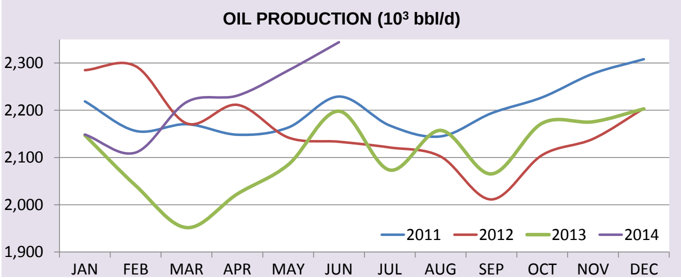


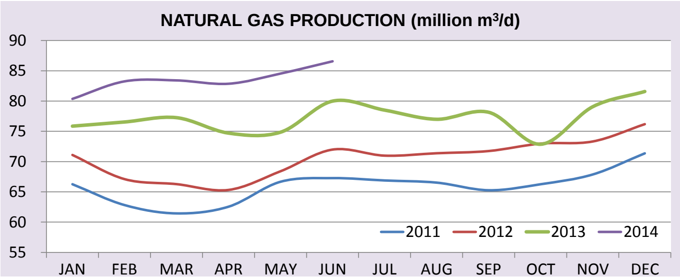


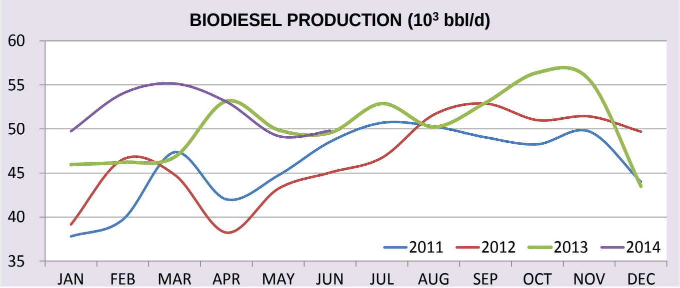


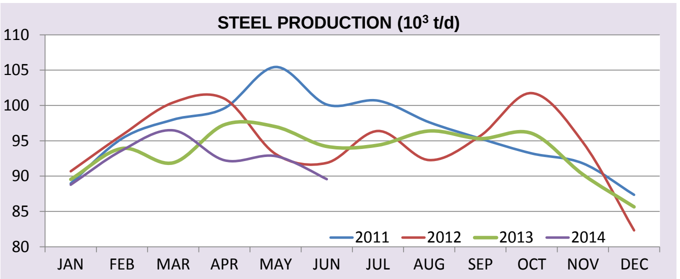


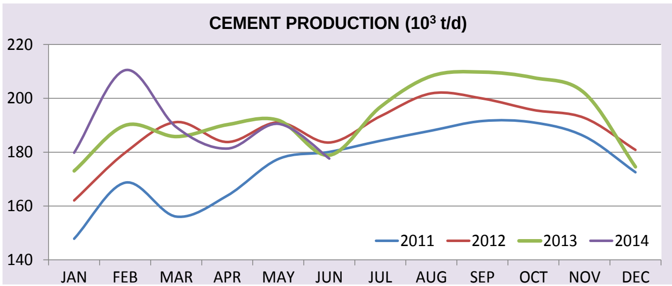




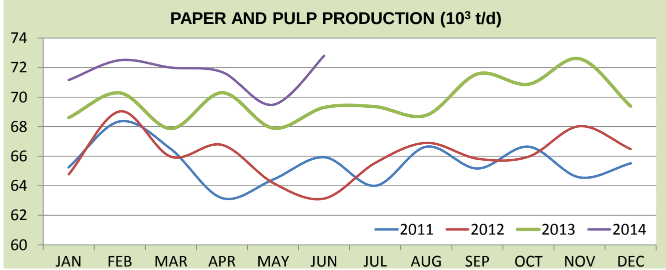


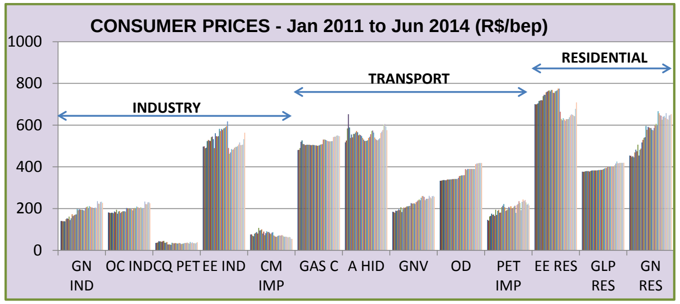


**Note: For a better visualization, the graphs minimum scale was raised to the level close to the lowest value of the curves.**

## Methodological Remarks

The *purpose of this bulletin* is to follow up a set of energy and non-energy variables that provide a reasonable estimate of the behavior both monthly as cumulative of the total energy demand in Brazil.

*Total demand of natural gas* = domestic production (+) import (-) unused (-) reinjection.

*Apparent consumption of oil derivatives* = distributors' sales (+) Petrobras' own consumption (including refinery gas) (+) Petrobras' direct sales. The monthly data published in the press and on the ANP website do not consider the own consumption and direct sales of Petrobras, whose volume is about 20% of the total oil products consumption.

(*) *Domestic Energy Supply* (DES), or Total Energy Demand, is the energy required to move the economy of a country or region, and includes final energy consumption in the residential sector and in the other economic sectors, includes losses in transmission and distribution, and losses on power transformation.

"Tonne of oil equivalent" (toe) = 10 Gigacalorias (Gcal), is the standard unit used to consolidate power data. Firewood releases 3,100 cal / g, or 3.1 Gcal / t, when the combustion. The ratio of firewood indicator and oil indicator results in 0.31 toe / t, a factor that converts tons of firewood to toe. The same goes for the other combutíveis.

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# Monthly Energy Bulletin - Brazil

**Reference Month: June 2014**

## Domestic Energy Supply

The june indicators do not change the trends observed until last month, of weak performance in some export products, such as steel, aluminum, pellets and sugar. In the aspect of population welfare, persists the good performance in energy consumption, mainly on individual transport sector and on residential and commercial electricity consumption. In terms of energy supply, continues the decline of hydroelectric generation, which increases the thermal generation and their thermal losses. For the sugar cane products, there is a forecast of a lower performance in 2014. So, up to June, the available data shows a growth rate of 3.6% on the Domestic Energy Supply (DES) (*), over the same period of 2013.

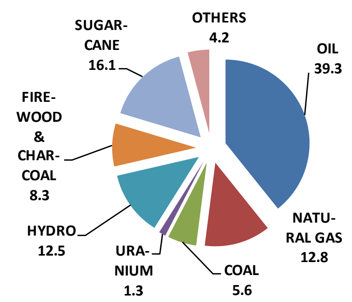
***Total energy demand in 2014 can grow between 2.5% and 3.5%***

For the full year 2014, the estimates for the DES growth are in the range of 2.5% to 3.5% (same as the previous month). Reasons: a) reduction of hydraulic generation, which causes an increase in thermal generation and their losses; b) poor performance of sugar-alcohol sector and of commodities; c) good performances of the Otto cycle transportation and electricity consumption.

Based on the available information at the date of this report, the DES's growth rate for 2014 was estimated at 2.7% (the same of the previous bulletin).

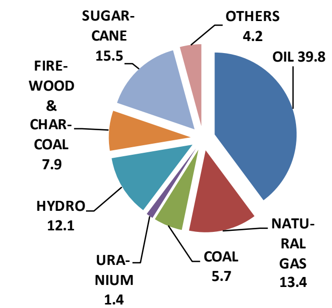
Renewable sources should maintain its participation near to 40% in the 2014 DES Matrix, but below the indicator of 2013. Only the wind generation and the biodiesel production should present an above the average energy demand.

**DES 2013 (%)**




**296.2 million toe**
**41.0% renewables**

**DES 2014 (%)**




**304.1 million toe**
**39.7% renewables**

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OFFICE OF STRATEGIC ENERGY STUDIES

# Highlights until June 2014

### *Steel production recoils*

Until June, steel production retreated 1.8% (reduction of 1.2% until May), the production of aluminum retreated 18.5% (reduction of 16% until May), iron ore exports grew by 11.2% (3.6% in 2013), and pellets exports declined 6.3% (reduction of 8.8% in 2013).

### *Hydro supply is declining*

The hydraulic energy supply fell 5.2% over the same month in 2013, and fell 3.3% over the previous month. Year to date, the rate is still positive, at 1.1% (2.3% until May).

### *Oil Products consumption remains high*

The apparent consumption of petroleum products increased by 5% in June over the same month of 2013, and increased 5.5% in the year date (5.6% until May). Diesel oil retreated 0.4% in June – this is the second negative rate of the year–, but the year rate is positive, 1.0%. Gasoline C grew by 24.5% in June and 15.5% in the year (2.7% in 2013). The total natural gas demand grew 12.3% in June, and 5.8% in the year.

Remains high the energy use performance in the Otto Cycle transport (gasoline, ethanol and natural gas), with a cumulative growth of 8.7% in the year. In 2013, the average increase was 6.1%, and 8.7% in 2012.

### *Electricity consumption is cooling down*

Electricity consumption (excluding captive self-producer) was stable in June (1.5% in May, 2.2% in April and 4.6% in March). In the year, the rate was 3.7% (4.4% until May), still above 3.5% the rate of entire 2013. In June, residential consumption grew 2.1% and commercial consumption grew up 4.2%. Industrial consumption remains low, with -4.9% in June (-4.2% in May and -2.7% in April) and -1.6% in the year. The decrease of 18,5% in the yearly aluminum production explains part of the low industrial performance.

### *Biodiesel production grows above 11%*

Biodiesel production grew up 0.5% in June, and 6.6% in the year date. In 2013 the rate was 7.4%.

### *Electricity tariffs for high*

The national average residential electricity tariff already become to rise 0.6% in the year to date. The commercial tariff accumulates 12.3% high, and the industrial, 4% high.



Cement production acummulates a growing rate of 4.5% in the year (3.6% in 2013). Pulp production continues to maintain good performance of 5.8% in the year date (7.1% in 2013).

## Basic Data

| SPECIFICATION | JUNE – IN THE MONTH 2014 | JUNE – IN THE MONTH 2013 | JUNE – IN THE MONTH %14/13 | ACCUMULATED IN THE YEAR 2014 | ACCUMULATED IN THE YEAR 2013 | ACCUMULATED IN THE YEAR %14/13 | %2014 |
|---|---|---|---|---|---|---|---|
| **OIL** | | | | | | | |
| PRODUCTION - with Shale Oil and NGL($10^3$ b/d) | 2,344 | 2,198 | 6.6 | 2,223 | 2,074 | 7.2 | - |
| IMPORTS AVERAGE PRICE (US$/bbl FOB) | 112 | 111 | 0.9 | 114 | 113 | 0.5 | - |
| **OIL PRODUCTS** | | | | | | | |
| TOTAL CONSUMPTION ($10^3$ b/day) | 2,767 | 2,634 | 5.0 | 2,743 | 2,600 | 5.5 | **100.0** |
| hereof: DIESEL with biodiesel - ($10^3$ b/day) | 1,036 | 1,041 | -0.4 | 1,006 | 996 | 1.0 | 34.8 |
| hereof: GASOLINE C ($10^3$ b/day) | 724 | 582 | 24.5 | 748 | 659 | 13.5 | 21.8 |
| CONSUMER PRICE - DIESEL (R$/l) | 2.50 | 2.33 | 7.2 | 2.50 | 2.30 | 8.7 | - |
| CONSUMER PRICE - GASOLINE C (R$/l) | 2.97 | 2.85 | 4.1 | 2.97 | 2.85 | 4.1 | - |
| CONSUMER PRICE - LPG (R$/13 kg) | 42.7 | 40.9 | 4.4 | 42.6 | 40.6 | 4.9 | - |
| **NATURAL GAS** | | | | | | | |
| PRODUCTION ($10^6$ $m^3$/day) | 86.6 | 80.0 | 8.2 | 83.5 | 76.5 | 9.1 | - |
| IMPORTS ($10^6$ $m^3$/day) | 51.9 | 39.7 | 30.9 | 53.7 | 47.8 | 12.3 | - |
| NON-UTILIZED AND REINJECTION ($10^6$ $m^3$/day) | 19.8 | 13.9 | 42.2 | 19.5 | 13.1 | 48.4 | - |
| AVAILABILITY FOR CONSUMPTION ($10^6$ $m^3$/day) | 118.7 | 105.8 | 12.3 | 117.6 | 111.1 | 5.8 | **100.0** |
| INDUSTRIAL CONSUMPTION ($10^6$ $m^3$/day) | 42.5 | 42.6 | -0.3 | 42.9 | 40.4 | 6.1 | 36.5 |
| POWER GENERATION CONS. ($10^6$ $m^3$/day) | 46.4 | 42.3 | 9.8 | 45.8 | 42.2 | 8.7 | 39.0 |
| INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 $m^3$/day | 18.3 | 16.5 | 11.1 | 17.8 | 17.9 | -0.4 | - |
| MOTOR PRICE SP (US$/MMBtu) | 20.7 | 20.6 | 0.4 | 20.0 | 21.2 | -5.6 | - |
| RESIDENTIAL PRICE SP (US$/MMBtu) | 52.7 | 52.1 | 1.2 | 50.1 | 53.4 | -6.2 | - |
| **ELECTRICITY** | | | | | | | |
| NATIONAL INTERCONNECTED SYSTEM | 60,708 | 60,513 | 0.3 | 64,428 | 62,123 | 3.7 | **100.0** |
| SOUTHEAST/MIDWEST POWER LOAD (MWavg) | 36,096 | 36,967 | -2.4 | 39,109 | 37,704 | 3.7 | 60.7 |
| SOUTH POWER LOAD (MWavg) | 10,366 | 10,166 | 2.0 | 11,208 | 10,546 | 6.3 | 17.4 |
| NORTHEAST POWER LOAD (MWavg) | 9,225 | 9,303 | -0.8 | 9,895 | 9,732 | 1.7 | 15.4 |
| NORTH POWER LOAD (MWavg) | 5,021 | 4,077 | 23.2 | 4,909 | 4,191 | 17.1 | 7.6 |
| TOTAL CONSUMPTION (TWh) (**) | 37.7 | 37.7 | 0.0 | 238.0 | 229.6 | 3.7 | **100.0** |
| RESIDENTIAL | 10.3 | 10.1 | 2.1 | 66.8 | 62.4 | 7.2 | 28.1 |
| INDUSTRIAL | 14.6 | 15.3 | -4.9 | 89.2 | 90.7 | -1.6 | 37.5 |
| COMMERCIAL | 6.9 | 6.6 | 4.2 | 45.4 | 41.8 | 8.6 | 19.1 |
| OTHER SECTORS | 5.9 | 5.6 | 4.7 | 36.5 | 34.7 | 5.1 | 15.3 |
| PLANTS ENTRY INTO OPERATING (MW) | 268 | 546 | -51.0 | 3,475 | 3,792 | -8.4 | - |
| RESIDENTIAL PRICE (R$/MWh) | 430 | 380 | 13.2 | 402 | 399 | 0.6 | - |
| COMMERCIAL PRICE (R$/MWh) | 412 | 332 | 24.2 | 383 | 341 | 12.3 | - |
| INDUSTRIAL PRICE (R$/MWh) | 342 | 292 | 17.1 | 316 | 304 | 4.0 | - |
| **ETHANOL AND BIODIESEL** | | | | | | | |
| BIODIESEL PRODUCTION ($10^3$ b/d) | 50 | 50 | 0.5 | 52 | 49 | 6.6 | - |
| MOTOR ETHANOL CONSUMPTION ($10^3$ b/d) | 398 | 386 | 3.1 | 409 | 368 | 11.3 | - |
| ETHANOL EXPORTS ($10^3$ b/d) | 35 | 59 | -40.1 | 27 | 40 | -32.3 | - |
| HYDRATED ETHANOL PRICE (R$/l) | 2.07 | 1.94 | 6.6 | 2.11 | 2.01 | 5.2 | - |
| **COAL** | | | | | | | |
| ELECTRICITY GENERATION (MWavg) | 1,982 | 1,726 | 14.8 | 2,049 | 1,458 | 40.5 | - |
| IMPORT PRICE (US$ FOB/t) | 104.3 | 133.8 | -22.0 | 111.7 | 139.8 | -20.1 | - |
| **NUCLEAR ENERGY** | | | | | | | |
| ELECTRICITY GENERATION - (GWh) | 1,391 | 1,354 | 2.7 | 7,960 | 7,115 | 11.9 | - |
| **INDUSTRIAL SECTORS** | | | | | | | |
| STEEL PRODUCTION ($10^3$ t/day) | 90 | 94 | -4.9 | 92 | 94 | -1.8 | - |
| ALUMINIUM PRODUCTION ($10^3$ t/day) | 2.4 | 3.5 | -31.7 | 3.0 | 3.7 | -18.5 | - |
| IRON ORE EXPORTS ($10^3$ t/day) | 878 | 742 | 18.4 | 747 | 672 | 11.2 | - |
| PELLETS EXPORTS ($10^3$ t/day) | 107 | 129 | -17.0 | 118 | 126 | -6.3 | - |
| CEMENT PRODUCTION ($10^3$ t/day) | 178 | 179 | -0.7 | 193 | 185 | 4.5 | - |
| PAPER PRODUCTION ($10^3$ t/day) | 28.8 | 28.7 | 0.3 | 28.7 | 28.5 | 0.7 | - |
| PULP PRODUCTION ($10^3$ t/day) | 44.0 | 40.6 | 8.4 | 42.9 | 40.5 | 5.8 | - |
| SUGAR PRODUCTION ($10^3$ t/daY) | 155 | 112 | 39.0 | 64 | 57 | 11.7 | - |
| SUGAR EXPORTS ($10^3$ t/day) | 62 | 73 | -15.8 | 56 | 63 | -11.3 | - |

**(*) SP is the acronym of the state of São Paulo.**

**(**) The traditional self-producers (consumers that do not use public grid) is not included.**