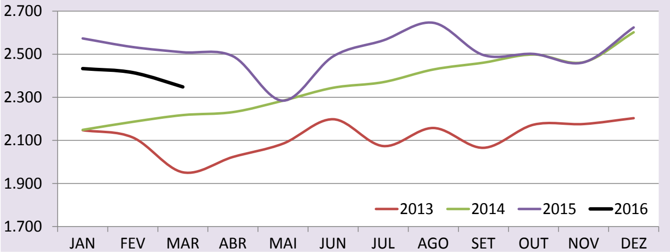
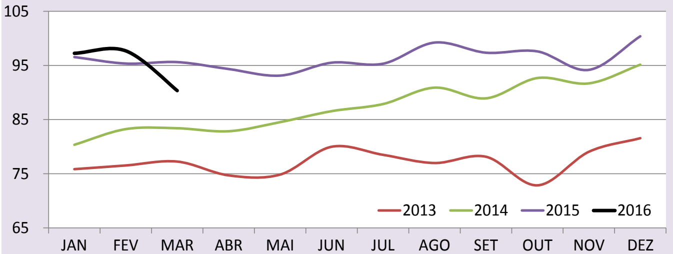
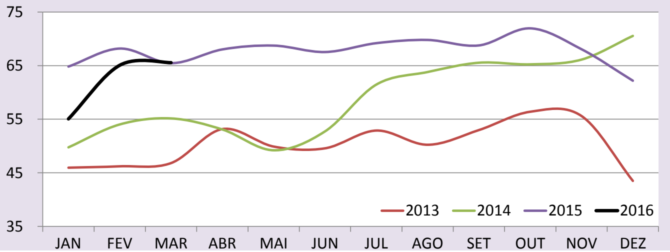
OIL PRODUCTION (10^3 bbl/d)



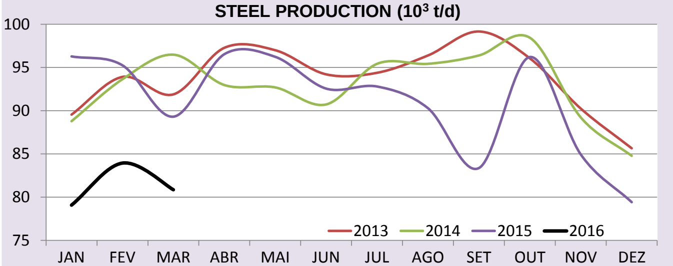
NATURAL GAS PRODUCTION (million m^3/d)



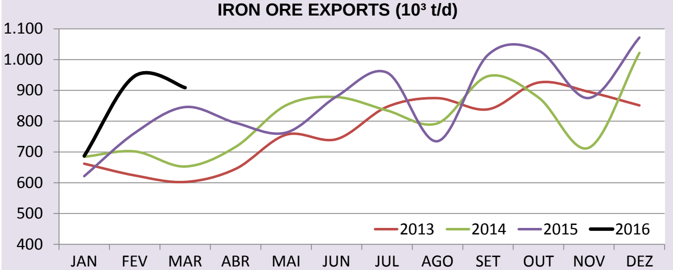
BIODIESEL PRODUCTION (10^3 bbl/d)



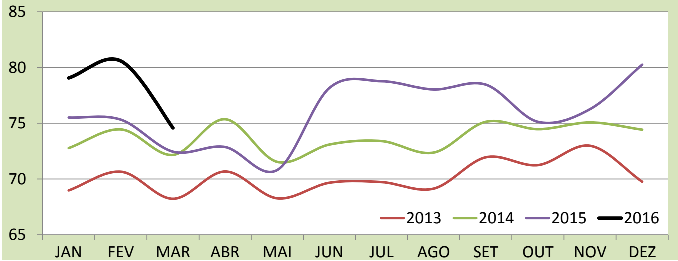
STEEL PRODUCTION (10^3 t/d)



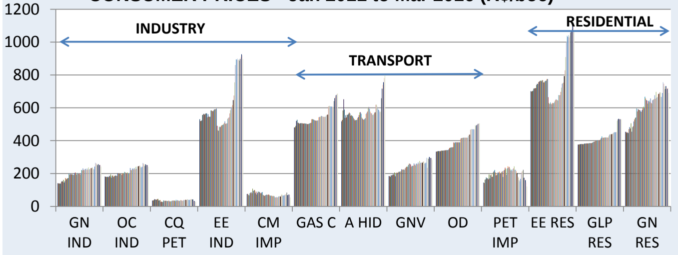
IRON ORE EXPORTS (10^3 t/d)



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



CONSUMER PRICES - Jan 2011 to Mar 2016 (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. 2015 data reflect the **2016 cycle** of the **National Energy Balance**, completed in April by the Energy Research Company (EPE), with the support of MME and its institutions.

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Monthly Energy Bulletin - Brazil

Reference Month: March 2016

Domestic Energy Supply

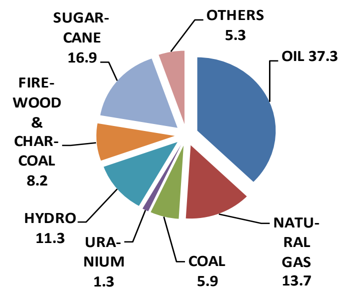
The economic and energy indicators of March 2016 still indicate low performance of household consumption and industrial production.

The Domestic Energy Supply (DES)* estimated by this month shows a decrease of 5.1% over the same period of 2015. It is observed sharp drop in oil products and natural gas demand. The metallurgy products, which have coal as the main energy source, also undergo severe downturn.

Total energy demand in 2016 may recede between 4 and 5%

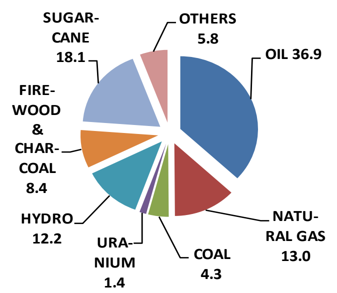
If the recessionary forces of the economy remain, it is possible that the 2016 DES will recede from 4 to 5%. During the elaboration of this bulletin, the estimated figure was -4.2%.

DES 2015 (%)



299.2 million toe
41.2% renewables

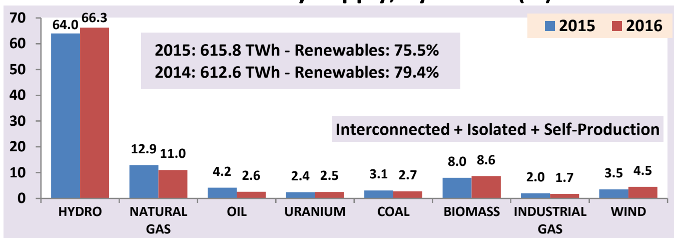
DES 2016 (%)



286.8 million toe
43.9% renewables

The Domestic Electricity Supply (DELS) in 2016 was estimated at 612.6 TWh, showing a 0.5% decline over 2015. Renewable sources should increase participation, due to good performance of hydro, wind and biomass generations.

Domestic Electricity Supply, by Source (%)



MME
MINISTRY OF MINES AND ENERGY - MME
SECRETARIAT OF ENERGY PLANNING AND DEVELOPMENT
OFFICE OF STRATEGIC ENERGY STUDIES

Highlights of March 2016

Oil production in low

Up to March 2016, oil production reduced 5.5% over the same period of 2015. Natural gas production recoiled 0.9% in the same period.

Steel production is declining

Steel production fell 9.5% in March, accumulating a recoil of 13.2% in the year to date. Iron ore exports are 13.9% positive in the year. In other hand, pellets exports fell 33.9%.

Hydraulic supply in on the up

The hydraulic power supply rose 11.7% in March, with Itaipu having a high of 6% (Paraguayan part). In the year, the national hydro generation increased 6.3%.

Oil products consumption in low

The apparent consumption of oil products fell 4.9% in March, accumulating decrease of 4.7% in the year. Diesel fell 2.9% and C gasoline grew 9.5% in the month. In the year, the diesel indicator is -4.1% and gasoline's, 0.2%. The total demand for natural gas shows decrease of 17.3% in the year, with strong influence in the thermoelectric consumption declining, of 32%.

The consumption in the Otto cycle transport (gasoline, ethanol and natural gas) accumulates a recoil of 1.9% in the year (+0.8% in the whole year of 2015 and +6.2% in 2014).

Electricity consumption still falling

Electricity consumption (excluding captive self-producer) fell 1.7% in March 2016, and the year accumulates -4.2% (-5.5% until February). The industry showed the greatest reduction in March: -6% (-7.2% in the year). Residential consumption accumulated -2.6% in the year, and commercial consumption, -3.2%.

Biodiesel production with strong decrease

Biodiesel production declined 0.1% in March and fell down 6.5% in the year to date. In 2015, the rate was 15% positive.

The pulp production continues with high performance, showing an increase of 5.9% in March and 8.2 in the year to date. Throughout 2015, the expansion was 8.5% and in 2014, 9.2%.

Electricity rates

In 2016, the national average residential electricity tariff rose 29.3%. The commercial tariff grew 31.3%, and the industrial, 32.1%.

Basic data of 2015 and 2016

SPECIFICATION	MARCH						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2016	2015	%16/15	2016	2015	%16/15	%2015
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	2,348	2,509	-6.4	2,398	2,539	-5.5	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	39	63	-37.7	42	74	-43.4	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,532	2,661	-4.9	2,433	2,554	-4.7	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	1,012	1,042	-2.9	947	988	-4.1	37.0
hereof: GASOLINE C (10^3 b/day)	756	690	9.5	727	725	0.2	23.9
CONSUMER PRICE - DIESEL (R$/l)	3.02	2.81	7.5	3.01	2.74	10.1	-
CONSUMER PRICE - GASOLINE C (R$/l)	3.73	3.32	12.2	3.71	3.22	15.1	-
CONSUMER PRICE - LPG (R$/13 kg)	53.9	45.2	19.1	53.9	44.9	20.0	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	90.4	95.6	-5.5	95.0	95.9	-0.9	-
IMPORTS (10^6 m^3/day)	37.5	55.2	-32.0	41.3	53.2	-22.4	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	33.0	25.7	28.6	33.6	24.8	35.2	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	94.9	125.1	-24.2	102.8	124.3	-17.3	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	39.5	44.8	-12.0	39.8	44.4	-10.5	38.7
POWER GENERATION CONS. (10^6 m^3/day)	26.9	50.9	-47.1	34.2	50.2	-31.8	33.3
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	12.1	13.1	-7.4	11.5	14.4	-20.3	-
MOTOR PRICE SP (US$/MMBtu)	14.2	15.0	-5.9	13.4	16.6	-19.1	-
RESIDENTIAL PRICE SP (US$/MMBtu)	34.4	38.4	-10.3	32.7	42.3	-22.8	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	67,280	66,647	0.9	67,211	67,869	-1.0	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	39,571	38,704	2.2	39,565	40,111	-1.4	58.9
SOUTH POWER LOAD (MWavg)	11,492	11,930	-3.7	11,916	12,156	-2.0	17.7
NORTHEAST POWER LOAD (MWavg)	10,924	10,482	4.2	10,480	10,554	-0.7	15.6
NORTH POWER LOAD (MWavg)	5,293	5,135	3.1	5,250	5,049	4.0	7.8
TOTAL CONSUMPTION (TWh) (**)	39.2	39.8	-1.7	115.9	121.0	-4.2	**100.0**
RESIDENTIAL	11.3	11.1	1.5	34.5	35.4	-2.6	29.8
INDUSTRIAL	13.7	14.6	-6.0	39.7	42.8	-7.2	34.2
COMMERCIAL	7.8	7.9	-1.2	23.3	24.1	-3.2	20.1
OTHER SECTORS	6.3	6.1	2.4	18.4	18.8	-1.8	15.9
PLANTS ENTRY INTO OPERATING (MW)	199	508	-60.8	1,528	1,593	-4.1	-
RESIDENTIAL PRICE (R$/MWh)	649	551	17.8	661	511	29.3	-
COMMERCIAL PRICE (R$/MWh)	583	490	19.0	591	450	31.3	-
INDUSTRIAL PRICE (R$/MWh)	544	458	18.8	554	420	32.1	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	66	65	0.1	62	66	-6.5	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	419	455	-7.9	444	461	-3.8	-
ETHANOL EXPORTS (10^3 b/d)	42	22	87.6	44	23	86.9	-
HYDRATED ETHANOL PRICE (R$/l)	2.87	2.23	28.9	2.80	2.17	28.9	-
COAL							
ELECTRICITY GENERATION (MWavg)	2,010	2,201	-8.7	1,853	2,221	-16.5	-
IMPORT PRICE (US$ FOB/t)	64.8	97.2	-33.4	69.6	97.5	-28.6	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,486	1,314	13.1	4,365	3,909	11.6	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	81	89	-9.5	81	94	-13.2	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.1	2.3	-9.4	2.1	2.3	-8.3	-
IRON ORE EXPORTS (10^3 t/day)	909	846	7.4	845	742	13.9	-
PELLETS EXPORTS (10^3 t/day)	69	147	-53.0	92	139	-33.9	-
PAPER PRODUCTION (10^3 t/day)	27.7	28.2	-1.7	28.3	28.4	-0.5	-
PULP PRODUCTION (10^3 t/day)	46.8	44.2	5.9	49.8	46.0	8.2	-
SUGAR PRODUCTION (10^3 t/daY)	15	14	4.2	14	17	-22.0	-
SUGAR EXPORTS (10^3 t/day)	67	71	-5.6	69	62	10.8	-

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

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