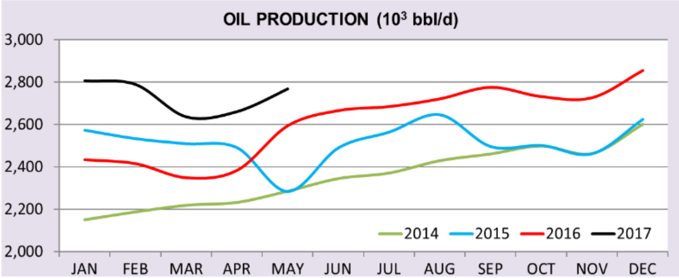

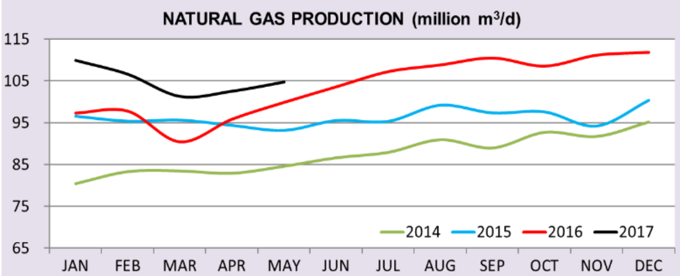

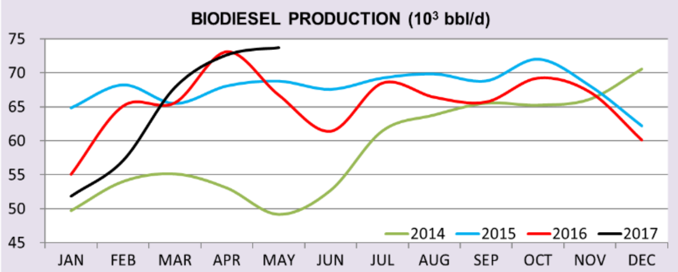

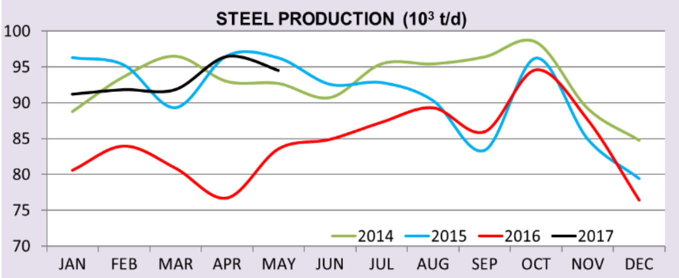

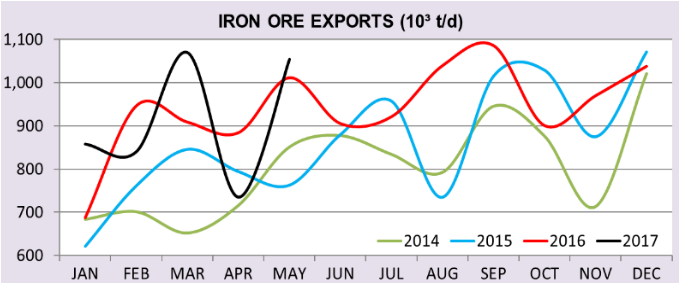

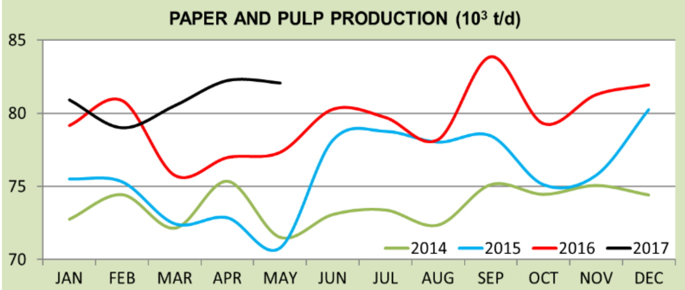

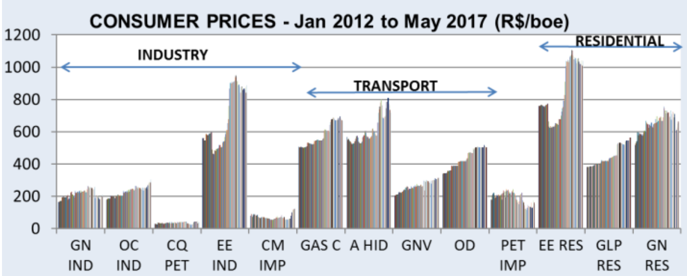

Note: For a better visualization, the minimum scale of the graphs was raised to the level close to the lowest value of the curves.

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.

Department of Information and Studies on Energy - SPE/MME
www.mme.gov.br / die@mme.gov.br
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Monthly Energy Bulletin - Brazil

Reference Month: May 2017

Domestic Energy Supply

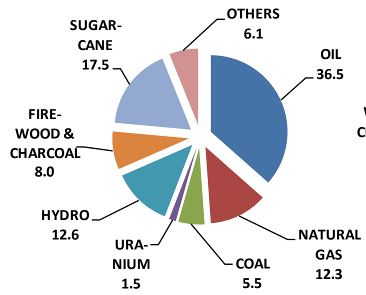
The indicators for May 2017, as in April, indicate a weak performance of the economy. Electricity consumption declined again and energy consumption in light vehicles has increased irrelevantly. The new forecasts for the sugarcane harvest are down.

Thus, for Domestic Energy Supply (DES)*, it was estimated a growth rate of 0.5% (1,1% up to April and 1.5% to March). Considering the analysis for the twelve months of the year, the DES is expected to reducing to the range between 1 and 2%.

On July 25, 2017, a rate of 1.2% was estimated for the DES increase in 2017. The sectorial energy consumption is expected to grow slightly less due to the increase in thermal losses, as a result of a higher thermoelectric generation.

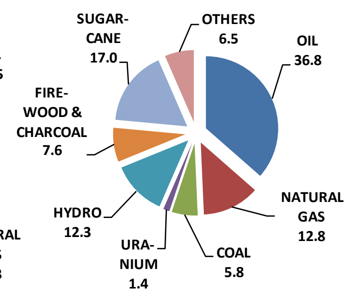
Total energy demand in 2017 may grow between 1 and 2%

DES 2016 (%)



288.4million toe
43.5% renewables

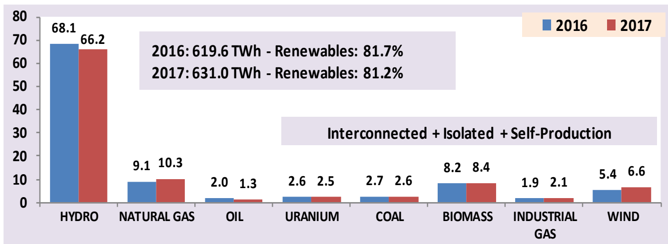
DES 2017 (%)



291.8 million toe
42.8% renewables

The Domestic Electricity Supply (DELS) in 2017 was estimated at 631 TWh, showing an increase of 1.8% 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 May 2017

Oil production still in high

Oil accumulates a growth of 12.2% up to May over the same period of 2016. In April, the increase was 6.7%. Natural gas production repeats good oil rates, growing 9.2% in the year and 5% in May. These indicators should lead Brazil to have a global surplus of energy in 2017, for the first time.

Steel production in high

Steel production increased by 13.2% in May, compared to the same month in 2016, but was below production by May 2015. Iron ore exports grew by 4.2% in May and accumulated a 3.1% increase in year. Pellet exports fell 8.5% in May and 9.3% in the year.

Hydraulic supply downward

Hydropower supply increased by 2.5% through May (7.6% through March). The import of Itaipu decreased 7% in the year (-6% up to April and -0.2 to March).

Oil derivatives in high

Apparent consumption of oil products grew by 3.4% in May, accumulating an increase of 0.6% in the year. Diesel consumption rose by 3.4% in May (-1.4% in the year) and gasoline C by 10.3% (7.2% in the year). Total natural gas demand grew by 13.8% in May (0.3% in the year). The gas use in electricity generation increased by 44.4% in May (-9.9% in the year).

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

Electricity consumption recoils

Electricity consumption (excluding captive self-producers) fell by 1.1% in May (+ 0.5% in the year). In 2016, the rate was negative by 1.6%. Until May, industrial consumption was at 0.4%, residential 1.1% and commercial, -1.1%.

Biodiesel production upwards

Biodiesel production grew by 10.5% in May, but fell by 0.5% in the year (-3.5% up to April, -4.6% to March and -9.3% to February). In 2016 the rate was -3.6% and in 2015, by + 15%.

Pulp production grew by 8.1% in May. In the year, the rate is positive at 6.0% (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 May (+5.8% in the whole 2016 and +42.5% in 2015), the commercial tariff decreased 5.2% (+5.7% in 2016 and +43.8% in 2015) and the industrial fell by 5.5% (+3.6% in 2016 and +51.7% in 2015).

Basic data

SPECIFICATION	MAY						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2017	2016	%17/16	2017	2016	%17/16	%2017
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	2,768	2,593	6.7	2,731	2,435	12.2	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	53	37	44.8	54	41	32.8	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,409	2,329	3.4	2,450	2,435	0.6	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	990	957	3.4	948	962	-1.4	36.8
hereof: GASOLINE C (10^3 b/day)	768	696	10.3	777	725	7.2	25.4
CONSUMER PRICE - DIESEL (R$/l)	3.02	3.02	0.0	3.05	3.02	1.0	-
CONSUMER PRICE - GASOLINE C (R$/l)	3.62	3.67	-1.6	3.68	3.70	-0.5	-
CONSUMER PRICE - LPG (R$/13 kg)	57.2	53.4	7.2	56.2	53.8	4.5	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	104.8	99.8	5.0	105.0	96.2	9.2	-
IMPORTS (10^6 m^3/day)	31.1	26.8	16.2	25.7	36.7	-30.0	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	27.9	31.6	-12.0	30.3	32.8	-7.4	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	108.0	94.9	13.8	100.4	100.1	0.3	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	41.4	40.7	1.7	40.5	40.2	0.8	40.4
POWER GENERATION CONS. (10^6 m^3/day)	32.3	22.4	44.4	27.3	30.3	-9.9	27.2
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	11.6	12.6	-8.5	11.0	11.9	-7.8	-
MOTOR PRICE SP (US$/MMBtu)	17.2	14.7	16.9	17.3	13.9	24.4	-
RESIDENTIAL PRICE SP (US$/MMBtu)	35.9	36.0	-0.3	35.9	34.0	5.7	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	63,492	62,955	0.9	66,660	65,595	1.6	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	36,541	36,541	0.0	38,696	38,221	1.2	58.0
SOUTH POWER LOAD (MWavg)	10,705	10,599	1.0	11,803	11,582	1.9	17.7
NORTHEAST POWER LOAD (MWavg)	10,463	10,359	1.0	10,734	10,481	2.4	16.1
NORTH POWER LOAD (MWavg)	5,784	5,457	6.0	5,427	5,310	2.2	8.1
TOTAL CONSUMPTION (TWh) (**)	38.0	38.4	-1.1	195.4	194.3	0.5	**100.0**
RESIDENTIAL	11.0	10.9	0.9	57.8	57.2	1.1	29.6
INDUSTRIAL	13.5	13.8	-2.1	67.5	67.3	0.4	34.6
COMMERCIAL	7.2	7.4	-2.6	38.3	38.7	-1.1	19.6
OTHER SECTORS	6.3	6.3	-0.5	31.7	31.1	1.9	16.2
PLANTS ENTRY INTO OPERATING (MW)	70	515	-86.4	2,342	3,280	-28.6	-
RESIDENTIAL PRICE (R$/MWh)	630	642	-1.9	621	653	-4.9	-
COMMERCIAL PRICE (R$/MWh)	564	575	-1.9	554	584	-5.2	-
INDUSTRIAL PRICE (R$/MWh)	538	541	-0.6	525	555	-5.5	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	74	67	10.5	65	65	-0.5	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	404	442	-8.7	383	445	-13.9	-
ETHANOL EXPORTS (10^3 b/d)	17	24	-29.7	18	34	-47.2	-
HYDRATED ETHANOL PRICE (R$/l)	2.58	2.48	4.3	2.73	2.72	0.4	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,272	1,790	-28.9	1,246	1,864	-33.1	-
IMPORT PRICE (US$ FOB/t)	161.6	62.3	159.2	154.2	70.0	120.3	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,417	1,495	-5.2	6,818	7,288	-6.5	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	95	84	13.2	93	81	14.9	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.2	2.2	1.6	2.2	2.1	3.3	-
IRON ORE EXPORTS (10^3 t/day)	1,055	1,012	4.2	914	887	3.1	-
PELLETS EXPORTS (10^3 t/day)	78	85	-8.5	81	89	-9.3	-
PAPER PRODUCTION (10^3 t/day)	28.0	27.3	2.6	28.2	28.2	0.1	-
PULP PRODUCTION (10^3 t/day)	54.0	50.0	8.1	52.8	49.8	6.0	-
SUGAR PRODUCTION (10^3 t/daY)	119	117	1.6	43	55	-21.4	-
SUGAR EXPORTS (10^3 t/day)	79	65	21.3	64	65	-0.6	-

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

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