

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 2017 data still reflect the positions of the bulletin of December / 2017. On the other hand, the DELS data for 2017 account for results of the National Energy Balance - BEN, cycle 2018, although not yet definitive.

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

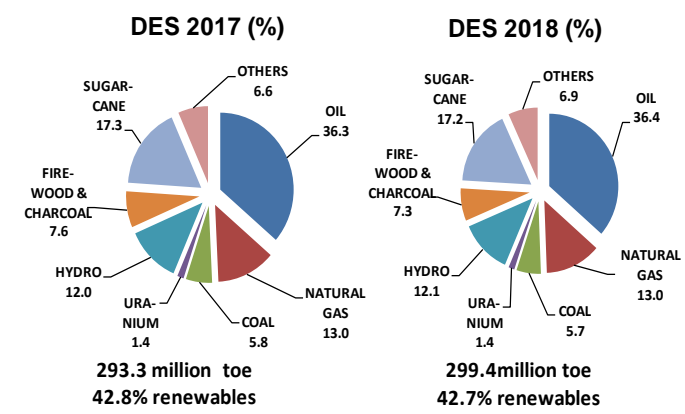
Reference Month: January 2018

Domestic Energy Supply

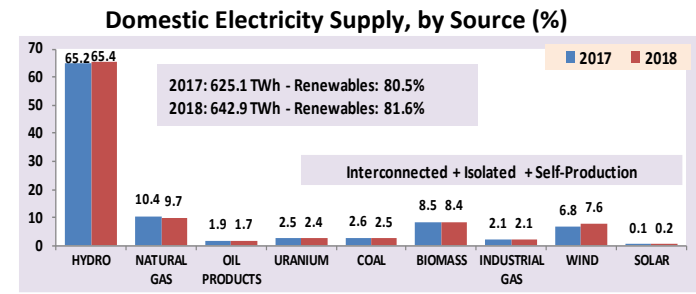
The year of 2018 begins with a sharp decline in the demand for gasoline C, a reduction in hydroelectric generation and a consequent increase in the electricity thermal generation, and small increases for energy-intensive products and electricity consumption.

Economic and energy indicators, from January 2018, indicate that Domestic Energy Supply - DES* decreased by 1% over the same month of 2017. For the whole of 2018, estimates indicate that the DES may grow slightly above 2%.

Total energy demand in 2018 may grow 2.1%



The Domestic Electricity Supply - DELS** of 2018 was estimated at 642.9 TWh, an increase of 2.8% over 2017. The proportion of renewable sources is expected to remain close to 80%. The wind power continues to increase its participation. Solar energy starts a process of strong increase in the DELS matrix.



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

Highlights of January 2018

Oil production with a slight decrease

Oil production starts the year with a decrease of 2.5%. The production of natural gas begins with an increase of 2.3%, on the month of 2017.

Steel production in slight increase

Steel production grew by 1.3% in January 2018. Iron ore exports gre by 3.5% and pellets by 25.9%, repeating the good recovery of 2017 (-38% in January 2017).

Hydraulic supply in decline

Hydraulic generation starts 2018 with a 3% drop. Itaipu's generation started the year with a strong 9.2% increase.

Oil derivatives declining

Apparent consumption of petroleum products decreased by 7.5% in January 2018, according to ANP and SECEX's foreign trade accounting records. In terms of physical movement, the decrease was lower, of 2.3%. Diesel consumption grew by 5.5% and gasoline consumption recoiled by 9%. The decline in gasoline was offset by a sharp increase of 28.9% in ethanol demand. Total demand for natural gas grew 6.4%, and sales for electric generation, 16.3%.

Energy consumption in light vehicles of the Otto cycle (gasoline, ethanol and natural gas) grew 1.6% in January, although the drop in gasoline C (0.9 in 2017, -1.1% in 2016, 0, 8% in 2015 and 6.2% in 2014). It is an indicator that directly reflects the effects of the economy on the purchasing power of the population.

Electricity consumption with small high

Electricity consumption (excluding self-production that do not use the public grid) begins the year with a 0.5% increase (0.8% for the whole of 2017 and a negative 0.9% for 2016). Industrial consumption was the only one with a positive rate of 3.9%. Residential consumption retreated by 1%, and commercial consumption retreated by 2%. A less severe summer, in January, contributed to lower consumption.

Biodiesel production in strong high

Biodiesel production had a strong increase of 32.3% in January (12.9% for the whole of 2017, -3.6% in 2016 and 15% in 2015).

Pulp production started the year with a positive rate of 10.2%, but it had a low base in January 2017 (3.8% in 2017, 7.8% in 2016, 8.5% in 2015 and 9.2% in 2014). Paper production grew by 1.9% (1.7% throughout 2017).

Electricity rates increases

The average domestic tariff for residential electricity grew 9.3% in January, over the same month of 2017 (stable in 2017, 5.8% in 2016 and 42.5% in 2015). The commercial rate increased by 11.5% (0.7% in 2017, 5.7% in 2016 and 43.8% in 2015), and industrial tariffs increased 10.5% (1.2% in 2017, 3.6% % in 2016 and 51.7% in 2015).

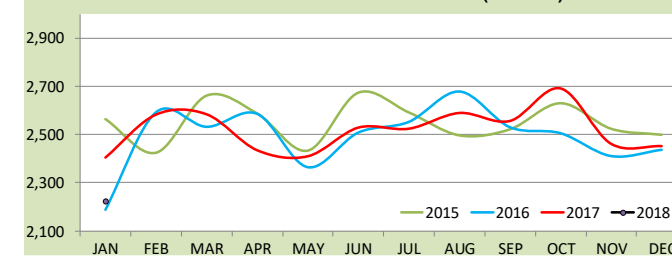
Basic data

SPECIFICATION	JANUARY							
	IN THE MONTH			ACCUMULATED IN THE YEAR				
	2018	2017	%18/17	2018	2017	%18/17	%2018	
OIL								
PRODUCTION - with Shale Oil and NGL(10 ³ b/d)	2,736	2,806	-2.5	2,736	2,806	-2.5	-	
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	59	47	24.4	59	47	24.4	-	
OIL PRODUCTS								
TOTAL CONSUMPTION (10 ³ b/day)	2,223	2,403	-7.5	2,223	2,403	-7.5	100.0	
hereof: DIESEL with biodiesel (10 ³ b/day)	885	839	5.5	885	839	5.5	37.8	
hereof: GASOLINE C (10 ³ b/day)	687	755	-9.0	687	755	-9.0	24.7	
CONSUMER PRICE - DIESEL (R\$/l)	3.38	3.09	9.2	3.38	3.09	9.2	-	
CONSUMER PRICE - GASOLINE C (R\$/l)	4.19	3.77	11.2	4.19	3.77	11.2	-	
CONSUMER PRICE - LPG (R\$/13 kg)	67.3	55.6	21.0	67.3	55.6	21.0	-	
NATURAL GAS								
PRODUCTION (10 ⁶ m ³ /day)	112.4	109.9	2.3	112.4	109.9	2.3	-	
IMPORTS (10 ⁶ m ³ /day)	21.7	16.4	32.5	21.7	16.4	32.5	-	
NON-UTILIZED AND REINJECTION (10 ⁶ m ³ /day)	34.1	32.3	5.5	34.1	32.3	5.5	-	
AVAILABILITY FOR CONSUMPTION (10 ⁶ m ³ /day)	100.1	94.1	6.4	100.1	94.1	6.4	100.0	
INDUSTRIAL CONSUMPTION (10 ⁶ m ³ /day)	38.6	38.3	0.7	38.6	38.3	0.7	38.6	
POWER GENERATION CONS. (10 ⁶ m ³ /day)	27.6	23.7	16.3	27.6	23.7	16.3	27.6	
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) - consumption range of 20,000 m ³ /day	12.5	10.3	21.0	12.5	10.3	21.0	-	
MOTOR PRICE SP (US\$/MMBtu)	18.4	17.3	6.1	18.4	17.3	6.1	-	
RESIDENTIAL PRICE SP (US\$/MMBtu)	38.3	34.7	10.3	38.3	34.7	10.3	-	
ELECTRICITY								
NATIONAL INTERCONNECTED SYSTEM	67,969	67,582	0.6	67,969	67,582	0.6	100.0	
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	39,610	39,497	0.3	39,610	39,497	0.3	58.3	
SOUTH POWER LOAD (MWavg)	12,068	12,079	-0.1	12,068	12,079	-0.1	17.8	
NORTHEAST POWER LOAD (MWavg)	10,965	10,683	2.6	10,965	10,683	2.6	16.1	
NORTH POWER LOAD (MWavg)	5,326	5,323	0.0	5,326	5,323	0.0	7.8	
TOTAL CONSUMPTION (TWh) (**)	39.5	39.3	0.5	39.5	39.3	0.5	100.0	
RESIDENTIAL	11.9	12.0	-1.0	11.9	12.0	-1.0	30.0	
INDUSTRIAL	13.6	13.1	3.9	13.6	13.1	3.9	34.4	
COMMERCIAL	7.6	7.8	-2.0	7.6	7.8	-2.0	19.3	
OTHER SECTORS	6.4	6.5	-0.9	6.4	6.5	-0.9	16.2	
PLANTS ENTRY INTO OPERATING (MW)	252	1,180	-78.7	252	1,180	-78.7	-	
RESIDENTIAL PRICE (R\$/MWh)	676	618	9.3	676	618	9.3	-	
COMMERCIAL PRICE (R\$/MWh)	612	549	11.5	612	549	11.5	-	
INDUSTRIAL PRICE (R\$/MWh)	582	527	10.5	582	527	10.5	-	
ETHANOL AND BIODIESEL								
BIODIESEL PRODUCTION (10 ³ b/d)	69	52	32.3	69	52	32.3	-	
MOTOR ETHANOL CONSUMPTION (10 ³ b/d)	483	374	28.9	483	374	28.9	-	
ETHANOL EXPORTS (10 ³ b/d)	25	21	16.3	25	21	16.3	-	
HYDRATED ETHANOL PRICE (R\$/l)	2.98	2.91	2.5	2.98	2.91	2.5	-	
COAL								
ELECTRICITY GENERATION (MWavg)	1,396	1,190	17.3	1,396	1,190	17.3	-	
IMPORT PRICE (US\$ FOB/t)	130.7	136.6	-4.3	130.7	136.6	-4.3	-	
NUCLEAR ENERGY								
ELECTRICITY GENERATION - (GWh)	1,400	1,441	-2.8	1,400	1,441	-2.8	-	
INDUSTRIAL SECTORS								
STEEL PRODUCTION (10 ³ t/day)	92	91	1.3	92	91	1.3	-	
ALUMINIUM PRODUCTION (10 ³ t/day)	2.2	2.2	-1.3	2.2	2.2	-1.3	-	
IRON ORE EXPORTS (10 ³ t/day)	888	858	3.5	888	858	3.5	-	
PELLETS EXPORTS (10 ³ t/day)	94	75	25.9	94	75	25.9	-	
PAPER PRODUCTION (10 ³ t/day)	27.7	27.2	1.9	27.7	27.2	1.9	-	
PULP PRODUCTION (10 ³ t/day)	59.2	53.7	10.2	59.2	53.7	10.2	-	
SUGAR PRODUCTION (10 ³ t/day)	13	16	-22.0	13	16	-22.0	-	
SUGAR EXPORTS (10 ³ t/day)	51	71	-29.2	51	71	-29.2	-	

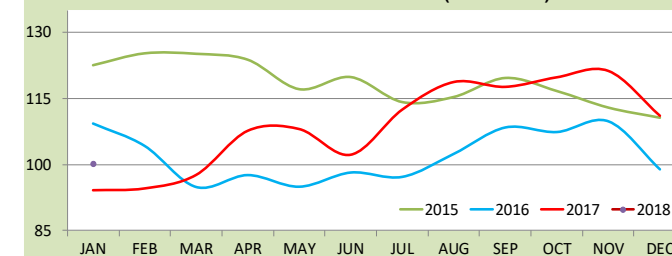
(*) SP is the acronym of the state of São Paulo.

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

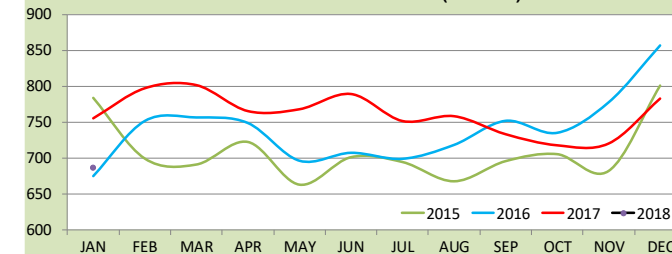
OIL PRODUCTS TOTAL CONSUMPTION (10³ bbl/d)



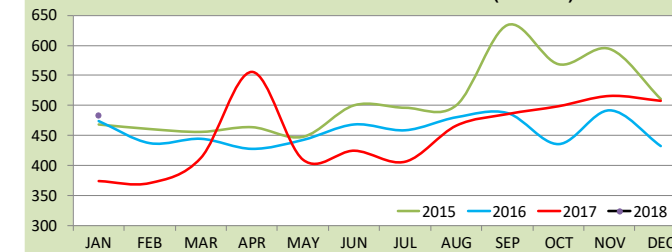
NATURAL GAS TOTAL DEMAND (million m³/d)



C GASOLINE CONSUMPTION (10³ bbl/d)



MOTOR ETHANOL TOTAL CONSUMPTION (10³ bbl/d)



NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)

