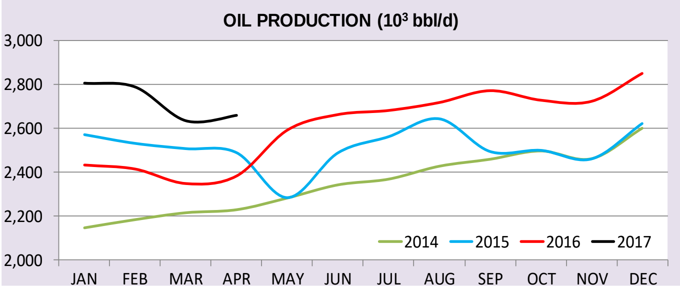

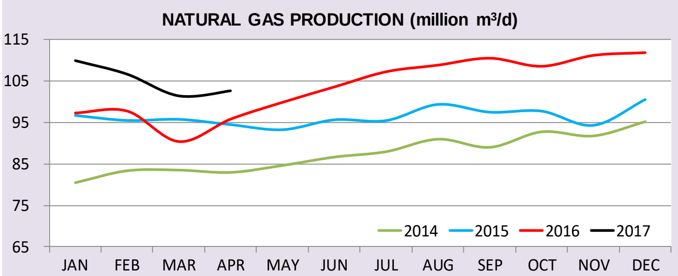

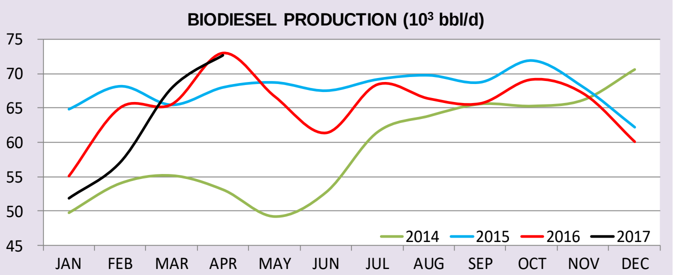

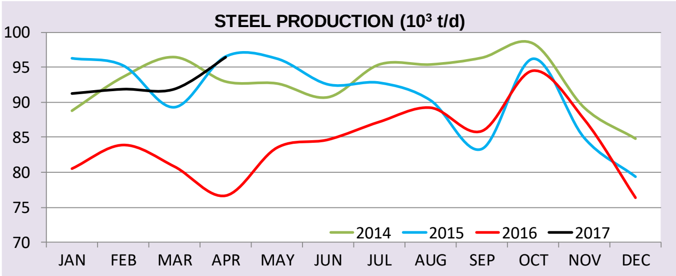

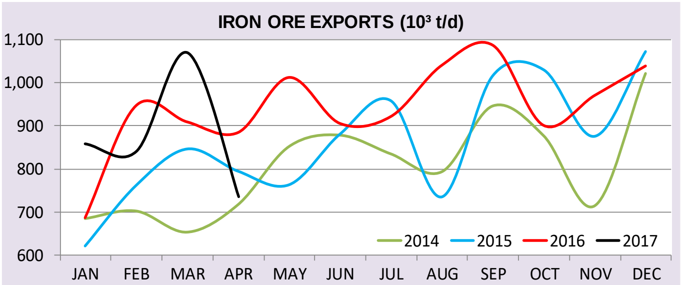

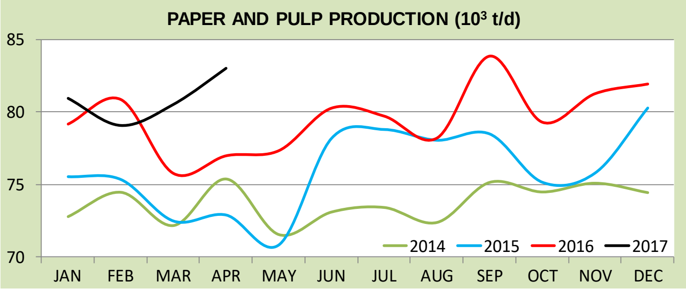

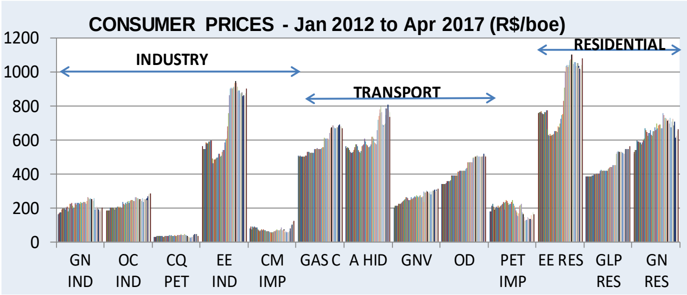

Note: For a better visualization, the minimum scale of the graphs was raised to the level close to the lowest value of the curves.

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: April 2017

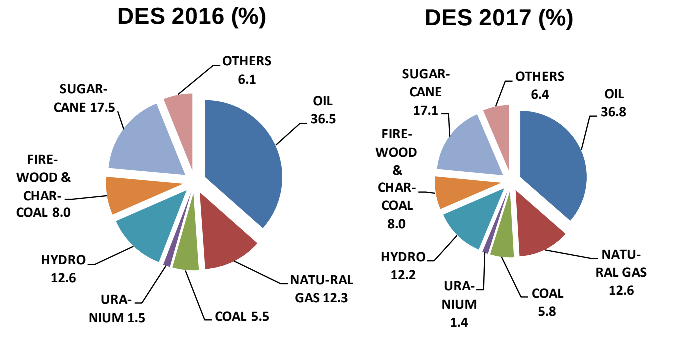
Domestic Energy Supply

The indicators for April 2017, in the opposite of March, signalize a desaceleration on the economy. Electricity consumption recoiled as well as fuel consumption in light vehicles, which are important indicators of population purchase power.

Thus, for Domestic Energy Supply (DES)*, a growth rate of 1.1% was estimated up to April (1,5% until March). Considering the analysis for the twelve months of the year, the DES is expected to grow a little more, between 1.5 and 2.5%.

On June 29, 2017 an OIE growth rate of 2.3% was estimated for the full year 2017. The increase in thermal losses due to higher thermoelectric generation should raise the relative difference between the DES and the final energy consumption in the consumer sectors.

Total energy demand in 2017 may grow between 1.5 and 2.5%

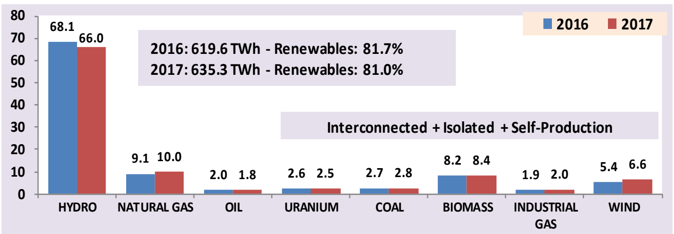


288.4million toe
43.5% renewables

294,6 million toe
43% renewables

The Domestic Electricity Supply (DELS) in 2017 was estimated at 635 TWh, showing an increase of 2.5% 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 April 2017

Oil production still in high

Oil production accumulates an increase of 13.7% up to April, over the same period of 2016. In April, the increase was 11.7%. Natural gas production repeats good oil rates, growing 10.4% in the year and 7.1% in April.

Steel production in high

Steel production rose 25.8% in April, compared to the same month in 2016, remaining the same as production in April 2015. Iron ore exports fell 16.9% in April, but accumulated a rise of 2.7% in the year. Pellet exports fell 18.8% in April and 9.5% in the year.

Hydraulic supply downward

Hydropower supply increased by 3.8% through April (7.6% through March), showing a decline of 14% over March. The import of Itaipu decreased 6% in the year (-0.2% until March).

Oil derivatives falling down

Apparent consumption of petroleum products fell by 3.7% in April, but had a positive rate of 1.0% in the year. Diesel consumption fell by 8.9% in April (-2.6% in the year) and that of gasoline C grew 2.2% (6.4% in the year). Total demand for natural gas grew 10.3% in April, but still continues with a negative rate of 3.0% in the year. Gas use in electricity generation increased by 24.9% in April.

The consumption in the Otto cycle transport (gasoline, ethanol and natural gas) grew by 1.1% in the year (2.4% up 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 2.3% in April (+ 3.1% in March) and increased by 0.9% in the year (-1.6% in the 12 months of 2016). Until April, industrial consumption was at 1.1%, residential was at 1.1% and commercial, at -0.8%.

Biodiesel production downward

Biodiesel production fell by 0.5% in April and, in the year, accumulates a reduction of 3.4% (-4.6% up to March and -9.3% to February). In 2016 the rate was -3.6% and in 2015, +15%.

Pulp production grew by 12.6% in April. 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% up to April (+5.8% in the whole 2016 and +42.5% in 2015), the commercial tariff decreased 4.5% (+5.7% in 2016 and +43.8% in 2015) and the industrial fell by 5.0% (+3.6% in 2016 and +51.7% in 2015).

Basic data

SPECIFICATION	APRIL – IN THE MONTH 2017	IN THE MONTH 2016	IN THE MONTH %17/16	ACCUMULATED IN THE YEAR 2017	ACCUMULATED 2016	ACCUMULATED %17/16	ACCUMULATED %2017
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	2,661	2,383	11.7	2,722	2,394	13.7	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	58	42	37.0	57	42	36.0	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,434	2,527	-3.7	2,486	2,462	1.0	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	920	1,010	-8.9	937	963	-2.6	35.8
hereof: GASOLINE C (10^3 b/day)	765	748	2.2	779	732	6.4	25.1
CONSUMER PRICE - DIESEL (R$/l)	3.02	3.02	-0.2	3.05	3.02	1.3	-
CONSUMER PRICE - GASOLINE C (R$/l)	3.64	3.72	-2.2	3.70	3.71	-0.3	-
CONSUMER PRICE - LPG (R$/13 kg)	57.2	53.7	6.5	56.0	53.9	3.9	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	102.6	95.8	7.1	105.1	95.2	10.4	-
IMPORTS (10^6 m^3/day)	33.3	33.3	0.2	24.3	39.3	-38.1	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	28.3	31.5	-10.1	31.0	33.1	-6.3	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	107.6	97.6	10.3	98.4	101.5	-3.0	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	41.8	41.1	1.7	40.3	40.1	0.5	40.9
POWER GENERATION CONS. (10^6 m^3/day)	33.1	26.5	24.9	26.0	32.3	-19.5	26.4
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	11.1	12.6	-11.4	10.8	11.7	-7.6	-
MOTOR PRICE SP (US$/MMBtu)	17.5	14.7	18.6	17.4	13.7	26.4	-
RESIDENTIAL PRICE SP (US$/MMBtu)	36.8	35.8	2.8	35.9	33.5	7.4	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	62,886	65,054	-3.3	67,009	66,414	0.9	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	36,614	38,433	-4.7	38,883	38,831	0.1	58.0
SOUTH POWER LOAD (MWavg)	10,693	11,092	-3.6	11,994	11,797	1.7	17.9
NORTHEAST POWER LOAD (MWavg)	10,309	10,147	1.6	10,794	10,512	2.7	16.1
NORTH POWER LOAD (MWavg)	5,269	5,382	-2.1	5,338	5,274	1.2	8.0
TOTAL CONSUMPTION (TWh) (**)	39.2	40.1	-2.3	157.4	156.0	0.9	**100.0**
RESIDENTIAL	11.2	11.8	-4.9	46.8	46.3	1.1	29.7
INDUSTRIAL	13.9	13.8	0.7	54.0	53.5	1.1	34.3
COMMERCIAL	7.7	8.1	-4.7	31.1	31.3	-0.8	19.7
OTHER SECTORS	6.4	6.4	-1.0	25.5	24.9	2.5	16.2
PLANTS ENTRY INTO OPERATING (MW)	772	1,077	-28.4	2,272	2,765	-17.8	-
RESIDENTIAL PRICE (R$/MWh)	654	637	2.7	630	656	-4.0	-
COMMERCIAL PRICE (R$/MWh)	579	569	1.9	560	586	-4.5	-
INDUSTRIAL PRICE (R$/MWh)	548	539	1.6	531	559	-5.0	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	73	73	-0.5	62	65	-3.4	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	328	427	-23.2	378	446	-15.2	-
ETHANOL EXPORTS (10^3 b/d)	27	15	78.2	18	37	-50.2	-
HYDRATED ETHANOL PRICE (R$/l)	2.64	2.74	-3.7	2.77	2.78	-0.5	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,168	1,972	-40.8	1,240	1,883	-34.1	-
IMPORT PRICE (US$ FOB/t)	159.9	72.9	119.4	152.3	71.9	111.9	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,439	1,428	0.8	5,400	5,793	-6.8	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	97	77	25.8	93	80	15.4	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.2	2.2	2.2	2.2	2.1	3.7	-
IRON ORE EXPORTS (10^3 t/day)	735	884	-16.9	878	855	2.7	-
PELLETS EXPORTS (10^3 t/day)	67	82	-18.8	81	90	-9.5	-
PAPER PRODUCTION (10^3 t/day)	28.1	28.2	-0.4	28.2	28.4	-0.8	-
PULP PRODUCTION (10^3 t/day)	54.9	48.8	12.6	52.7	49.7	6.0	-
SUGAR PRODUCTION (10^3 t/daY)	58	115	-49.8	24	39	-39.5	-
SUGAR EXPORTS (10^3 t/day)	54	51	6.2	60	65	-6.3	-

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

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