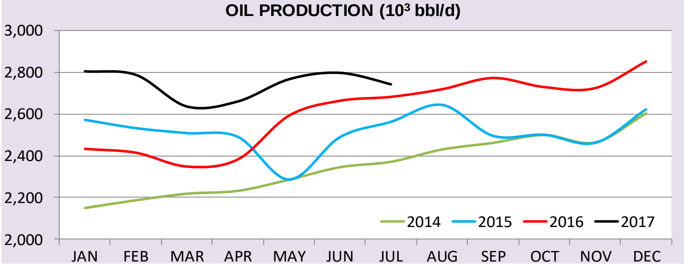
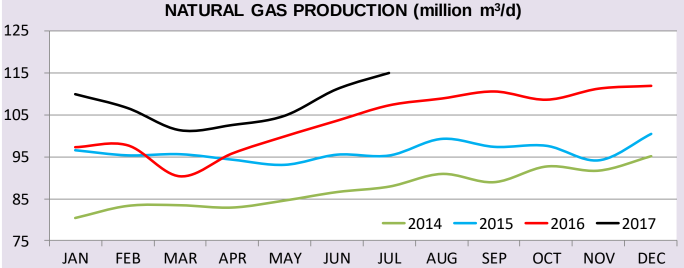
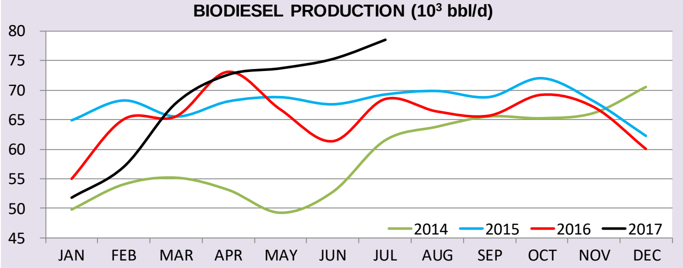
OIL PRODUCTION (10^3 bbl/d)



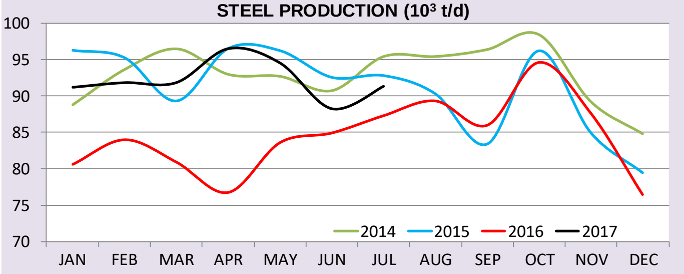
NATURAL GAS PRODUCTION (million m³/d)



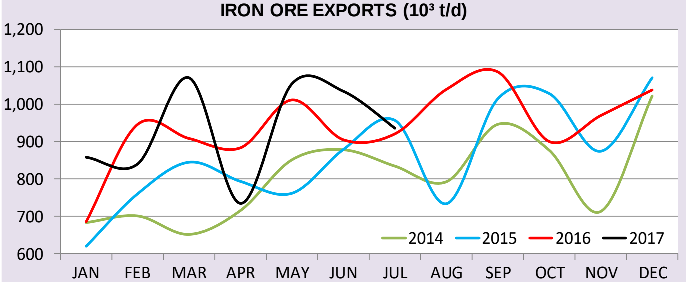
BIODIESEL PRODUCTION (10^3 bbl/d)



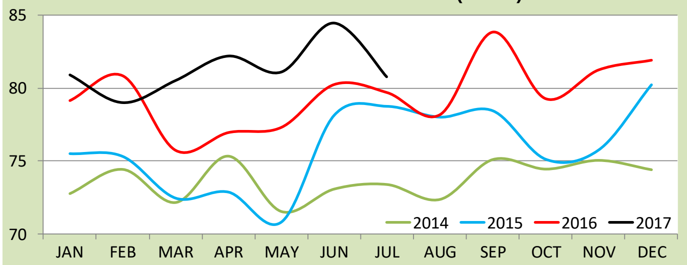
STEEL PRODUCTION (10^3 t/d)



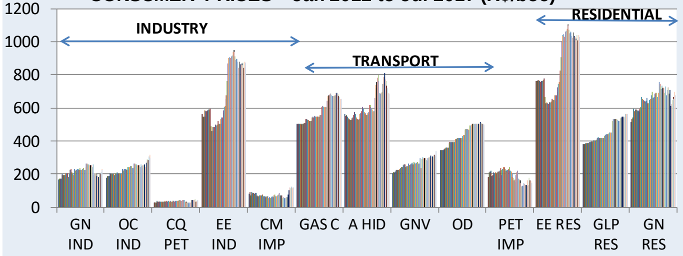
IRON ORE EXPORTS (10^3 t/d)



PAPER AND PULP PRODUCTION (10^3 t/d)



CONSUMER PRICES - Jan 2012 to Jul 2017 (R$/boe)



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 is equal to domestic production (+) import (-) unused (-) reinjection.

Apparent consumption of oil derivatives is equal 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**, 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.

(**) The DES and DELS data for 2016 reflect the final results of the Cicle 2017 of Brazilian Energy Balance – BEB, that is elaborated by the Energy Research Company (EPE) in colaboration with MME and with the others sectorial players.

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Monthly Energy Bulletin - Brazil

Reference Month: July 2017

Domestic Energy Supply

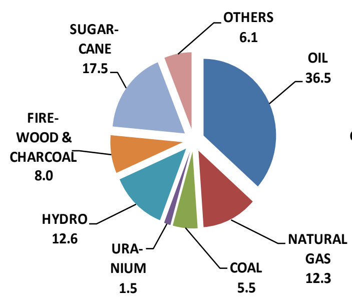
Brazil is expected to have an energy surplus in 2017, a fact that will occur for the first time since 1940, first year of global energy statistics. High growth rates in oil and natural gas production coupled with low global energy demand will provide the surplus.

The indicators for June do not modify the path previously foreseen for the Domestic Energy Supply - DES*. Up to this month the OIE rate was 1% and, for the twelve months of the year, it is expected to be between 1% and 2%.

Data available up to the end of August 2017 suggest an increase of 1,5% for the OIE of the year.

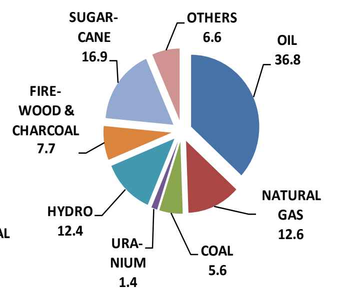
Total energy demand in 2017 may grow between 1 and 2%

DES 2016 (%)



288.4million toe
43.5% renewables

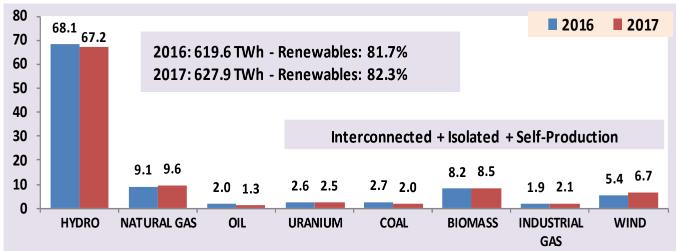
DES 2017 (%)



292.4 million toe
42.8% renewables

The Domestic Electricity Supply (DELS) in 2017 was estimated at 631.7 TWh, showing an increase of 1.9% over 2016. The proportion of renewable sources should remain above 80% by 2017.

Domestic Electricity Supply, by Source (%)



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Department of Information and Studies on Energy

Highlights to July 2017

Oil production still in high

Oil production accumulated a growth of 10.9% until June, over the same period of 2016. In June, the increase was 5%. Natural gas production repeats good oil rates, growing 8.9% in the year and 7.4% in June.

Steel production slows growth pace

Steel production accumulated a 13.1% increase in the year. In June the rate stood at 4% over the same month of 2016. Iron ore exports grew 14.3% in June and accumulated a 5% growth in the year. Exports of pellets, up 48% in June, still accumulate a negative rate of 2.3% in the year.

Hydropower supply slows down

Hydropower supply increased 1.5% in June (2.5% up to May and 7.6% to March). The import of Itaipu decreased by 9% in the year (-0.2% until March).

Oil derivatives in high

Apparent consumption of petroleum products increased by 3.6% in June, accumulating a rise of 2.1% in the year. Diesel consumption fell 19% in June (-4.5% in the year) and that of gasoline C, up 11.6% (7.9% in the year). Total demand for natural gas increased by 4.1% in June (0.9% in the year). The use of gas in electricity generation increased by 7.8% in June (-7.5% in the year).

The consumption in the Otto cycle transport (gasoline, ethanol and natural gas) grew by 1.8% in the year (1.7% up to May and 2.4% to March). This rate was -1.1% in 2016, +0.8% in 2015 and +6.2% in 2014.

Electricity consumption increases

Electricity consumption (excluding captive self-producers) rose by 1.7% in June (-1.1 in May). In the year, the rate is 0.7%. In 2016, the rate was negative by 1.6%. Up to June, industrial consumption remained at 0.5%, residential, at 1.4% and commercial, at -0.7%.

Biodiesel production upwards

Biodiesel production grew by 22.5% in June, already showing a rise of 3.1% in the year (-0.5% up to May and -3.5% up to April). In 2016, the rate was -3.6% and in 2015, by + 15%.

Pulp production grew 5.1% in June. In the year, the rate is positive at 5.6% (7.8% in the 12 months of 2016, 8.5% in 2015 and 9.2% in 2014).

Electricity rates recoil

The national average residential electricity tariff recoiled 4.9% up to June (+5.8% in the whole 2016 and +42.5% in 2015), the commercial tariff decreased 5% (+5.7% in 2016 and +43.8% in 2015) and the industrial fell by 5.7% (+3.6% in 2016 and +51.7% in 2015).

Basic data

SPECIFICATION	JULY – IN THE MONTH 2017	IN THE MONTH 2016	IN THE MONTH %17/16	ACCUMULATED IN THE YEAR 2017	ACCUMULATED IN THE YEAR 2016	ACCUMULATED IN THE YEAR %17/16	%2017
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	2,744	2,684	2.2	2,743	2,503	9.6	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	53	52	2.5	54	43	25.3	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,524	2,497	1.1	2,494	2,445	2.0	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	1,029	1,005	2.4	943	976	-3.4	35.9
hereof: GASOLINE C (10^3 b/day)	751	698	7.6	775	718	7.9	24.9
CONSUMER PRICE - DIESEL (R$/l)	2.97	3.02	-1.5	3.03	3.02	0.4	-
CONSUMER PRICE - GASOLINE C (R$/l)	3.55	3.65	-2.5	3.64	3.69	-1.1	-
CONSUMER PRICE - LPG (R$/13 kg)	57.5	52.8	8.9	56.6	53.5	5.6	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	115.0	107.2	7.3	107.4	98.8	8.7	-
IMPORTS (10^6 m^3/day)	29.5	29.6	-0.4	25.3	34.8	-27.2	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	32.4	39.6	-18.2	30.3	34.1	-11.2	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	112.1	97.2	15.3	102.4	99.4	2.9	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	42.1	41.5	1.4	40.9	41.0	-0.1	40.0
POWER GENERATION CONS. (10^6 m^3/day)	35.0	23.1	51.5	28.2	28.3	-0.5	27.6
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	12.7	11.1	15.1	11.4	11.6	-1.4	-
MOTOR PRICE SP (US$/MMBtu)	19.2	16.2	18.5	17.6	14.5	21.4	-
RESIDENTIAL PRICE SP (US$/MMBtu)	38.4	38.9	-1.4	36.5	35.2	3.8	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	61,785	61,955	-0.3	65,104	64,533	0.9	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	34,915	35,502	-1.7	37,572	37,444	0.3	57.7
SOUTH POWER LOAD (MWavg)	11,244	10,767	4.4	11,434	11,344	0.8	17.6
NORTHEAST POWER LOAD (MWavg)	10,184	10,396	-2.0	10,589	10,436	1.5	16.3
NORTH POWER LOAD (MWavg)	5,442	5,289	2.9	5,510	5,309	3.8	8.5
TOTAL CONSUMPTION (TWh) (**)	37.1	37.0	0.2	270.3	268.5	0.7	**100.0**
RESIDENTIAL	10.4	10.4	0.1	79.0	78.1	1.2	29.2
INDUSTRIAL	14.0	13.9	0.7	95.3	94.8	0.5	35.2
COMMERCIAL	6.7	6.7	-0.8	51.9	52.3	-0.7	19.2
OTHER SECTORS	6.1	6.1	0.5	44.1	43.3	1.7	16.3
PLANTS ENTRY INTO OPERATING (MW)	814	1,635	-50.2	3,694	5,422	-31.9	-
RESIDENTIAL PRICE (R$/MWh)	624	629	-0.8	620	648	-4.3	-
COMMERCIAL PRICE (R$/MWh)	564	565	-0.2	556	580	-4.1	-
INDUSTRIAL PRICE (R$/MWh)	529	532	-0.5	522	550	-5.0	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	79	68	14.8	68	65	5.0	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	409	459	-10.7	395	450	-12.3	-
ETHANOL EXPORTS (10^3 b/d)	32	45	-28.1	22	38	-42.1	-
HYDRATED ETHANOL PRICE (R$/l)	2.46	2.45	0.2	2.66	2.65	0.4	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,595	1,826	-12.7	1,280	1,907	-32.9	-
IMPORT PRICE (US$ FOB/t)	156.5	72.8	115.0	153.3	71.0	115.9	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,423	1,144	24.4	9,499	9,681	-1.9	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	91	87	4.7	92	83	11.8	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.2	2.2	1.0	2.2	2.1	2.7	-
IRON ORE EXPORTS (10^3 t/day)	936	921	1.6	934	894	4.5	-
PELLETS EXPORTS (10^3 t/day)	74	55	35.9	81	80	1.5	-
PAPER PRODUCTION (10^3 t/day)	28.7	28.1	2.2	28.3	28.2	0.4	-
PULP PRODUCTION (10^3 t/day)	52.1	51.6	0.9	53.0	50.3	5.2	-
SUGAR PRODUCTION (10^3 t/daY)	211	189	11.7	88	85	3.2	-
SUGAR EXPORTS (10^3 t/day)	86	94	-8.6	73	72	0.7	-

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

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