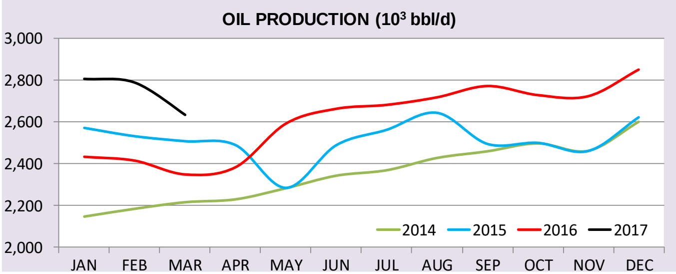
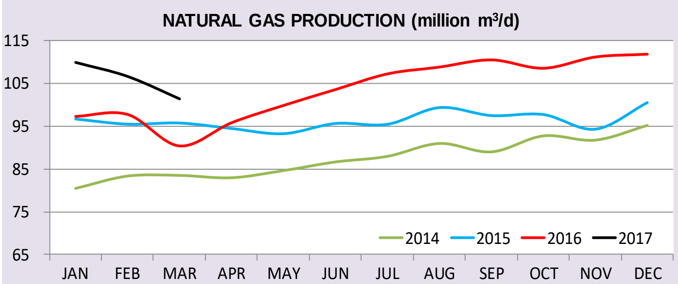
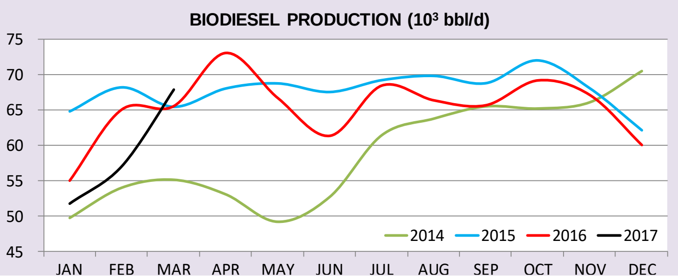
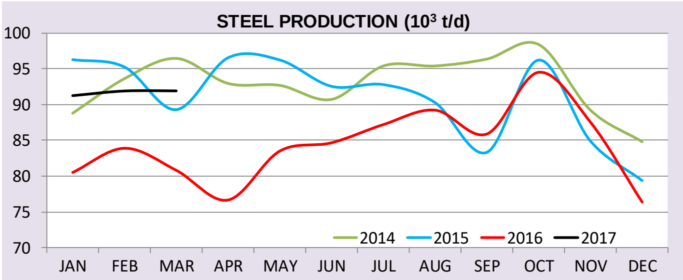
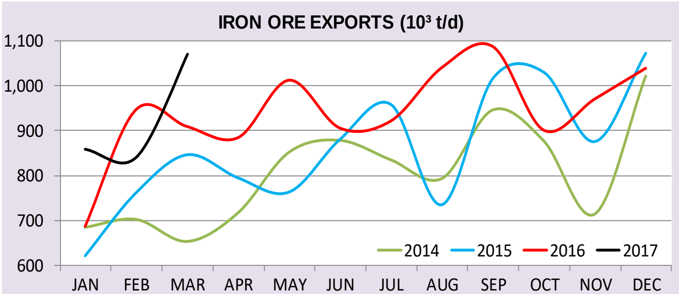
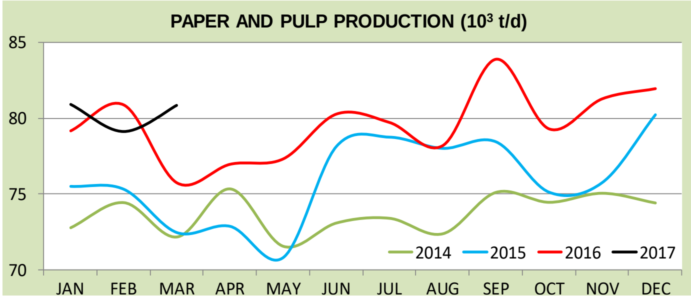


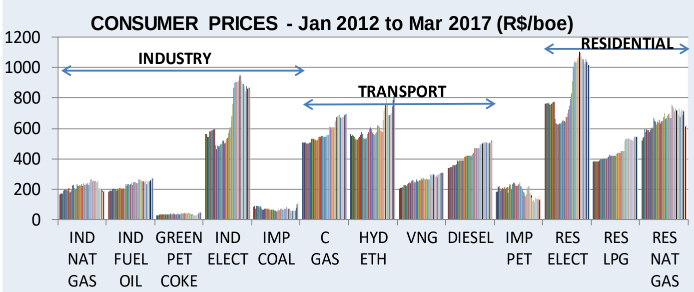












Note: For a better visualization, the minimum scale of the graphs was raised to the level close to the lowest value of the curves.

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
(55 61) 2032 5967/5764

Monthly Energy Bulletin - Brazil

Reference Month: March 2017

Domestic Energy Supply

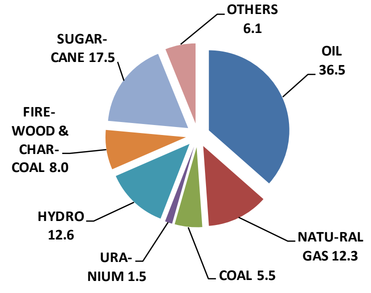
The indicators for March 2017, of industrial production and energy use, signalize a small recovery of the economy. The metallurgical industry goes to reasonable growth rates and the consumption of energy in light vehicles (mostly personal use) reverses negative performances.

Thus, for Domestic Energy Supply (DES)*, a growth rate of 1.5% was estimated up to March. However, considering the analysis for the twelve months of the year, the DES is expected to grow slightly, somewhere between 1.5 and 2.5%.

On May 31, 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.

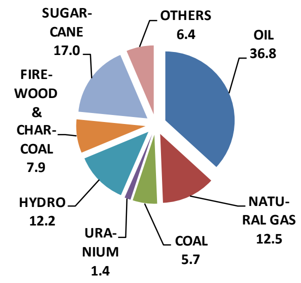
Total energy demand in 2017 may grow between 1.5 and 2.5%

DES 2016 (%)



288.4million toe
43.5% renewables

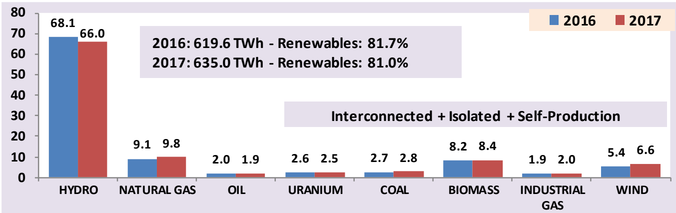
DES 2017 (%)



295.0 million toe
42.8% 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 (%)



MME
MINISTRY OF MINES AND ENERGY - MME
SECRETARIAT OF ENERGY PLANNING AND DEVELOPMENT
Department of Information and Studies on Energy

Highlights to March 2017

Oil production still rising

Oil production accumulated a 14.4% increase until March, over the same period of 2016. In March, the increase was 12.3%. Natural gas production repeats good oil prices, growing 11.5% in the year and 12.2% in March.

Steel production in high

Steel production increased 13.6% in March, compared to the same month in 2016, but was below the March 2014 production. Iron ore exports grew 17.8% in March and 9.5% in the yearly accumulate. Pellet exports, although rising in March, continue with a negative rate of 6.7% in the year (-42.7% in 2016).

Hydraulic supply in fall

The hydropower supply increased by 7.6% until March, but declined 4.1% over February. The import of Itaipu recoiled 0.2% in the year.

Oil derivatives in high

Apparent consumption of petroleum products grew 5.9% in March, and 3.8% in the year. Diesel consumption rose 2.1% (-0.4% in the year) and that of C gasoline grew by 5.9% in the month (7.9% in the year). Total demand for natural gas showed a decline of 8.9% in the year (-9.4% through February), with a strong influence on the decline of 36.3% in thermoelectric consumption.

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

Electricity consumption in high

Electricity consumption (excluding captive self-producers) grew by 3.1% in March 2017 and 2.1% in the year (-1.6% for the whole 2016). Until March, industrial consumption was at 1.2%, residential at 3.2% and commercial at 0.5%.

Biodiesel production in high

Biodiesel production grew 3.5% in March, but maintained a negative rate of 4.6% in the year (-9.3% until February). In 2016 the rate was negative by 3.6% and in 2015, positive by 15%.

Pulp production grew 9.9% in March, recovering the 5.2% decline in February. In the year, the rate is positive at 4.2%. (7.8% for 2016, 8.5% for 2015 and 9.2% for 2014).

Electricity rates recoil

The national average residential electricity tariff recoiled 6.1% up to March (+5.8% in 2016 and +42.5% in 2015), the commercial tariff decreased 6.5% (+5.7% in 2016 and +43.8% in 2015) and the industrial fell by 7.2% (+3.6% in 2016 and +51.7% in 2015).

Basic data

SPECIFICATION	MARCH						
	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)	2,636	2,348	12.3	2,742	2,398	14.4	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	63	39	62.3	54	42	27.9	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,584	2,441	5.9	2,534	2,440	3.8	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	1,033	1,012	2.1	943	947	-0.4	35.4
hereof: GASOLINE C (10^3 b/day)	801	756	5.9	784	727	7.9	24.7
CONSUMER PRICE - DIESEL (R$/l)	3.05	3.02	1.0	3.07	3.01	1.8	-
CONSUMER PRICE - GASOLINE C (R$/l)	3.69	3.73	-1.2	3.72	3.71	0.4	-
CONSUMER PRICE - LPG (R$/13 kg)	55.7	53.9	3.4	55.5	53.9	3.0	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	101.3	90.4	12.2	106.0	95.0	11.5	-
IMPORTS (10^6 m^3/day)	31.0	37.5	-17.3	22.3	41.3	-46.0	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	32.0	33.0	-3.1	31.9	33.6	-5.1	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	92.4	94.9	-2.6	93.6	102.8	-8.9	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	41.7	39.5	5.7	39.8	39.8	0.1	42.5
POWER GENERATION CONS. (10^6 m^3/day)	19.5	26.9	-27.5	21.8	34.2	-36.3	23.3
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	11.0	12.1	-8.9	10.8	11.5	-6.2	-
MOTOR PRICE SP (US$/MMBtu)	17.2	14.2	21.6	17.3	13.4	29.3	-
RESIDENTIAL PRICE SP (US$/MMBtu)	36.5	34.4	5.8	35.6	32.7	9.1	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	68,163	65,842	3.5	68,289	66,705	2.4	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	39,228	38,534	1.8	39,562	38,876	1.8	57.9
SOUTH POWER LOAD (MWavg)	11,842	11,171	6.0	12,411	11,958	3.8	18.2
NORTHEAST POWER LOAD (MWavg)	11,208	10,882	3.0	10,955	10,634	3.0	16.0
NORTH POWER LOAD (MWavg)	5,886	5,255	12.0	5,361	5,238	2.3	7.9
TOTAL CONSUMPTION (TWh) (**)	40.4	39.2	3.1	118.3	115.9	2.1	**100.0**
RESIDENTIAL	12.2	11.3	7.8	35.6	34.5	3.2	30.1
INDUSTRIAL	13.8	13.7	0.5	40.1	39.7	1.2	33.9
COMMERCIAL	7.9	7.8	1.8	23.4	23.3	0.5	19.8
OTHER SECTORS	6.4	6.3	1.9	19.1	18.4	3.8	16.2
PLANTS ENTRY INTO OPERATING (MW)	145	351	-58.6	1,500	1,688	-11.1	-
RESIDENTIAL PRICE (R$/MWh)	633	649	-2.5	622	662	-6.1	-
COMMERCIAL PRICE (R$/MWh)	563	583	-3.4	553	592	-6.5	-
INDUSTRIAL PRICE (R$/MWh)	530	553	-4.1	525	566	-7.2	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	68	66	3.5	59	62	-4.6	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	439	444	-1.1	395	452	-12.7	-
ETHANOL EXPORTS (10^3 b/d)	11	42	-73.9	15	44	-64.9	-
HYDRATED ETHANOL PRICE (R$/l)	2.75	2.87	-4.3	2.81	2.80	0.5	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,256	2,010	-37.5	1,264	1,853	-31.8	-
IMPORT PRICE (US$ FOB/t)	153.2	64.8	136.6	156.3	69.6	124.7	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,321	1,486	-11.1	3,961	4,365	-9.2	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	92	81	13.6	92	82	12.1	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.2	2.1	4.3	2.2	2.1	4.3	-
IRON ORE EXPORTS (10^3 t/day)	1,070	909	17.8	926	845	9.5	-
PELLETS EXPORTS (10^3 t/day)	104	69	50.0	86	92	-6.7	-
PAPER PRODUCTION (10^3 t/day)	28.7	28.3	1.5	28.2	28.5	-1.0	-
PULP PRODUCTION (10^3 t/day)	52.1	47.4	9.9	52.1	50.0	4.2	-
SUGAR PRODUCTION (10^3 t/daY)	10	16	-35.1	12	14	-12.4	-
SUGAR EXPORTS (10^3 t/day)	52	67	-23.2	63	69	-9.3	-

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

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