final energt Consumption by sector,2017/18
industry&cons.
2%
Transport
9%
commercial
1%
household
88%

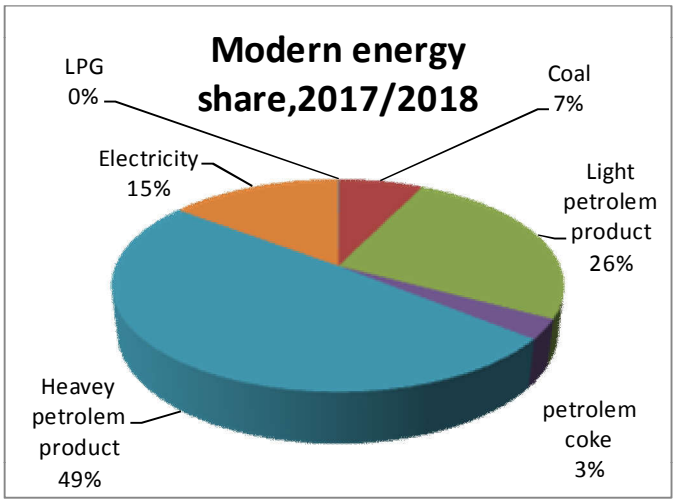

Final energy consumption by sector
Consumption energy in Ktoe
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
2009/10
2010/11
2011/12
2012/13
2013/14
2014/15
2015/16
2016/17
2017/18
household
commercial
Transport
industry





The total biomass energy consumption in 2017/18 (excluding ethanol used for transport sector) accounted for 87 % of the total energy consumed which is (34890Ktoe).





2.2 Local energy production

Total energy production from local renewable sources (Biomass, Hydro, wind and geothermal) rose by 2% from 37310Ktoe in 2017 to 38231Ktoe in 2018.

2.3 Imports of energy sources

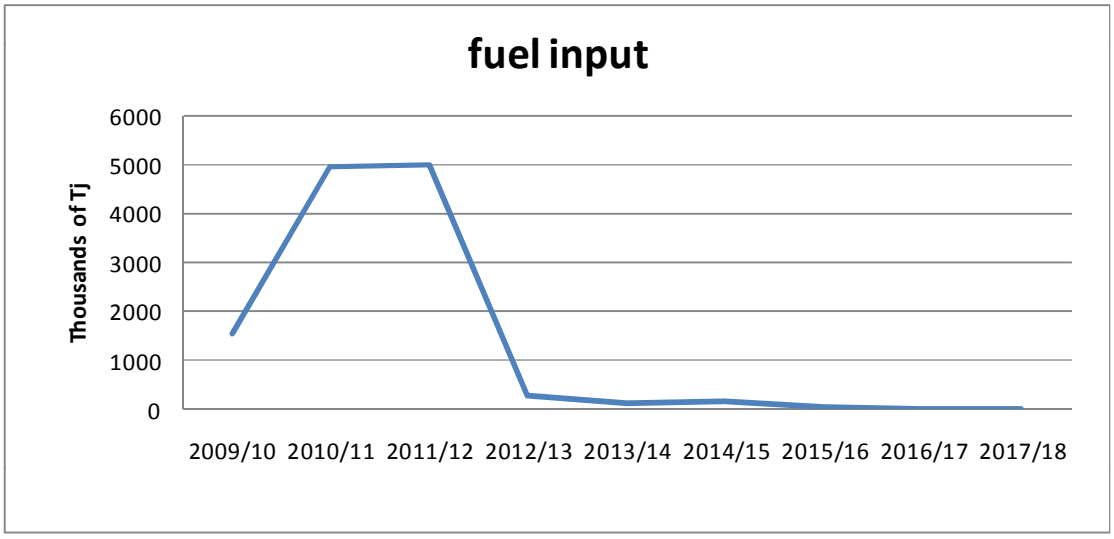
Data on total imports of energy sources show that some 4430ktoe of coal and petroleum products imported in 2018 compared with 4253ktoe in 2017, representing an increase of 4%. Starting from October 2008 blending of 5% ethanol and 95% of Benzene for city of Addis Ababa has been proceeding. In 2018, 4,286,123.73 Liters of Ethanol is produced.

2.4 Electricity Generation

13214Gwh (1136Ktoe) of electricity was generated in 2018; and compared to the 12535Gwh (1078 Ktoe) in 2017, that will represent an increase of 5%. Hydro energy represented 96%, Wind 4%.The peak demand of ICS in 2018 reached about 2602.9 MW (7.4% growth as compared with 2409.45 MW in 2017). This peak demand is considered to be superseding demand. Electricity use by sectors was 31% in industry and construction, 44% in household and 25% in Service sectors. Electricity statistics for years 2008 - 2018 is attached in table 7. There is insignificant utilization of standalone home system of solar Photovoltaic electricity generation in Household and Public sector like schools, health centers and other organizations. These data is not included in the produced Energy Balance and Statistics.

2.5 Fuel input for electricity generation

Fuel input for electricity generation decreased from 119 Ktoe in 2010 to almost 0 in 2018.



2.6 Electricity sales and consumption

Electricity sales increased from 12535.2Gwh in 2017 to13214 Gwh in 2018, which is an increase of 5%. The per capita consumption of electricity per annum (electricity sold per capita per annum) stood at 100 kWh in 2018.

2.7 Final energy consumption

Final energy consumption grown up by 2.5%, from 38964 Ktoe in 2017 to 40039Ktoe in 2018. "Households" and "Transport" sectors were the two largest energy consuming sectors. Accounting for 87.6% and 9.1% of energy consumed respectively. They were followed by "Industry & Construction" 2.1 % and "Service" 1.2%.

2.8 Industry & construction

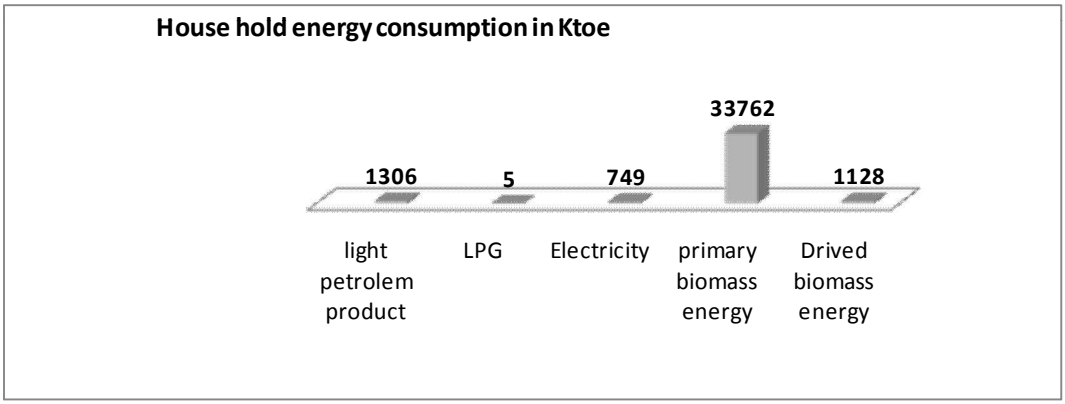
Industry and construction sector use accounted 2.08% of the final consumption, of which 28.1% petroleum products & 43.7coal and 28.2 electricity in 2018. Petroleum product consumption in 2018 by industry and construction was 5.7%, household 2%& service 2% and transport 90.3%.

2.9 Transport

Transportation sector energy use accounted for 9.2% of final energy consumption and 90.3% of it consists petroleum fuels in 2018; the remaining is ethanol.

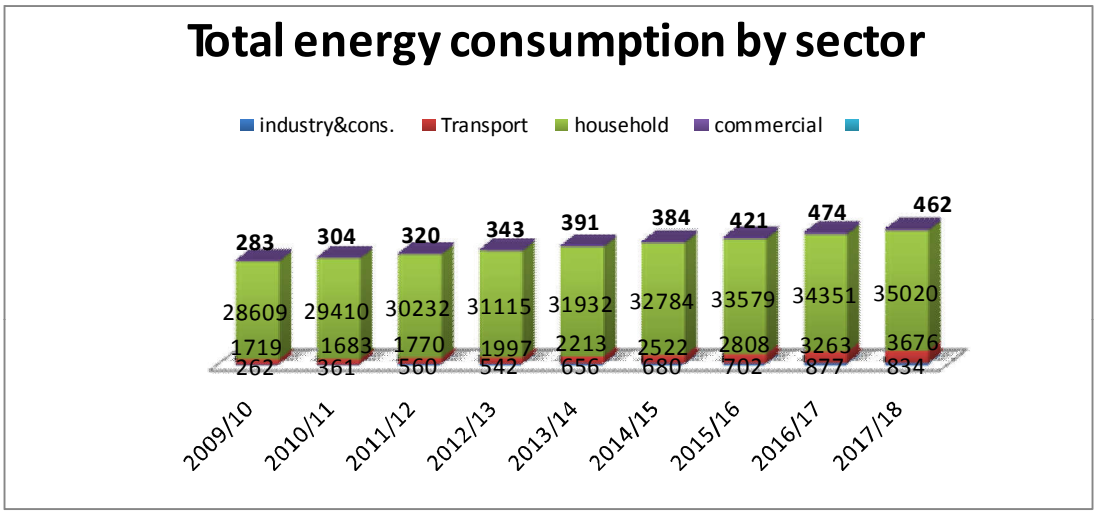
2.10 Household

Household energy use was almost entirely from biomass (88 %) in 2018, electricity and petroleum products together accounted for 10.1% of household consumption.



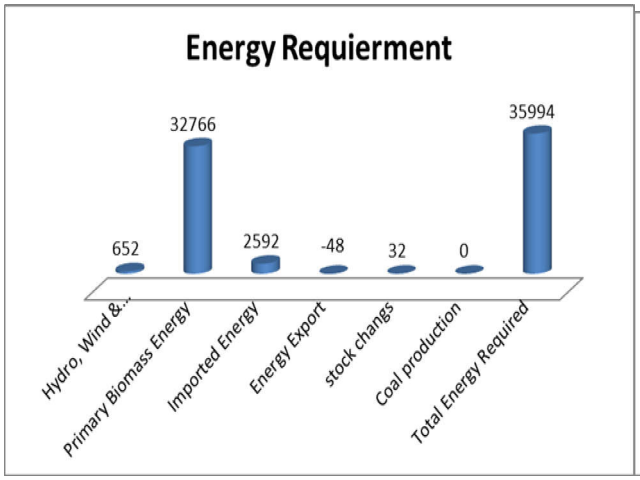
2.11 Service

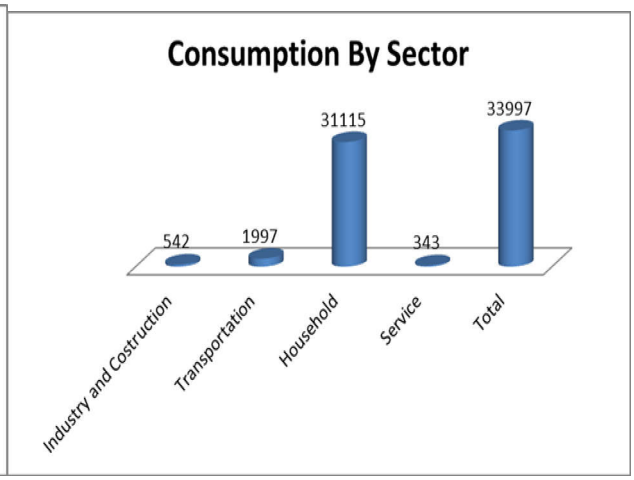
Commercial and Service sector use of energy accounted 2.7% of the final consumption, of which 2.2% electricity and 0.68 biomass in 2018.

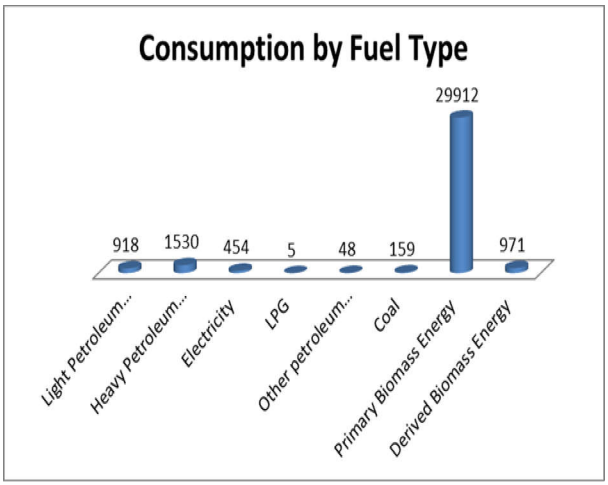


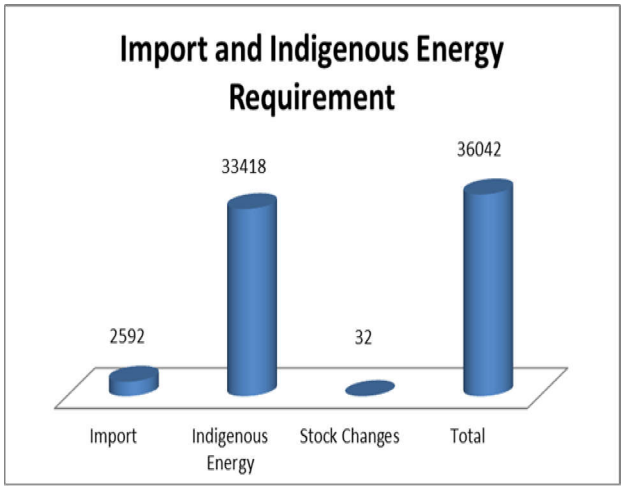
3. Graphic representation

Year 2013/14

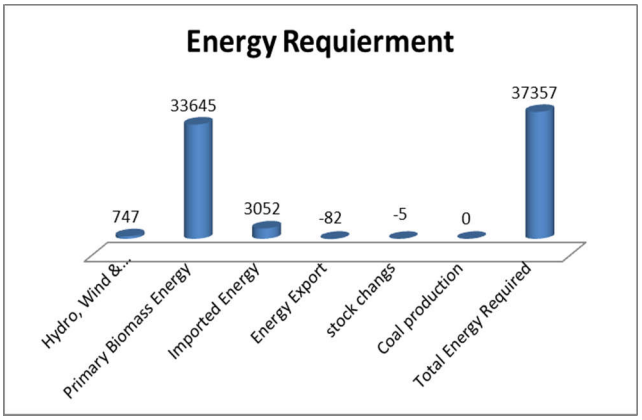


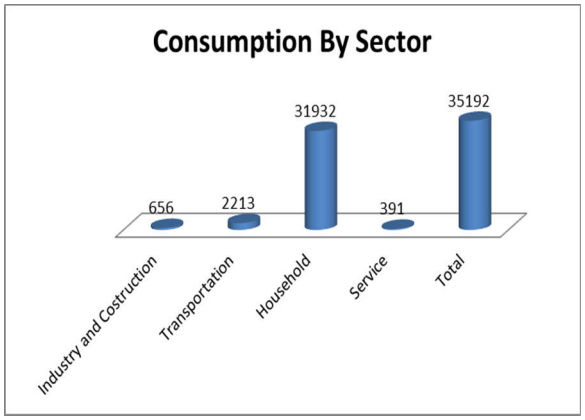




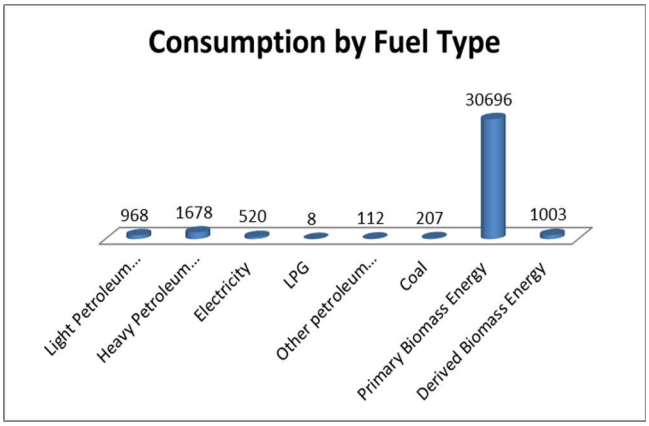


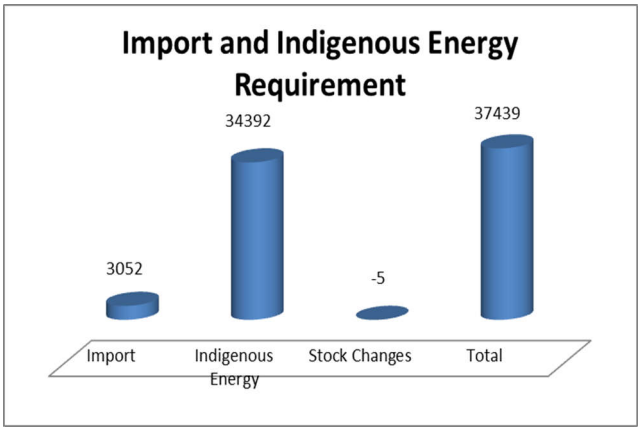
Year 2014/15



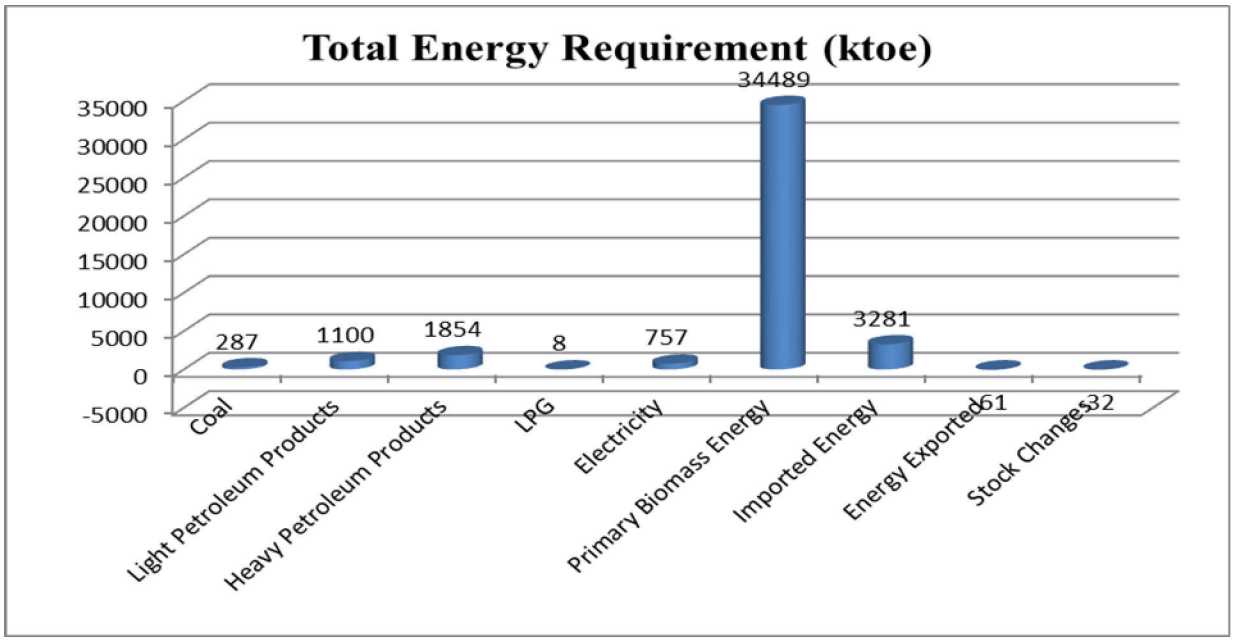


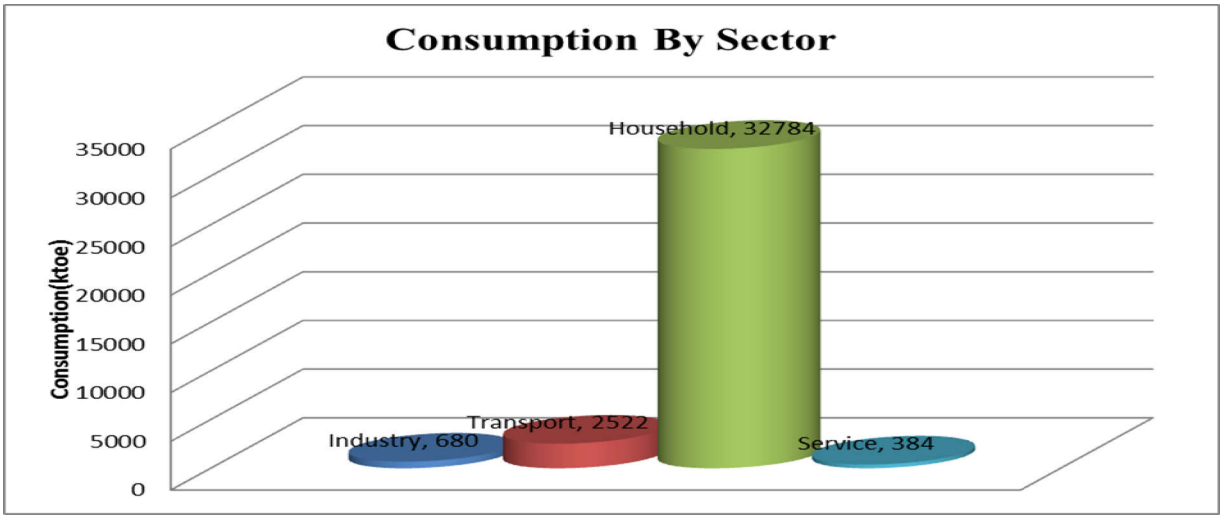
Year 2014/15



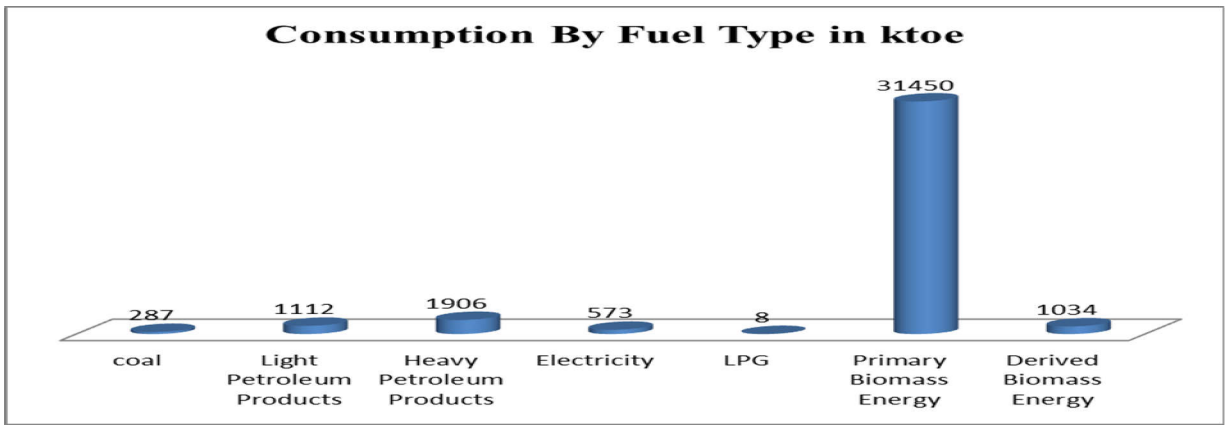


Year 2015/16

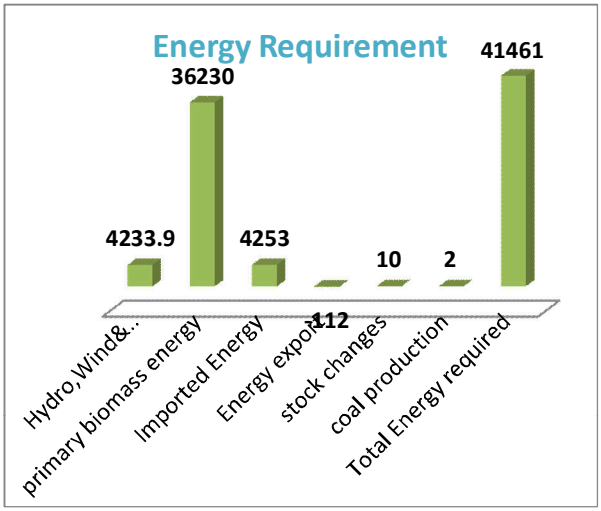


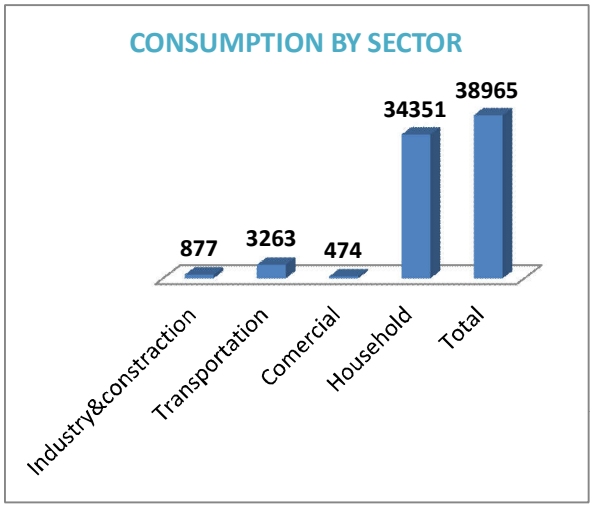


Year 201 5/16

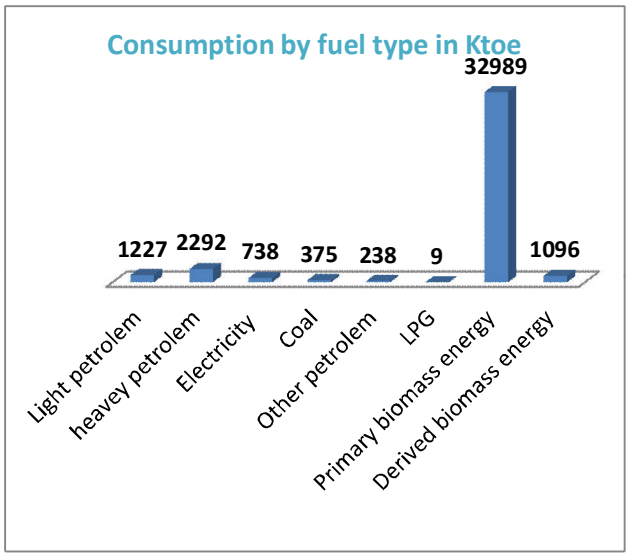


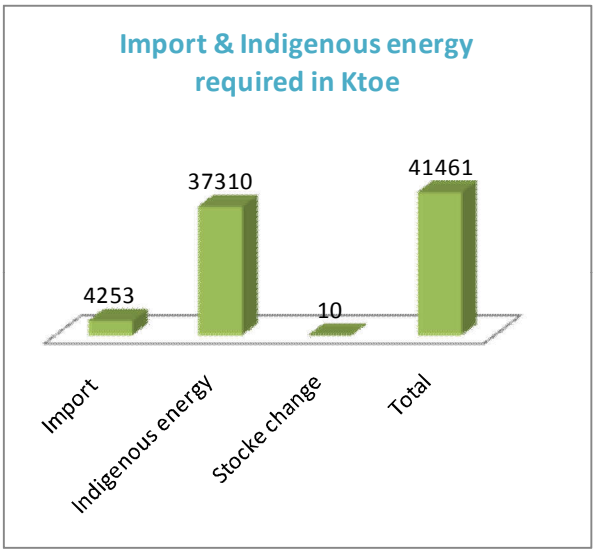
Year 201 6/17



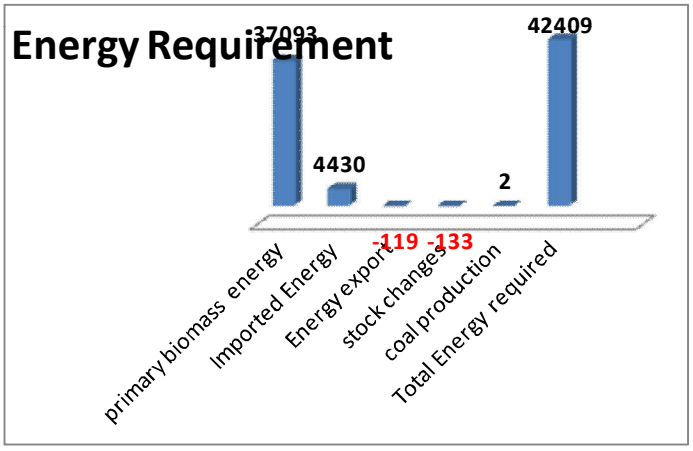


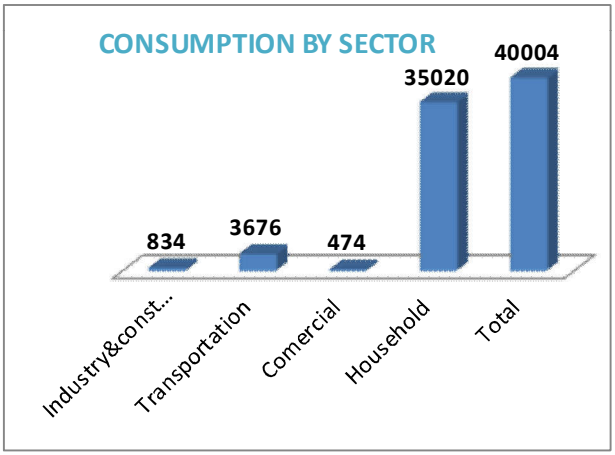
Year 2016/17

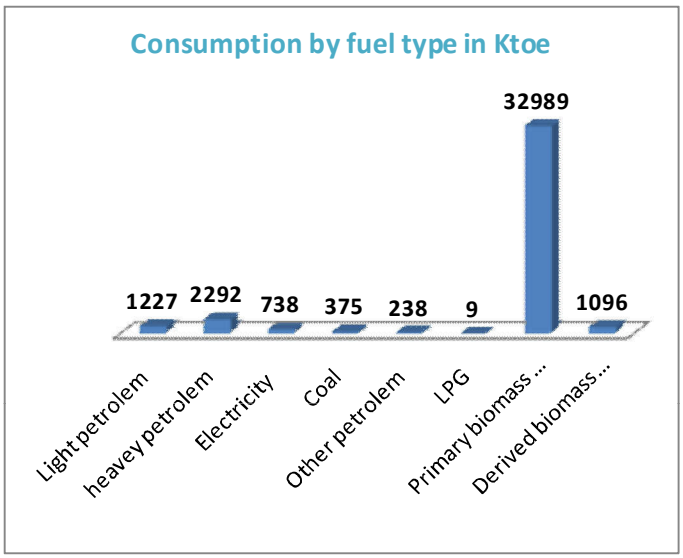


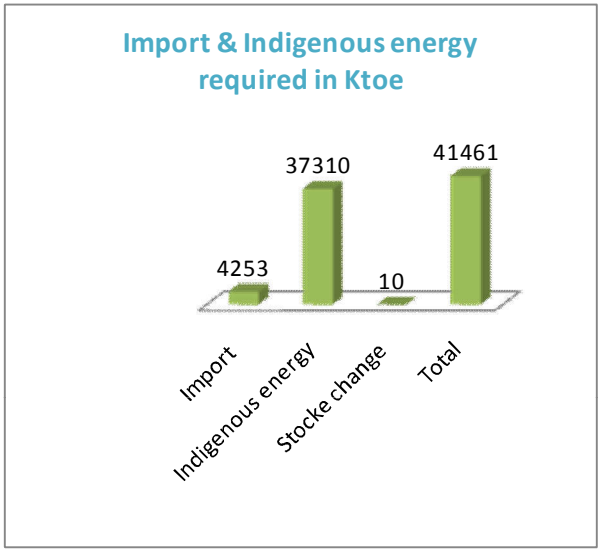


Year 2017/18

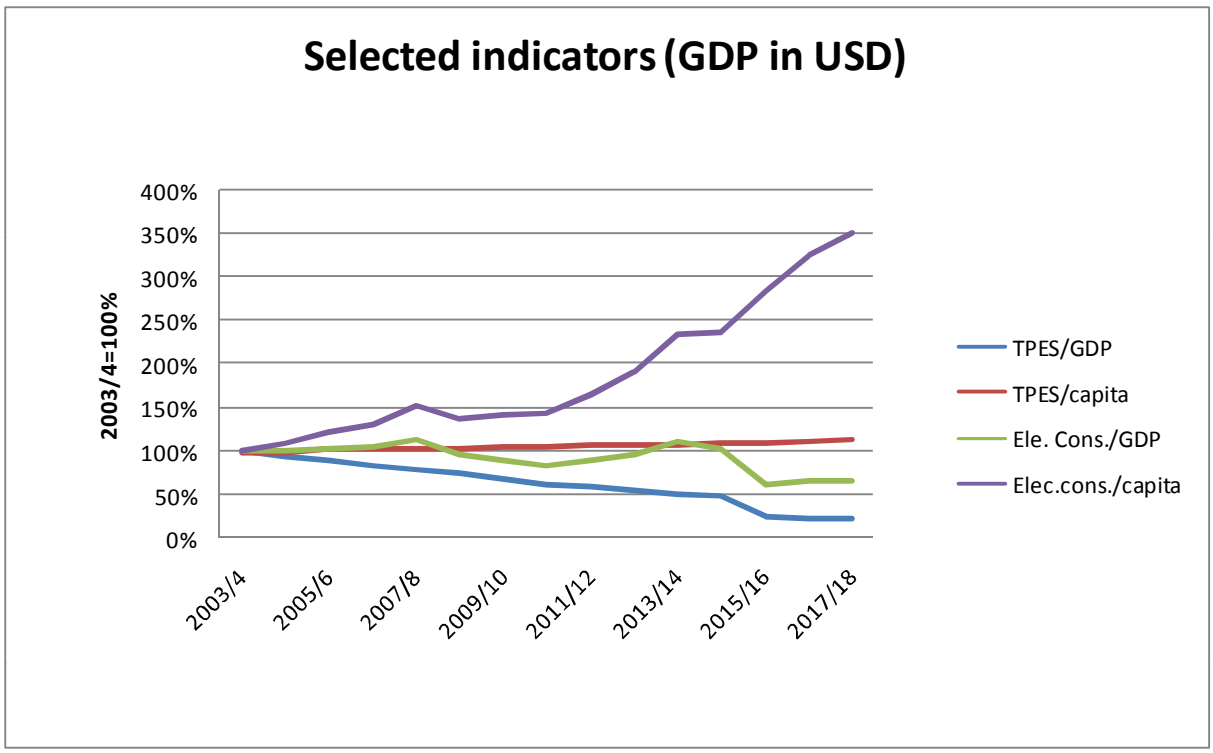








3.1 Selected Energy Indicators



From the above Energy Indicator Graph; Electricity consumption per GDP and Total Primary Energy supply per GDP have decreased (i.e. The GDP Growth was not based on Energy consuming sector like manufacturing as much but on Agriculture and service sectors which consume relatively less energy) while Electricity Consumption per capita has increased more than three times from 2003/4 up to 20117/18 and the Total Primary Energy Supply per capita is constant. To do this analysis we use 2003/4=100% as a base year.

3.1 Energy Balance of the Year from 2017/18 – 2913/14GC (2011-2006 EFY)

Energy Balance of the Year 2017/18 GC (Year 2010 EFY)

Unit: ktoe

Item	Hard coal, lignite and peat (1)	Light petroleum products (4)	Heavy petroleum products (5)	Other petroleum products (6)	LPG and refinery gas (7)	Electricity (10)	Primary biomass energy (11)	Derived biomass energy (12)	Total energy (14)
Production of primary energy	2					1136	37093		38231
Imports	363	1284	2624	154	5				4430
Exports						-123			-123
Stock changes		22	-101						-79
Total energy requirements	365	1306	2523	154	5	1013	37093		42459
Energy converted							-3316	1128	-2188
Other conversion industries							-3316	1128	-2188
Consumption by energy sector						-2			-2
Losses in transport and distribution						-253			-253
Statistical differences		54					-15		39
Final consumption	365	1306	2524	154	5	795	33762	1128	40039
By industry and construction	365	37	43	154		235			834
Chemical industry									
Other industry and construction	365	37	43	154		235			834
By transport		1188	2481				7		3676
Road		461	2481				7		2949
Air		727							727
By households and other consum.		81			5	560	33755	1128	35529
Households		81			5	369	33490	1120	35065
Other consumers						190	264	8	462

Ethiopian Fiscal year(EFE)is from july 8,to july 7.

Energy Balance for the year 2016/17GC (Year 2009 EFY)

Unit: ktoe

Item	Hard coal, lignite and peat (1)	Light petroleum products (4)	Heavy petroleum products (5)	Other petroleum products (6)	LPG and refinery gas (7)	Electricity (10)	Primary biomass energy (11)	Derived biomass energy (12)	Total energy (14)
Production of primary energy	2					1078	36230		37310
Imports	373	1299	2334	238	9				4253
Exports						-112			-112
Marine / aviation bunkers									
Stock changes		5	5						10
Total energy requirements	375	1304	2339	238	9	966	36230		41461
Energy converted		0	0			0	-3225	1096	-2129
Electric power plants		0	0			0			
Other conversion industries							-3225	1096	-2129
Consumption by energy sector						-4			-4
Losses in transport and distribution						-223			-223
Statistical differences		-78	-48	0		0	-16	0	-142
Final consumption	375	1227	2292	238	9	738	32989	1096	38964
By industry and construction	375	42	38	238		184			877
Other industry and construction	375	42	38	238		184			877
By transport		1009	2254						3263
Road		382	2254						2636
Rail									
Air		627							627
By households and other consum.		176			9	554	32989	1096	34824
Households		176			9	347	32734	1085	34351
Agriculture									
Other consumers						207	256	11	474

Ethiopian Fiscal year(EFE)is from july 8,to july 7.

Energy Balance for the year 2015/16GC (Year 2008 EFY)

Unit:ktoe

Item	Hard coal, lignite and peat	Light petroleum products	Heavy petroleum products	Other petroleum products	LPG and refinery gas	Electricity	Primary biomass energy	Derived biomass energy	Total energy
Production of primary energy						899	35353		36252
Imports	292	1143	2056	0	8				3499
Exports						-60			-60
Marine / aviation bunkers									
Stock changes		-9	19						10
Total energy requirements	292	1134	2075		8	839	35353		39701
Energy converted		0				0	-3132	1065	-2067
Electric power plants		0				0			
Other conversion industries							-3132	1065	-2067
Consumption by energy sector						-3			-3
Losses in transport and distribution						-179			-179
Statistical differences		7	3			184	1	0	195
Final consumption	292	1158	2040		8	730	32217	1065	37510
By industry and construction	292	42	69	0		299			702
Chemical industry									
Other industry and construction	292	42	69	0		299			702
By transport		837	1971						2808
Road		328	1971						2299
Rail									
Air		509							509
By households and other consum.		279			8	431	32217	1065	34000
Households		279			8	270	31970	1052	33579
Agriculture									
Other consumers						161	247	13	421

Ethiopian Fiscal year(EFE)is from july 8,to july 7.

Energy Balance for the Year 2014/15 (Year 2007 EFY)

Unit:ktoe

Item	Hard coal, lignite and peat	Light petroleum products	Heavy petroleum products	Other petroleum products	LPG and refinery gas	Electricity	Primary biomass energy	Derived biomass energy	Total energy
Production of primary energy						818	34489		35307
Imports	287	1106	1880	0	8				3281
Exports						-61			-61
Stock changes		-6	-26						-32
Total energy requirements	287	1100	1854		8	757	34489		38495
Energy converted		-1				0	-3039	1034	-2006
Electric power plants		-1				0			-1
Other conversion industries							-3039	1034	-2005
Consumption by energy sector						-1			-1
Losses in transport and distribution						-184			-184
Statistical differences		11	52		0	1	1	0	65
Final consumption	287	1112	1906		8	573	31450	1034	36370
By industry and construction	287	42	131	0		220			680
Other industry and construction	287	42	131	0		220			680
By transport		742	1775				5		2522
Road		256	1775				5		2036
Rail									
Air		485							485
By households and other consum.		328			8	353	31445	1034	33168
Households		328			8	222	31207	1019	32784
Agriculture									
Other consumers						131	238	15	384

Ethiopian Fiscal Year (EFY) is from July 8, to July

Energy Balance for the Year 2013/14 (Year 2006 EFY)

Unit:ktoe

Item	Hard coal, lignite and peat	Light petroleum products	Heavy petroleum products	Other petroleum products	LPG and refinery gas	Electricity	Primary biomass energy	Derived biomass energy	Total energy
Production of primary energy						747	33645		34392
Imports	207	1006	1719	112	8				3052
Exports						-82			-82
Stock changes		4	-9						-5
Total energy requirements	207	1010	1710	112	8	665	33645		37357
Energy converted						1	-2950	1003	-1946
Electric power plants			0			1			1
Other conversion industries							-2950	1003	-1947
Consumption by energy sector						-4			-4
Losses in transport and distribution						-142			-142
Statistical differences		-42	-32			0	1		-73
Final consumption	207	968	1678	112	8	520	30696	1003	35192
By industry and construction	207	40	122	112		175			656
Other industry and construction	207	40	122	112		175			656
By transport		653	1556				4		2213
Road		220	1556				4		1780
Rail									
Air		434							434
By households and other consum.		275			8	345	30692	1003	32323
Households		275			8	204	30463	982	31932
Agriculture									
Other consumers /Commercial/						141	229	21	391

Ethiopian Fiscal Year (EFY) is from July 8, to July

Ethiopian Electricity Statistics for Years 2008/9 - 2017/18 (Years 2001 - 2010 EFY)

Item	2014	2015	2016	2017	2018
Production, trade and consumption	GWh	GWh	GWh	GWh	GWh
Total public and self-producer	8692	9515	10461	12535	13214
Hydro	8500	9013	9674	11753	12681
Geothermal	192	499	786	782	533
Thermal		3	1	0	
Total public	8692	9515	10461	12535	13214
Hydro	8500	9013	9674	11753	12681
Geothermal	192	499	786	782	533
Thermal		3	1	0	
Station use and station loss		10	38	50	21
Net production	8692	9525	10499	12585	13235
Exports		712	166	1303	1432
Losses in conversion and distrib.		2143	2787	2597	2945
Consumption	5435	6660	7470	8586	9242
By industry and construction	2090	2556	2278	2141	2732
By households and other cons.	3345	4104	5192	6445	6510
Net installed capacity	MW	MW	MW	MW	MW
Total public and self-producer	2230	2223	4185	4234	4234
Hydro	1940	1940	3813	3816	3815
Geothermal	178	171	332	331	332
Thermal	112	112	40	87	87
Total public	2230	2223	4185	4234	4234
Hydro	1940	1940	3813	3816	3815
Geothermal	178	171	332	331	332
Thermal	112	112	40	87	87
Thermal power plant input	TJ	TJ	TJ	TJ	TJ
Residual fuel oil			7	0	
Naphtha		35	6	1	
Others	TJ	TJ	TJ	TJ	TJ
Total input		35	13	1	
Total production		12	4	0	
Estimated efficiency (% of production to input)		34	31		

Annex I: Collected and used Data by fuel type

1. Biomass

1.4 Biomass Data for the year 2010 EFY (2017/18)

Units: Tera Joule

Description	Firewood		Charcoal	Biogas	Agro Residues and Waste	Ethanol (in liters)
	Commercial	Non-Commercial				
Production	253,199.33	1,004,475.2		-	314,838.0367	4,286,123.73
Imports	-	-	-	-	-	
Exports	-	-	-	-	-	
Total Supply	-	-	-	-	-	
Charcoal Production - Input	139,386.454					
- Output			47,743.37			
Input to Electricity Production	-	-	-	-	-	
Total Final Consumption	1,116,964.66	1,004,475.2	46,814.37	-	**310,668.70**	4,286,123.73
Of which:- Industry	**NA**	-	-	-	-	
-Transport	-	-	-	-	-	4,286,123.73
of which: - Com.& Public	11,257.33	-	929	-	-	
-Households	1,105,707.33	974,845.42	47,743.37	-	310,668.70	
-Agriculture	**NA**	-	-	-	**NA**	

NA=not available

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

1.3 Biomass Data for the year 2009 EFY (2016/17)

Units: Tera Joule

Description	Firewood		Charcoal	Biogas	Agro Residues and Waste	Ethanol (in liters)
	Commercial	Non-Commercial				
Production	242,838.441	974,845.42		-	301,504.46	568,584.3
Imports	-	-	-	-	-	
Exports	-	-	-	-	-	
Total Supply	-	-	-	-	-	
Charcoal Production -Input	135,417.259					
-Output			46,039.193			
Input to Electricity Production	-	-	-	-	-	
Total Final Consumption	107,485.448	974,845.42	45,962.53	-	301,504.46	5,372,092.8
Of which: -Industry	**NA**	-	-	-	-	
-Transport	-	-	-	-	-	6,372,092.8
of which: Com.& Public	10,744.99	-	900.564	-	-	
Households	96,740,853	974,845.42	45,061.429	-	304,631.46	
Agriculture	**NA**	-	-	-	**NA**	

NA=not available

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

1.2 Biomass Data for the year 2008 EFY (2015/16)

Units: Tera Joules

Description	Firewood		Charcoal	Biogas	Agro Residues and Waste	Ethanol (in liters)
	Commercial	Non-Commercial				
Production	235,067.773	952,623.085		-	294,631.28	6,355,756.90
Imports	-	-	-	-	-	
Exports	-	-	-	-	-	
Total Supply	-	-	-	-	-	
Charcoal Production -Input	131,454.327					
-Output			44,692.624			
Input to Electricity Production	-	-	-	-	-	
Total Final Consumption	103,667.244	952,623.085	44,629.3	-	294,631.277	6,218,887.9
Of which: -Industry	NA	-	-	-	-	
-Transport	-	-	-	-	-	6,218,887.9
of which: Com.& Public	10,363.697	-	881.952	-	-	
Households	93,304.094	952,623.09	43,746.912	-	294,631.28	
Agriculture	NA	-	-	-	NA	

NA=not available

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

1.1 Biomass Data for the year 2006 EFY 2013/14

Units: Tera Joules

Description	Firewood		Charcoal	Biogas	Agro Residues and Waste	Ethanol (in liters)
	Commercial	Non-Commercial				
Production	219,501.07	908,129.73		-	280,869.83	7,323,786
Imports	-	-	-	-	-	
Exports	-	-	-	-	-	
Total Supply	-	-	-	-	-	
Charcoal Production -Input	123,510.43					
-Output			41,995.48			
Input to Electricity Production	-	-	-	-	-	
Total Final Consumption	96,017	908,129.73	41,962	-	280,869.83	7,650,683
Of which: -Industry	NA	-	-	-	-	
-Transport	-	-	-	-	-	7,650,683
of which: Com.& Public	9,599.55	-	847,.72	-	-	
Households	86,417.64	908,129.73	41,114	-	280,869.83	
Agriculture	NA	-	-	-	NA	

NA=not available

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

2. Electricity

2.1 Electricity Data for the year 2009 EFY 2017/18

	Primary or Secondary Fuels used to Produce Electricity		Gross Electricity Produced	
	Quantity	unit	GWh	
PRODUCTION		Specify the unit for each fuel	Total	of which Auto producers
1) Fossil Fuels Plants			-	-
Oil			-	-
Light fuel oil	0			
Gas/Diesel				-
Heavy fuel oil		Ton		
Gas				-
Coal				-
2) Nuclear				-
3) Hydro				-
4) Geothermal				-
5) Wind				-
6) Solar				-
7) Biomass				-
8) Others				-
Total Production				-

SUPPLY & DEMAND BALANCE	MWh
Total Production	13,211.3
Imports	-
Exports	1,386.3
Total Supply	
Own Use	21
Distribution & Transmission Losses	2,944.52
Total Final Consumption	8,714.26
of which: Industry	2,731.6
Transport	-
Other/auxiliary&prepaid/	-
Of which: Com.& Public	1,969.03
Households	3,769.63
Street Light	244

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

2.2 Electricity Data for the year 2009 EFY2016/17

	Primary or Secondary Fuels used to Produce Electricity		Gross Electricity Produced	
	Quantity	unit	GWh	
PRODUCTION		Specify the unit for each fuel	Total	of which Auto producers
1) Fossil Fuels Plants			-	-
Oil			-	-
Light Fuel Oil	0			
Gas/Diesel				-
Heavy Fuel Oil		Ton	2.63	
Gas				-
Coal				-
2) Nuclear				-
3) Hydro				-
4) Geothermal				-
5) Wind				-
6) Solar				-
7) Biomass				-
8) Others				-
Total Production				-

SUPPLY & DEMAND BALANCE	Mwh
Total Production	12,535.16
Imports	-
Exports	1,302.97
Total Supply	
Own Use	49,643
Distribution & Transmission Losses	2,596,610
Total Final Consumption	8,585,940
of which: Industry	3093410
Transport	-
Other /Auxiliary & Prepaid/	-
Of which: Com.& Public	18,99,640
Households	3,561,850
Street Light	31,020

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

2.3 Electricity Data for the year 2008 EFY 2015/16

	Primary or Secondary Fuels used to Produce Electricity		Gross Electricity Produced	
	Quantity	unit	GWh	
PRODUCTION		Specify the unit for each fuel	Total	of which Auto producers
1) Fossil Fuels Plants			-	-
Oil			-	-
Light Fuel Oil	0			
Gas/Diesel				-
Heavy Fuel Oil		Ton	2.63	
Gas				-
Coal				-
2) Nuclear				-
3) Hydro				-
4) Geothermal				-
5) Wind				-
6) Solar				-
7) Biomass				-
8) Others				-
Total Production				-

SUPPLY & DEMAND BALANCE	Mwh
Total Production	10,461,000
Imports	-
Exports	700,420
Total Supply	
Own Use	38,160
Distribution & Transmission Losses	2,084,500
Total Final Consumption	8,882,889
of which: Industry	3,753,700
Transport	-
Other /Auxiliary & Prepaid/	-
Of which: Com.& Public	2,017,800
Households	3,080,800
Street Light	30,563

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

2.4 Electricity Data for the year 2007 EFY 2014/15

	Primary or Secondary Fuels used to Produce Electricity		Gross Electricity Produced	
	Quantity	unit		GWh
PRODUCTION		Specify the unit for each fuel	Total	of which Auto producers
1) Fossil Fuels Plants			-	-
Oil			-	-
Light Fuel Oil	0			
Gas/Diesel				-
Heavy Fuel Oil		Ton	0.786	3.31
Gas				-
Coal				-
2) Nuclear				-
3) Hydro				-
4) Geothermal				-
5) Wind				-
6) Solar				-
7) Biomass				-
8) Others				-
Total Production				-

SUPPLY & DEMAND BALANCE	MWh
Total Production	9,515,050
Imports	-
Exports	712,492.766.05
Total Supply	
Own Use	9,515
Distribution & Transmission Losses	2,149,330.31
Total Final Consumption	6,659,574
of which: Industry	2,556.000
Transport	-
Other /Auxiliary & Prepaid/	-
Of which: Com.& Public	1,486,653
Households	2,585,845
Street Light	31070

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

2.5 Electricity Data for the year 2005 EFY 2013/14

	Primary or Secondary Fuels used to Produce Electricity		Gross Electricity Produced	
	Quantity	unit	MWh	
PRODUCTION		Specify the unit for each fuel	Total	of which Auto producers
1) Fossil Fuels Plants			-	-
Oil			-	-
Light Fuel Oil	0	Ton	-	-
Gas/Diesel			8,115.42	-
Heavy Fuel Oil			-	-
Gas			-	-
Coal			-	-
2) Nuclear			-	-
3) Hydro			8,337,619.805	-
4) Geothermal			-	-
5) Wind			355,757.851	-
6) Solar			-	-
7) Biomass			-	-
8) Others			-	-
Total Production			8,701,493.1	-

SUPPLY & DEMAND BALANCE	MWh
Total Production	8,701,493.1
Imports	-
Exports	954,159.26
Total Supply	8,701,493.1
Own Use	5,209.17
Distribution & Transmission Losses	1,654,790.14
Total Final Consumption	6,087,334.54
of which: Industry	2,032,476.2
Transport	-
Other /Auxiliary & Prepaid/	42,399.68
Of which: Com.& Public	1,612,983.23
Households	2,374,628.13
Street Light	24,847.3

Ethiopian Fiscal Year (EFY) is from July 8, to July 7

3. Hydrocarbons

3.5 Hydrocarbon Data for the year 2010 EFY 2017/18

Units:Tonnes

	Crude Oil & Others				Petroleum Products							
	Crude Oil	Coal	Total	LPG	Gasoline	Jet Fuel	Kerosene	Gas/ Diesel Oil	Light Fuel Oil	Heavy Fuel Oil	Pet.coke	Total
Production												
Imports		**511,642**		**4,743**	**441,542**	**738,106**		**2,507,670**	**35,785**	**47,483**	**179,880**	**4,466,851**
Exports												
International Marine Bunkers												
Stock Changes					**581**		**2552**	**9244**	**14**			**12,391**
Total Supply												
Refinery: Input												
Output												
Input to Electricity Production												
Own Use												
Total Final Consumption		**511,642**		**4,743**	**435,732**	**690,440**	**76,046**	**2,415,230**	**34,385**	**41,506**	**179,880**	**4,389,604**
Of which: Industry		**511,642**							**34,385**	**41,506**	**179,880**	**767,413**
Transport					**435,732**	**690,440**		**2,415,230**				**3,540,402**
Others												
of which: Com.&Public												
Households				**4,743**			**76,046**					**80,789**
Agriculture												
Non-Energy Use												

Ethiopian Fiscal Year is from July 8, 2017 to July 7, 2018

3.4 Hydrocarbon Data for the year 2009 EFY 2016/17

Units:Tonnes

	Crude Oil & Others				Petroleum Products							
	Crude Oil	Coal	Total	LPG	Gasoline	Jet Fuel	Kerosene	Gas/ Diesel Oil	Light Fuel Oil	Heavy Fuel Oil	Pet.coke	Total
Production												
Imports		*526,217*		*8,297.06*	366,650		820,605	2,235,302	**41,609**	**37,582**	***306,702***	**4,342,964.06**
Exports												
International Marine Bunkers												
Stock Changes					1,259		3,617	4,128	**17**			**9,021**
Total Supply												
Refinery: Input												
Output												
Input to Electricity Production												
Own Use												
Total Final Consumption		*526,217*		*8,297.06*	360,806	595,421	164,043	2,194,438	39,457	37,196	***306,702***	**4,232,577.06**
Of which: Industry		*526,217*							39,457	37,196	***306,702***	**909,572**
Transport					360,806	595,421		**2,194,438**				**3,150,665**
Others												
of which: Com.&Public												
Households							164,043					**164,043**
Agriculture												
Non-Energy Use												

Ethiopian Fiscal Year is from July 8, 2016 to July 7, 2017

3.3 Hydrocarbon Data for the year 2008 EFY 2015/16

Units:Tonnes

	Crude Oil & Others				Petroleum Products							
	Crude Oil	Coal	Total	LPG	Gasoline	Jet Fuel	Kerosene	Gas/ Diesel Oil	Light Fuel Oil	Heavy Fuel Oil	Pet.coke	Total
Production												
Imports		411,292.96		7,196.80	308,036.00			1,930,539.00	35,956.00	71,076.00	210,531.00	3,709,976.00
Exports												
International Marine Bunkers												
Stock Changes					300.03		-6463	-18478	(1,258.00)			
Total Supply												
Refinery: Input												
Output												
Input to Electricity Production												
Own Use												
Total Final Consumption		411,292.96		7,196.80	309,973.00	4,083,524.00	260,524.00	1,919,550.00	39,529.00	66,947.00		7,309,068.00
Of which: Industry											210,531.00	
Transport												
Others		411,292.96							39,529.00	66,947.00	210,531.00	517,769.00
of which: Com.&Public												
Households					309,973.00	4,083,524.00		1,919,550.00				6,313,047.00
Agriculture												
Non-Energy Use												

Ethiopian Fisical Year is from July 8, 2015 to July 7, 2016

3.2 Hydrocarbon Data for the year 2007 EFY 2014/15

Units:Tonnes

	Crude Oil & Others				Petroleum Products							
	Crude Oil	Coal	Total	LPG	Gasoline	Jet Fuel	Kerosene	Gas/ Diesel Oil	Light Fuel Oil	Heavy Fuel Oil	Pet.coke	Total
Production												
Imports		**300.03**				**(1,258.00)**		**300.03**				**(1,258.00)**
Exports												
International Marine Bunkers					**(18,478.00)**					**(18,478.00)**		
Stock Changes				**(6,463.00)**					**(6,463.00)**			
Total Supply												
Refinery: Input												
Output												
Input to Electricity Production												
Own Use												
Total Final Consumption		**404,674.08**		**7,281.00**	**242,373.39**	**460,504.00**	**405,263.78**	**1,728,596.12**	**40,638.00**	**127,893.32**		**3,714,319.33**
Of which: Industry											**297,095.65**	
Transport		**404,674.08**							**40,638.00**	**118,940.00**	**297,095.65**	**861,347.72**
Others					**242,373.39**	**460,504.00**		**1,728,596.12**				**2,431,473.51**
of which: Com.&Public												
Households												
Agriculture												
Non-Energy Use												

Ethiopian Fiscal Year is from July 8, 2014 to July 7, 2015

3.1 Hydrocarbon Data for the year 2006 EFY 2013/14

Units:Tonnes

	Crude Oil & Others				Petroleum Products							
	Crude Oil	Coal	Total	LPG	Gasoline	Jet Fuel	Kerosene	Gas/ Diesel Oil	Light Fuel Oil	Heavy Fuel Oil	Pet.coke	Total
Production												
Imports		**291,388**		**7,231.1**	**211,598**	**700,744**		**1,558,342**	**37,128**	**114,995**	**143,662.72**	**3,065,088.8**
Exports												
International Marine Bunkers												
Stock Changes					**-720.9**		**-2,605.36**	**8,963.42**				
Total Supply												
Refinery: Input												
Output												
Input to Electricity Production												
Own Use												
Total Final Consumption		**291,388**			**207,819**	**411,593**	**256,739**	**1,514,693**	**37,319**	**118,940**	**143,662.72**	**2,982,153.7**
Of which: Industry		**291,388**							**37,319**	**118,940**	**143,662.72**	**299,921.7**
Transport					**207,819**	**411,593**		**1,514,693**				**2,134,105**
Others												
of which: Com.&Public												
Households							**256,739**					**256,739**
Agriculture												
Non-Energy Use												

Ethiopian Fiscal Year is from July 8, 2013 to July 7, 2014