

Note: For a better visualization, the minimum scale of the graphs 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 (-) used (-) 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.

(**) 2014 data reflect the 2015 cycle of the National Energy Balance, completed in July by the Energy Research Company (EPE), with the support of MME and its institutions.

Monthly Energy Bulletin - Brazil

Reference Month: September 2015

Domestic Energy Supply

Increases in interest rates, inflation, unemployment and administered prices have greatly affected the domestic demand for goods and services, with repercussions in the energy demand.

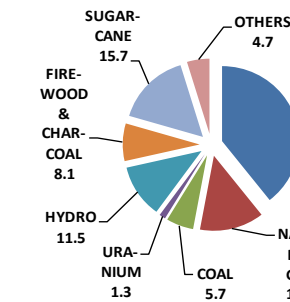
Economic and energetic indicators until September indicate that Domestic Energy Supply (DES) (*) (**) recoiled by 0.6%.

Energy Demand recoil in 2015

For the full year 2015, the DES evolution rate may stand between 1.0 and 2.0%. Despite the good performance of some commodities for export, the poor performance of domestic demand for goods and services affects practically all economy sectors, being the greatest impact on industrial production.

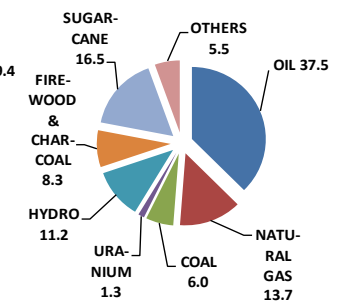
Until this report elaboration, the estimated DES's rate for 2015 was -1.4% (-1.1% in the last bulletin). Renewable sources must maintain a near 40% share in the 2015 OIE.

DES 2014 (%)



305.6 million toe
39.4% renewables

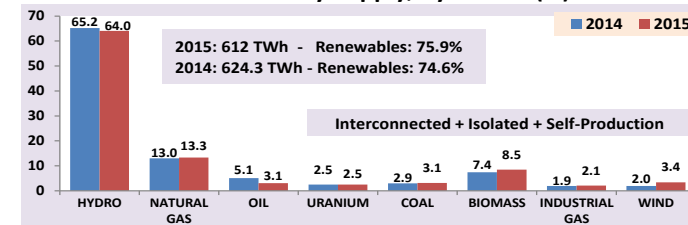
DES 2015 (%)



301.3 million toe
40.8% renewables

The Domestic Electricity Supply was estimated at 612 TWh for 2015(**), with a decrease of 2.0% over 2014. Until November 11, the National Interconnected System (SIN) load was 1.8% negative.

Domestic Electricity Supply, by Source (%)



Highlights of September 2015

Oil production accumulate significant rise in 2015

In September 2015, oil production grew by 1.4% and natural gas, 9.5%. Year to date, the rates are 9.3% and 12.2% respectively.

Minerals exports levels maintained

Steel production was stable in September and accumulates an increase of 0.3% in the year. Iron ore exports rose 7.3% in the month, and in the year is 4.4%. Pellets exports rose 9.6% in September, and 16.6% in the year.

Mild Hydraulic Recovery

The hydro power supply declined 1.9% in September, over the same month of 2014, and Itaipu generation increased by 10.5%. Up this month, the hydraulic supply is -3.7% (-5.3% until August).

Oil products consumption remains in low

In September, oil products apparent consumption recoiled 10.8% and accumulates a decrease of 5.1% in the year. C gasoline retreated 12.2% (-11.3% in August) and diesel oil decreased 7.5% (partially by the thermal plants power down). In the year, rates are negative: -6.8% for gasoline and -3.4% for diesel.

In the same month, gas consumption decreased by 1.2%, accumulating a 0.9% growth in the year (1.1% until August and 2.5% until July). The electricity generation sales rose 3.8%.

The energy consumption of the Otto cycle transport (gasoline, ethanol and natural gas), in gasoline equivalent, accumulates 1.5% in the year, much lower than the expressive rate of 6.4%, recorded in the same period of 2014. The 17.7% increase in ethanol consumption in 2015 offsets the gasoline decrease.

Electricity consumption declining

Electricity consumption – excluding captive self-production – recoiled by 3.1% in September (-2.2% in August and -2.7% in July), accumulating -1.5% in the year. Industrial consumption, with a negative rate of 6.2% in September, accumulates a reduction of 4.1% in the year. The industrial sector is in large part affected by strong decline in aluminum production, which is energy-intensive. Residential consumption, with a recoil of 1.7%, accumulates -0.6% in the year. The commercial sector recoils 0.7% in the month, but still up positive rate of 1.1% in the year.

Biodiesel production still high

Biodiesel production stood at 69 kbbbl/day in September, with a high of 4.9% over the same month of 2014. In the year, it accumulates an increase of 20.9%.

Retreat electricity rates

In the year to date, the national average residential electricity tariff rose 43.4% (43.7% until August), the commercial tariff grew 46.0% (46.7%), and the industrial, 53.7% (54.7%).

Basic data of 2014 and 2015

SPECIFICATION	SEPTEMBER							
	IN THE MONTH				ACCUMULATED IN THE YEAR			
	2015	2014	% 15/14	2015	2014	% 15/14	%2015	
OIL								
PRODUCTION - with Shale Oil and NGL(10 ³ b/d)	2,496	2,461	1.4	2,510	2,297	9.3	-	
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	62	114	-45.3	63	114	-45.1	-	
OIL PRODUCTS								
TOTAL CONSUMPTION (10 ³ b/day)	2,604	2,919	-10.8	2,635	2,777	-5.1	100.0	
hereof: DIESEL with biodiesel - (10 ³ b/day)	1,087	1,176	-7.5	1,044	1,081	-3.4	37.7	
hereof: GASOLINE C (10 ³ b/day)	695	792	-12.2	701	752	-6.8	21.3	
CONSUMER PRICE - DIESEL (R\$/l)	2.96	2.50	18.2	2.80	2.50	12.1	-	
CONSUMER PRICE - GASOLINE C (R\$/l)	3.28	2.96	10.6	3.27	2.97	10.2	-	
CONSUMER PRICE - LPG (R\$/13 kg)	52.9	43.7	21.1	46.4	42.7	8.5	-	
NATURAL GAS								
PRODUCTION (10 ⁶ m ³ /day)	97.4	88.9	9.5	95.8	85.4	12.2	-	
IMPORTS (10 ⁶ m ³ /day)	49.4	49.4	0.0	51.2	53.0	-3.5	-	
NON-UTILIZED AND REINJECTION (10 ⁶ m ³ /day)	29.7	19.8	49.9	27.0	19.5	38.3	-	
AVAILABILITY FOR CONSUMPTION (10 ⁶ m ³ /day)	117.1	118.5	-1.2	120.0	118.9	0.9	100.0	
INDUSTRIAL CONSUMPTION (10 ⁶ m ³ /day)	42.5	42.5	-0.1	43.3	43.1	0.5	36.1	
POWER GENERATION CONS. (10 ⁶ m ³ /day)	47.1	45.4	3.8	46.7	46.7	0.1	39.0	
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) - consumption range of 20,000 m ³ /day	11.5	17.2	-33.4	13.6	17.6	-22.6	-	
MOTOR PRICE SP (US\$/MMBtu)	13.1	20.0	-34.7	15.2	20.2	-24.8	-	
RESIDENTIAL PRICE SP (US\$/MMBtu)	32.7	50.5	-35.4	39.5	50.7	-22.0	-	
ELECTRICITY								
NATIONAL INTERCONNECTED SYSTEM	63,279	65,626	-3.6	63,628	64,721	-1.7	100.0	
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	37,008	38,932	-4.9	37,195	38,587	-3.6	58.5	
SOUTH POWER LOAD (MWavg)	10,271	10,846	-5.3	10,950	11,062	-1.0	17.2	
NORTHEAST POWER LOAD (MWavg)	10,385	10,164	2.2	10,289	9,817	4.8	16.2	
NORTH POWER LOAD (MWavg)	5,615	5,320	5.5	5,193	5,215	-0.4	8.2	
TOTAL CONSUMPTION (TWh) (**)	37.7	38.9	-3.1	34.81	35.33	-1.5	100.0	
RESIDENTIAL	10.4	10.6	-1.7	98.0	98.5	-0.6	28.1	
INDUSTRIAL	14.0	14.9	-6.2	128.1	133.7	-4.1	36.8	
COMMERCIAL	7.1	7.2	-0.7	67.2	66.4	1.1	19.3	
OTHER SECTORS	6.2	6.2	-1.0	54.8	54.6	0.4	15.8	
PLANTS ENTRY INTO OPERATING (MW)	146	482	-69.7	4,004	5,144	-22.2	-	
RESIDENTIAL PRICE (R\$/MWh)	625	438	42.7	584	407	43.4	-	
COMMERCIAL PRICE (R\$/MWh)	562	389	44.6	523	358	46.0	-	
INDUSTRIAL PRICE (R\$/MWh)	541	355	52.3	497	323	53.7	-	
ETHANOL AND BIODIESEL								
BIODIESEL PRODUCTION (10 ³ b/d)	69	66	4.9	68	56	20.9	-	
MOTOR ETHANOL CONSUMPTION (10 ³ b/d)	633	441	43.7	491	417	17.7	-	
ETHANOL EXPORTS (10 ³ b/d)	36	25	45.6	26	25	5.1	-	
HYDRATED ETHANOL PRICE (R\$/l)	2.07	2.01	3.4	2.13	2.08	2.2	-	
COAL								
ELECTRICITY GENERATION (MWavg)	2,052	1,739	18.0	2,062	1,972	4.6	-	
IMPORT PRICE (US\$/t)	77.5	96.0	-19.2	91.4	108.4	-15.6	-	
NUCLEAR ENERGY								
ELECTRICITY GENERATION - (GWh)	1,135	1,453	-21.9	11,306	10,991	2.9	-	
INDUSTRIAL SECTORS								
STEEL PRODUCTION (10 ³ t/day)	95	95	0.0	94	93	0.3	-	
ALUMINIUM PRODUCTION (10 ³ t/day)	2.0	2.3	-10.5	2.1	2.8	-22.7	-	
IRON ORE EXPORTS (10 ³ t/day)	1,015	946	7.3	819	784	4.4	-	
PELLETS EXPORTS (10 ³ t/day)	172	156	9.6	150	128	16.6	-	
PAPER PRODUCTION (10 ³ t/day)	28.8	28.9	-0.1	28.5	28.6	-0.5	-	
PULP PRODUCTION (10 ³ t/day)	48.5	42.5	14.2	46.7	41.1	13.5	-	
SUGAR PRODUCTION (10 ³ t/day)	164	137	19.2	89	98	-9.0	-	
SUGAR EXPORTS (10 ³ t/day)	59	74	-20.2	61	63	-2.7	-	

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

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

