## **II. Energy Production and Processing**

## 2.1. Import of Petroleum Products

During the second quarter of 2014/15, the total volume of petroleum products imported amounted to 707 thousands of metric tons, depicting 27.5 and 13.3 percent rise vis-à-vis the same quarter of last year and the preceding quarter, respectively. The yearly growth in the volume of import was attributed to higher import of gas oil (42.3 percent), fuel oil (16.9 percent), regular gasoline (15.4 percent) and jet fuel (5.5 percent).

Of the total petroleum imports during the period, gas oil constituted 61.6 percent

followed by jet fuel (24.2 percent), gasoline (8.1 percent) and fuel oil (6.1 percent).

Similarly, the volume of petroleum products imported rose by 13.3 percent on quarterly basis owing to an increase in the import of gas oil (21.2 percent), regular gasoline (10.2 percent) and jet fuel (1.2 percent), despite slowdown in fuel oil (0.8 percent) (Table 2.1).

**Table 2.1: Volume of Petroleum Products Imported** 

(In Metric Ton)

|                        |                   |                 |                         |                 |         |              |                      | (III Metric Toll) |  |  |
|------------------------|-------------------|-----------------|-------------------------|-----------------|---------|--------------|----------------------|-------------------|--|--|
|                        | 2013/14<br>Otr II | [               | 2014/15<br>Otr I Otr II |                 |         |              | Percentage<br>Change |                   |  |  |
| Petroleum Products     | A                 | Share<br>(In %) | В                       | Share<br>(In %) | С       | Share (In %) | C/A                  | С/В               |  |  |
| Regular Gasoline (MGR) | 49,883            | 9.0             | 52,223                  | 8.4             | 57,561  | 8.1          | 15.4                 | 10.2              |  |  |
| Jet Fuel               | 162,039           | 29.2            | 169,005                 | 27.1            | 171,011 | 24.2         | 5.5                  | 1.2               |  |  |
| Fuel Oil               | 36,641            | 6.6             | 43,175                  | 6.9             | 42,829  | 6.1          | 16.9                 | -0.8              |  |  |
| Gas Oil (ADO)          | 306,083           | 55.2            | 359,514                 | 57.6            | 435,565 | 61.6         | 42.3                 | 21.2              |  |  |
| Total                  | 554,646           | 100.0           | 623,917                 | 100.0           | 706,967 | 100.0        | 27.5                 | 13.3              |  |  |

**Source:** Ethiopian Petroleum Enterprise

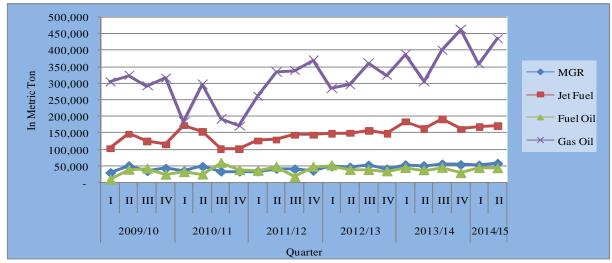


Fig.II.1: Trends in the Volume of Petroleum Products Imported

**Source:** Ethiopian Petroleum Enterprise

Meanwhile, total import bill of petroleum products declined to 9.9 billion Birr showing a 10.7 percent drop on quarterly basis, due to a dramatic fall in international market price. Accordingly, in the second quarter of 2014/15, the value of all types of petroleum products dropped by 10.7 percent as compared with the preceding quarter. The

largest reduction emanated from fuel oil (23.6 percent) followed by regular gasoline and jet fuel (by 17.5 and 16.3 percent) respectively, while gas oil contracted by 5.6 percent. Similarly, the value of petroleum products declined by 0.7 percent over last year same quarter (Table 2.2).

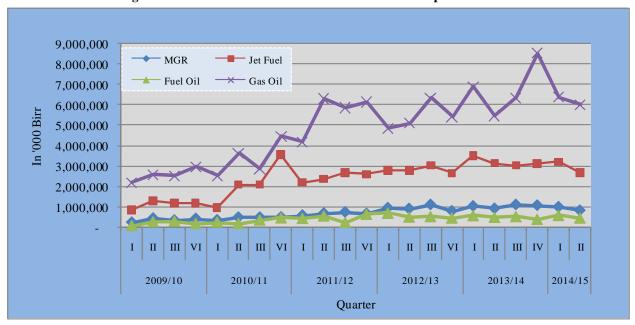
**Table 2.2: Value of Petroleum Products Imported** 

(In '000Birr)

|                        | 2013/14    |        | 2014/15          |        |           |        | Percentage |       |
|------------------------|------------|--------|------------------|--------|-----------|--------|------------|-------|
|                        | Qtr II     |        | Qtr <sub>I</sub> |        | Qtr II    |        | Change     |       |
| Defendance Decident    |            | Share  | Share            |        | C         | Share  | CIA        | C/D   |
| Petroleum Products     | A          | (In %) | В                | (In %) | C         | (In %) | C/A        | C/B   |
| Regular Gasoline (MGR) | 903,993    | 9.0    | 980,533          | 8.8    | 808,567   | 8.1    | -10.6      | -17.5 |
|                        |            |        |                  |        |           |        |            |       |
| Jet Fuel               | 3,134,800  | 31.3   | 3,192,513        | 28.7   | 2,671,982 | 26.9   | -14.8      | -16.3 |
|                        |            |        |                  |        |           |        |            |       |
| Fuel Oil               | 473,263    | 4.7    | 568,476          | 5.1    | 434,129   | 4.4    | -8.3       | -23.6 |
|                        |            |        |                  |        |           |        |            |       |
| Gas Oil (ADO)          | 5,493,636  | 54.9   | 6,383,797        | 57.4   | 6,024,809 | 60.6   | 9.7        | -5.6  |
|                        |            |        |                  |        |           |        |            |       |
| Total                  | 10,005,692 | 100.0  | 11,125,318       | 100.0  | 9,939,488 | 100.0  | -0.7       | -10.7 |

Source: Ethiopian Petroleum Enterprise

Fig.II.2: Trends in the Value of Petroleum Products Imported



**Source:** Ethiopian Petroleum Enterprise

The 27.2 percent slowdown in the average FOB price of petroleum products against the same quarter of last year was ascribed to lower FOB prices of all types of petroleum products, namely fuel oil (29.8 percent), gas oil (28.3 percent), jet fuel

(26.5 percent), and regular gasoline (25.1 percent).

In the meantime, the average FOB price of imported fuel showed a 23.7 percent decline compared with the preceding quarter (Table 2.3).

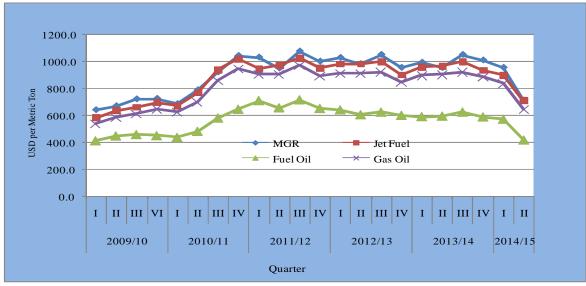
**Table 2.3: FOB Price of Petroleum Products Imported** 

(In USD/ Metric Ton)

|                           | 2013/14 | 2             | 014/15 |                   |       |  |
|---------------------------|---------|---------------|--------|-------------------|-------|--|
|                           | Qtr II  | Qtr. I Qtr II |        | Percentage Change |       |  |
| <b>Petroleum Products</b> | A       | В             | C      | C/A               | C/B   |  |
|                           |         |               |        |                   |       |  |
| Regular Gasoline (MGR)    | 955.4   | 956.2         | 715.7  | -25.1             | -25.2 |  |
|                           |         |               |        |                   |       |  |
| Jet Fuel                  | 966.0   | 899.6         | 709.7  | -26.5             | -21.1 |  |
|                           |         |               |        |                   |       |  |
| Fuel Oil                  | 596.3   | 573.1         | 418.7  | -29.8             | -26.9 |  |
|                           |         |               |        |                   |       |  |
| Gas Oil (ADO)             | 904.8   | 838.4         | 648.7  | -28.3             | -22.6 |  |
|                           |         |               |        |                   |       |  |
| Average                   | 855.6   | 816.8         | 623.2  | -27.2             | -23.7 |  |
| Brent crude oil           | 109.4   | 102.1         | 76.0   | -30.6             | -25.6 |  |
| (USD/barrel)*             |         |               |        |                   |       |  |

**Source:** Ethiopian Petroleum Enterprise :\*Crude Oil (Petroleum); Dated Brent

Fig.II.3: Trends in the FOB Price of Imported Petroleum Product



**Source:** Ethiopian Petroleum Enterprise

During the second quarter of 2014/15, the average price of Brent crude oil, used as a point of reference for international oil price, declined by 30.6 percent and stood at USD 76 per barrel compared with USD 109.4 recorded in the previous year same quarter, while it showed 25.6 percent contraction against the previous quarter.

Following the movements in the level of international oil prices and other factors, domestic retail prices have been adjusted accordingly. In the review quarter, the average retail price of fuel products in Addis Ababa went up marginally by 2.2 percent to 18 Birr/liter from 17.62 Birr/liter in the same quarter of last year despite reduction of fuel price in international market. However, the retail prices declined by 5.1 percent compared with the 18.97 Birr/liter registered in the preceding quarter (Table 2.4).

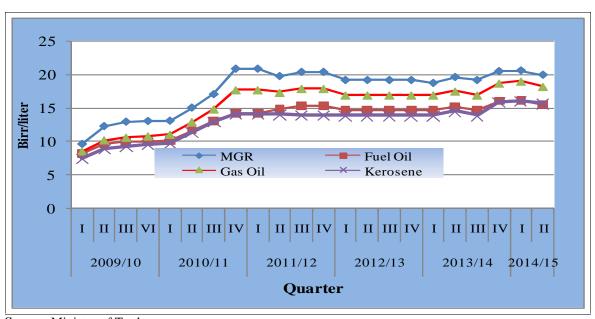
Table 2.4: Addis Ababa Average Retail Prices of Fuel

(Birr/Liter)

|                           | 2013/14 | 2014/15      |       |                   |       |  |
|---------------------------|---------|--------------|-------|-------------------|-------|--|
|                           | Qtr II  | Qtr I Qtr II |       | Percentage Change |       |  |
| <b>Petroleum Products</b> | A       | В            | С     | C/A               | C/B   |  |
| Regular Gasoline (MGR)    | 19.67   | 20.64        | 20.00 | 1.7               | -3.1  |  |
| Fuel Oil                  | 15.09   | 16.13        | 15.42 | 2.2               | -4.4  |  |
| Gas Oil (ADO)             | 17.49   | 19.00        | 18.19 | 4.0               | -4.2  |  |
| Kerosene                  | 14.50   | 16.00        | 15.63 | 7.8               | -2.3  |  |
| Jet fuel                  | 21.34   | 23.09        | 20.75 | -2.8              | -10.1 |  |
| Average                   | 17.62   | 18.97        | 18.00 | 2.2               | -5.1  |  |

**Source:** Ministry of Trade

Fig.II.4: Trends of Addis Ababa Average Retail Prices



**Source**: Ministry of Trade

## 2.2. Electric Power Generation

The total electricity generated during the second quarter of 2014/15 reached 3 billion KWH; registering 44.8 and 97.1 percent surge over the same quarter of last year and

the preceding quarter, respectively. The year-on-year increase in electric power generation was due to a massive improvement in hydropower (45.7 percent);

thermal power (40.8 percent) and wind power (28.1 percent). At the same time, the quarterly surge in power generation was attributed to hydropower (96.8 percent) and wind power (107.8 percent) despite a 37.8 percent reduction in thermal power as well as partly owing to the resolution of the problem substations faced on transmission lines in the first quarter of 2014/15. In addition, the surge in wind power (107.8 percent) during the period was associated with the newly operational Adama II wind power besides improvements in the performance of the existing stations.

Of the total power generated during the review period, about 95.7 percent was produced by hydropower, 4.3 percent by wind power and negligible amount (870 thousand KWH) by thermal power. There was no energy production from geothermal sources during the review period (Table 2.5)

By system generation, nearly all electric power was produced from Inter Connected System (ICS<sup>1</sup>) while Self Contained System (SCS<sup>2</sup>) formed a negligible amount of power (870 thousand KWH of thermal source) (Table 2.6).

<sup>&</sup>lt;sup>1</sup> Generates power by connecting to other systems

<sup>&</sup>lt;sup>2</sup> Generates power independently

**Table 2.5: Electricity Generation by Sources** 

(In '000 of K.W.H)

|                  | 2013/14     |                 | 2014/15     |              |             |                 |      |                |
|------------------|-------------|-----------------|-------------|--------------|-------------|-----------------|------|----------------|
|                  | Qtr II      | GI.             | Qtr I       | GI.          | Qtr II      | GI.             |      | entage<br>ange |
| Power Source     | A           | Share<br>(in %) | В           | Share (in %) | C           | Share<br>(in %) | C/A  | C/B            |
| Hydropower       | 2,029,316.6 | 95.1            | 1,502,337.9 | 95.9         | 2,956,677.5 | 95.7            | 45.7 | 96.8           |
| Thermal<br>Power | 618.1       | 0.0             | 1,399.6     | 0.1          | 870.0       | 0.0             | 40.8 | -37.8          |
| Geothermal       | -           | 0.0             | -           | 0.0          | -           | -               |      |                |
| wind             | 103,195.1   | 4.8             | 63,617.3    | 4.1          | 132,223.6   | 4.3             | 28.1 | 107.8          |
| Total            | 2,133,129.8 | 100.0           | 1,567,354.8 | 100.0        | 3,089,771.1 | 100.0           | 44.8 | 97.1           |

**Source:** Ethiopian Electric Power Corporation

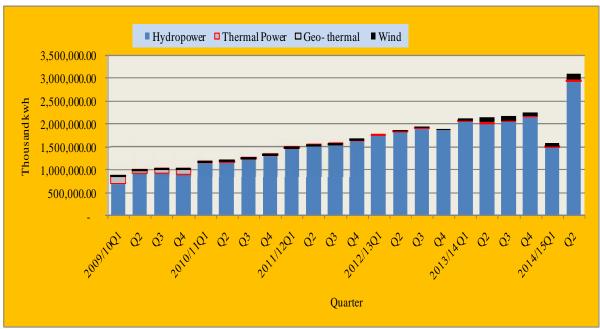
Table 2.6: Generation of Electricity Power in the Interconnected System (ICS) and Self Contained System (SCS)

(In '000 of K.W.H)

|                  |             | (III 000 of K.W.H) |              |        |             |        |                |       |
|------------------|-------------|--------------------|--------------|--------|-------------|--------|----------------|-------|
|                  | 2013/14     |                    |              |        |             |        |                |       |
| System of        | Qtr II      | Share              | Qtr I        | Share  | Qtr II      | Share  | Percer<br>Chai |       |
| Power Supply     | A           | (In %)             | В            | (In %) | C           | (In %) | C/A            | C/B   |
| ICS              |             |                    |              |        |             |        |                |       |
| Hydro Power      | 2,029,050.1 | 95.1               | 1,502,337.9  | 95.9   | 2,956,677.5 | 95.7   | 45.7           | 96.8  |
| Thermal<br>Power | -           | 0.0                | -            | 0.0    | 252.2       | 0.0    |                |       |
| Geothermal       | -           | 0.0                | -            | 0.0    | -           | -      |                |       |
| Wind             | 103,195.1   | 4.8                | 63,617.3     | 4.1    | 132,223.6   | 4.3    | 28.1           | 107.8 |
| Sub-Total        | 2,132,245.2 | 100.0              | 1,565,955.2  | 99.9   | 3,089,153.3 | 100.0  | 44.9           | 97.3  |
| SCS              |             |                    |              |        |             |        |                |       |
| Hydro Power      | 266.5       | 0.0                | -            | 0.0    | -           | -      | -100.0         |       |
| Thermal<br>Power | 618.1       | 0.0                | 1,399.6      | 0.1    | 617.8       | 0.0    | 0.0            | -55.9 |
| Geothermal       | -           | 0.0                | -            | 0.0    | -           | _      |                |       |
| wind             | -           | 0.0                | -            | 0.0    | -           | -      |                |       |
| Sub-Total        | 884.6       | 0.0                | 1,399.6      | 0.1    | 617.8       | 0.0    | -30.2          | -55.9 |
| Grand Total      | 2,133,129.8 | 100.0              | 1,567,354.84 | 100.0  | 3,089,771.1 | 100.0  | 44.8           | 97.1  |

Source: Ethiopian Electric Power Corporation

Fig.II.5: Volume of Electricity Production by Type



**Source:** Ethiopian Electric Power Corporation