

## II. ENERGY PRODUCTION

### 2.1 Electric Power Generation

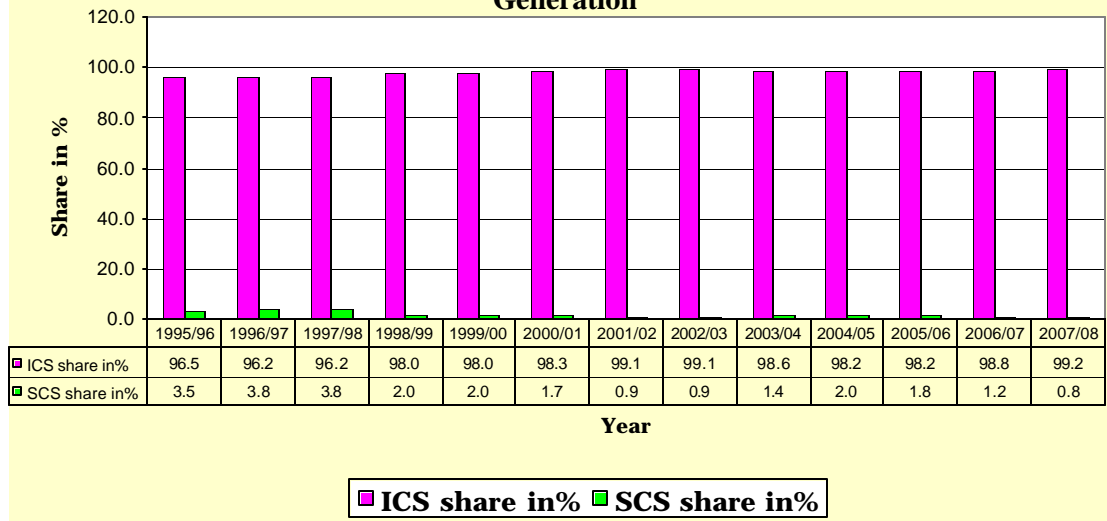
Ethiopia has immense potential for hydroelectric power and geothermal energy generation. Nine of its major rivers are suitable for hydroelectric power generation with a total capacity of generating 15,000-30,000 MW. Apart from this, the country has vast potential for geothermal energy generation. Despite such huge resources, the country has so far managed to utilize merely 790 MW of its power generating potential and, as a result, only about 17 percent of the population has access to electricity.

The Ethiopian Electric Power Corporation (EEPCo) is a public enterprise with the mandate of generating, transmitting, distributing,

and selling electricity. EEPCo generates electricity through two different power supply systems; namely, the Interconnected System (ICS) and the Self Contained System (SCS).

The ICS, which is largely generated by hydropower plants, is the major source of electric power generation. On the other hand, the power generated from SCS system has steadily dwindled with its share from the total electric power generated dropping to 0.8 percent in 2007/08 from an average of three percent during 1995/96-1999/00.

**Fig.II.1: Trends in Share of ICS and SCS in Total Power Generation**



Source: EEPCo

Total electric power generated during 2007/08 was 3,530.2 million KWH, 6.6 percent higher than that of last year. Of this amount, some 95.5 percent of the electric power was generated through hydropower while the rest (4.5 percent) came from thermal power (Table II.1).

As per the government's five-year development plan (2005/06-2009/10) (PASDEP), it is envisaged to step up electric power generation capacity of the country by finalizing the power projects currently under construction as well as building new ones thus expanding the coverage to rural towns and *kebeles*.

By 2010, when the power generation projects such as *Tekeze* (300 MW), *Gilgel Gibe 2nd* (420 MW), *Amerteneshe* (97 MW), *Beles* (460 MW), Wind Power (50 MWH) and *Yayo* (100 MW) are completed, the country's power generation capacity is expected to reach 2218 MW per hour. The number of electrified cities and towns accessing electric power services is also planned to reach 6000 from the current 1,166.

**Table: 2.1 Electric Power Generation in ICS and SCS**

(in 000 KWH)

Source		2005/2006	2006/2007	2007/2008	Percentage Change	
		[A]	[B]	[C]	[C/A]	[C/B]
ICS	Hydro Power	2,838,714	3,259,789	3,368,682	18.7	3.3
	Thermal Power	6,307	9,713	131,769	1989.3	1256.6
Sub Total		2,845,021	3,269,502	3,500,450	23.0	7.1
SCS	Hydro Power	18,663	5,238	2,733	-85.4	-47.8
	Thermal Power	32,839	35,653	27,097	-17.5	-24.0
Sub Total		51,502	40,891	29,830	-42.1	-27.1
Total	Hydro Power	2,857,378	3,265,027	3,371,415	18.0	3.3
	Thermal Power	39,147	45,366	158,865	305.8	250.2
Grand Total		<b>2,896,525</b>	<b>3,310,394</b>	<b>3,530,280</b>	21.9	6.6

Source: Ethiopian Electric Power Corporation (EEPCo)

## 2.2 Volumes and Value of Petroleum Imports

In 2007/08, a total of 1.9 million metric tons of petroleum products worth Birr 15,011.1 million were imported into the country by the Ethiopian Petroleum Enterprise (EPE). The import bill was 90.7 percent higher than that of the preceding fiscal year on account of the continuous rise in the international oil prices and increased fuel demand owing to the growing economy.

As Ethiopia is net importer of fuel, the escalating oil price in the international market has contributed to a widening trade deficit and inflationary pressure by way of a pass-through effect.

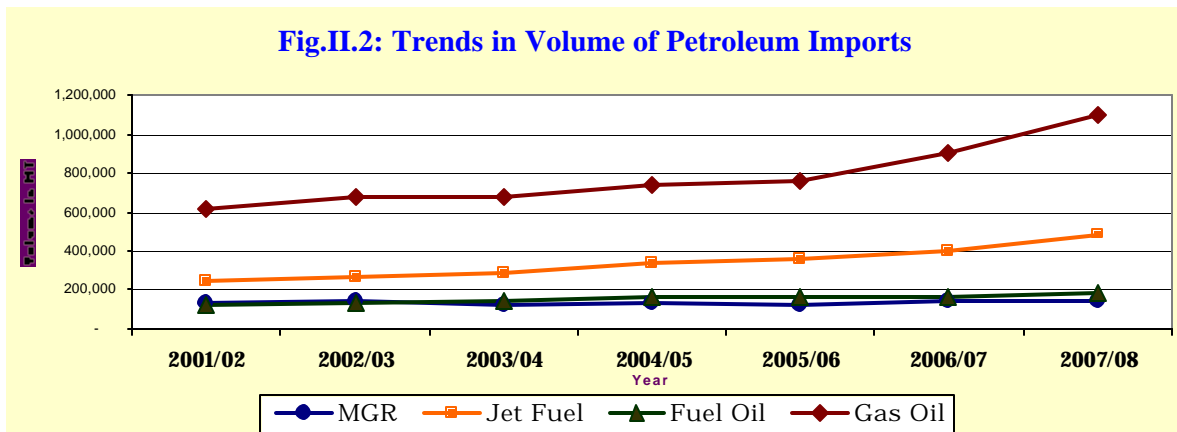
Component wise, the value of imports of regular gasoline, jet fuel, fuel oil and gas oil grew by 51.1, 93.2, 83.8 and 96.6 percent, respectively.

**Table 2.2 Volume and Value of Petroleum Imports**

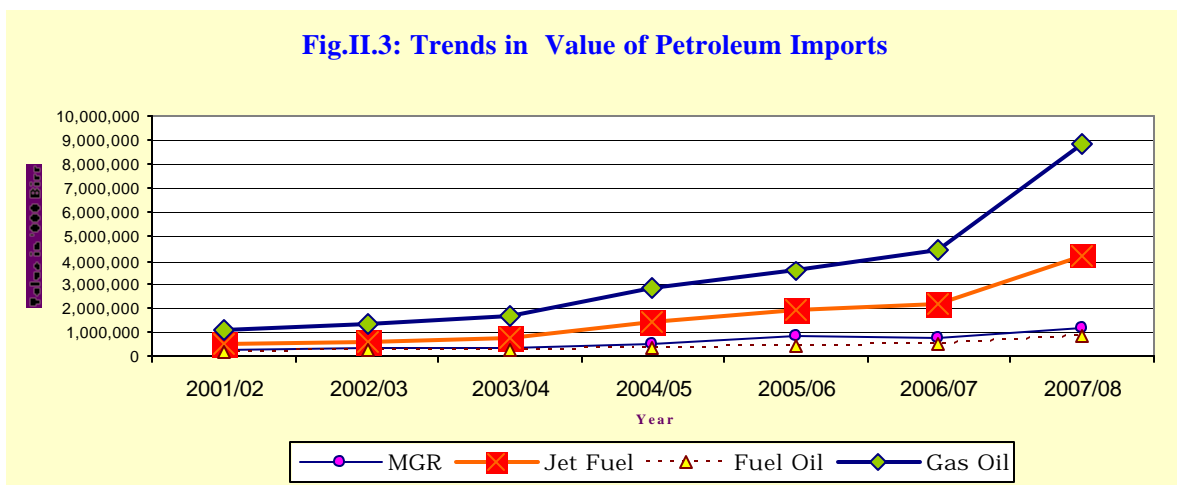
(Volume in MT and Value in Thousand Birr)

Products	2006/07		2007/08		Percentage Change	
	Volume [C]	Value [D]	Volume [E]	Value [F]	[E/C]	[F/D]
<i>Regular Gasoline (MGR)</i>	143,663.6	740,426.2	144,505.0	1,118,494.9	0.6	51.06
<i>Jet Fuel</i>	401,492.4	2,168,104.6	492,083.5	,189,310.1	22.6	93.2
<i>Fuel Oil</i>	158,842.8	461,230.4	180,992.8	847,556.7	13.9	83.8
<i>Gas Oil (ADO)</i>	904,378.2	4,503,816.2	1,093,804.5	8,855,755.4	20.9	96.6
<b>Total</b>	<b>1,608,377.0</b>	<b>7,873,577.5</b>	<b>1,911,385.7</b>	<b>15,011,117.2</b>	<b>18.8</b>	<b>90.7</b>

Source:EPE



Source: EEPCo



Source: EEPCo

Generally, the domestic retail prices of petroleum products are adjusted quarterly in line with the movements of oil prices in the world market. The retail prices of MGR, fuel oil, gas oil and kerosene were adjusted upward in the third quarter of 2007/08. As a result, the average prices of all petroleum products tended to rise over

the preceding fiscal year. In Addis Ababa, the average retail prices of MGR grew by 11.5 percent, gas oil by 14.8 percent and kerosene by 19.5 percent in 2007/08 (Table 2.3).

**Table 2.3: Quarterly Retail Prices of Petroleum Products in Addis Ababa (Birr/liter)**

	Quarter	MGR	Fuel Oil	Gas Oil	Kerosene
<b>2004/05</b>	Qtr.1	5.0	2.89	3.4	2.5
	Qtr.2	5.3	3.21	3.9	2.8
	Qtr.3	5.5	3.43	4.3	3.0
	Qtr.4	5.5	3.43	4.3	3.0
	Average	5.31	3.24	3.98	2.83
<b>2005/06</b>	Qtr.1	5.5	3.4	4.3	3.0
	Qtr.2	5.5	3.4	4.3	3.0
	Qtr.3	5.5	3.4	4.3	3.0
	Qtr.4	6.2	3.9	4.6	3.3
	Average	5.68	3.53	4.38	3.08
<b>2006/07</b>	Qtr.1	7.6	4.2	5.2	3.9
	Qtr.2	8.0	5.6	5.4	4.1
	Qtr.3	7.7	5.2	5.4	4.1
	Qtr.4	7.7	5.2	5.4	4.1
	Average	7.8	5.0	5.4	4.1
<b>2007/08</b>	Qtr.1	7.8	4.1	5.4	4.1
	Qtr.2	7.8	4.1	5.4	4.1
	Qtr.3	9.6	5.9	6.9	5.7
	Qtr.4	9.6	5.9	6.9	5.7
	Average	8.7	5.0	6.2	4.9

Source: EEPCo