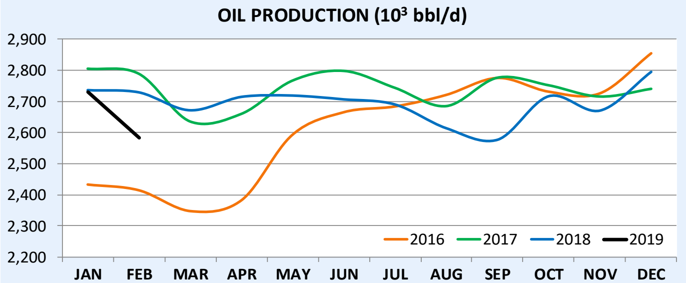
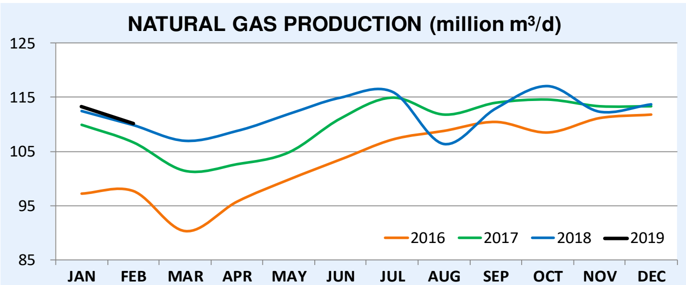
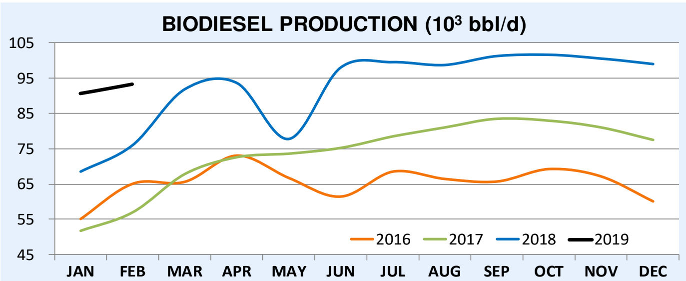
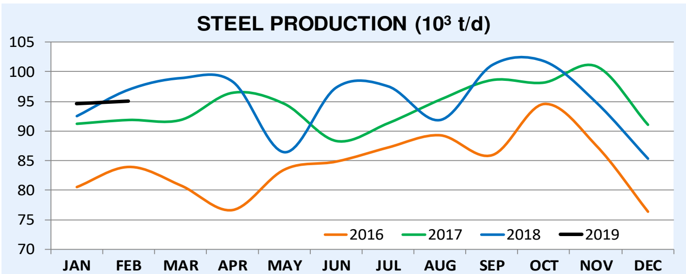
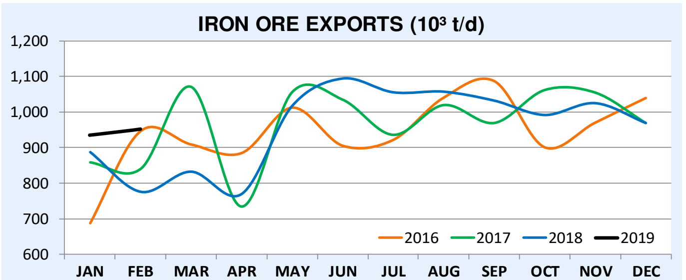
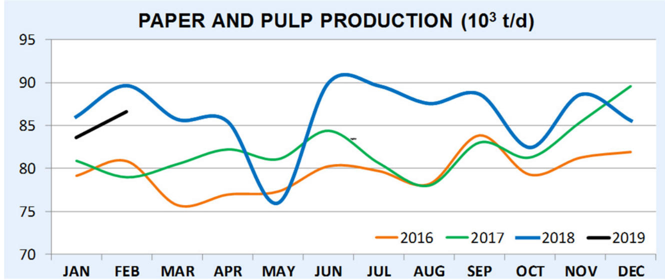


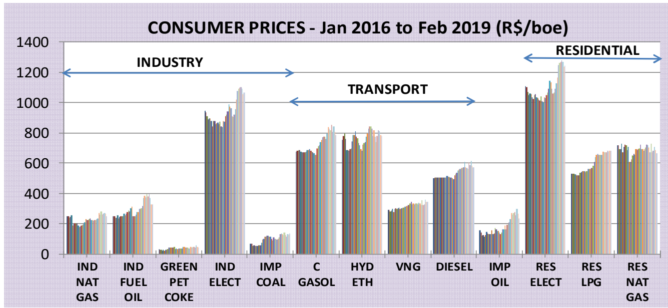












Note: For a better visualization, the minimum scale of the graphs was raised to the level close to the lowest value of the curves.

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 = domestic production (+) import (-) unused (-) reinjection.

Apparent consumption of oil derivatives = distributors' sales (+) Petrobras' own consumption (including refinery gas) (+) Petrobras' direct sales (+) consumer imports. The monthly data published in the press and on the ANP[3] website considers only the sales of distributors (+ or – 80% of total).

[1]**Domestic Energy Supply (DES), or Total Energy Demand**, represents the energy necessary to move the economy of a country or region over a period of time, includes final energy consumption in the residential sector and in the other economic sectors, includes losses in transmission and distribution, losses on power transformation and the own consumption of the energy sector.

[2] The DES and DELS data from 2017 reflect the final position of the 2018 cycle of the Brazilian Energy Balance (BEN), prepared by Energy Research Office (EPE) in cooperation with MME and entities of the energy sector.

Department of Information and Studies on Energy – DIE/SPE/MME
www.mme.gov.br / die@mme.gov.br
(55 61) 2032 5986/2032 5764

Monthly Energy Bulletin - Brazil

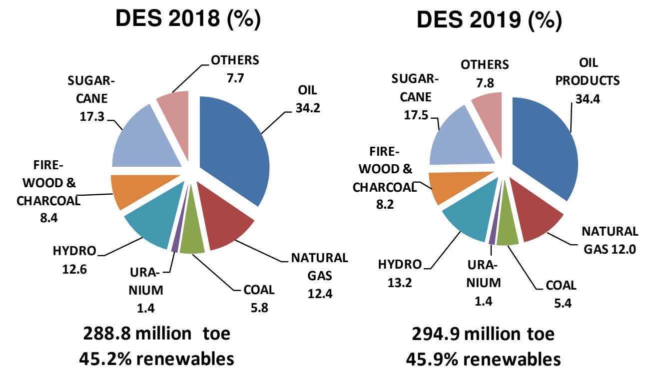
Reference Month: February 2019

Domestic Energy Supply

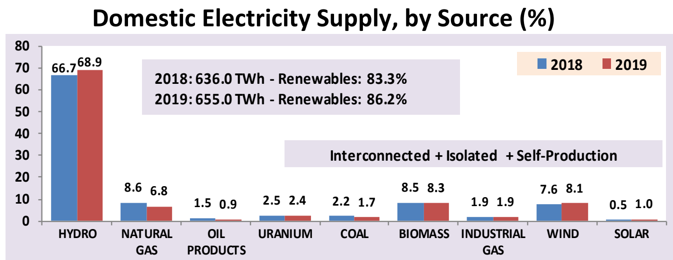
In February 2019, the energy sources associated with families consumption had highs. Energy consumption in light vehicles grew by 5.6% (3.6% in January), residential electricity consumption grew by 9.2% and commercial consumption increased by 7.2%. The increase in Tourism and air conditioned favored the indicators. The industry has been low, fact evidenced by 2.1% reduction in the power consumption of this sector.

The economic expectations signs that Domestic Energy Supply (DES)[1] of 2019 can increase above 2%. Even so, DES will be about 4% below the figure of 2014. By February 2019, the DES rate was 1.2%.

Total energy demand for 2019 is expected to increase over 2%



The Domestic Electricity Supply (DELS)[2] of 2019 was estimated at 655 TWh, showing an increase of 3.0% over 2018. The share of renewables should go beyond 85%. Wind and solar PV energies keep increasing their share in DELS matrix.



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

Highlights in February 2019

Oil production falling

Oil production fell by 5.4% in February 2019 over the same month of 2018, accumulating a drop of 2.6% in the year. The natural gas production rose slightly by 0.3% in the month and 0,5% in the year.

Steel production in fall

Steel production fell by 1.9% in February and accumulated a rise of 0.3% in the year (up 1.1% in the year 2018). Exports of iron ore accumulated a 13% increase in the year, and those of pellets high of 28.7%.

Hydraulic grows on up

Hydraulic generation grew almost 6.1% in the year (+ 50% from June 2018 to January 2019). Itaipu's generation declined 26%.

Oil derivatives risint

Apparent consumption of petroleum products grew by 3.4% in February (excluding ethanol and biodiesel). Diesel consumption, including biodiesel, was up 6.1%, and that of gasoline C, down 5.6%. The gasoline recoil was offset by the 39% increase in hydrated ethanol. Total natural gas demand accumulated a 9.9% drop in the year, with an accumulated 8.8% drop in electricity generation.

Energy consumption in light vehicles of the Otto cycle (gasoline, ethanol and natural gas) increased 4.5% (-1.2% in 2018, + 1.7% in 2017, -1.1 % in 2016, + 0.8% in 2015 and + 6.2% in 2014). It is an indicator that directly reflects the economy effects on the population purchasing power.

Electricity consumption with a strong rise

Electricity consumption, excluding autoproducers that do not use the public grid, grew by 4.6% in February. The strong heat raised the use of air conditioning. Residential consumption increased by 9.2% and commercial consumption by 7.2%. On the other hand, industrial consumption showed a negative rate of 2.1%, influenced by the 25% drop in aluminum production.

Biodiesel production keeps growing

Biodiesel production continued to rise in January, with a significant 27.4% (25% in 2018, 12.9% in 2017, -3.6% in 2016 and 15% in 2015).

Pulp production declined 4.9% in the year (+ 7.1% in all 2018, 3.8% in 2017, 7.8% in 2016, 8.5% in 2015 and 9.2% in 2014). Paper production grew by 0.6% in the year (0.8% in all 2018, + 1.7% in 2017).

Electricity tariffs in high

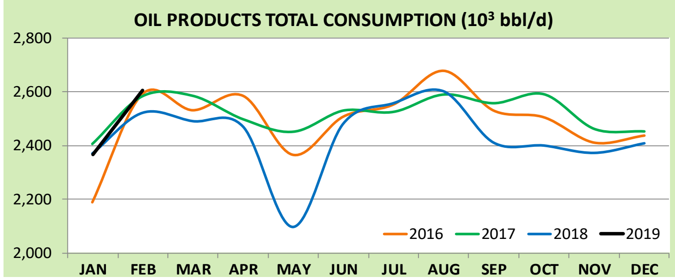
The average domestic tariff for residential electricity grew by 17.6% in february (12.6% in 2018, stable in 2017, 5.8% in 2016 and 42.5% in 2015). The commercial tariff increased 14.7% (12.4% in 2018, 0.7% in 2017, 5.7% in 2016 and 43.8% in 2015) and the industrial increased 13.7% (13.4% in 2018, 1.2% in 2017, 3.6% % in 2016 and 51.7% in 2015).

Basic Data

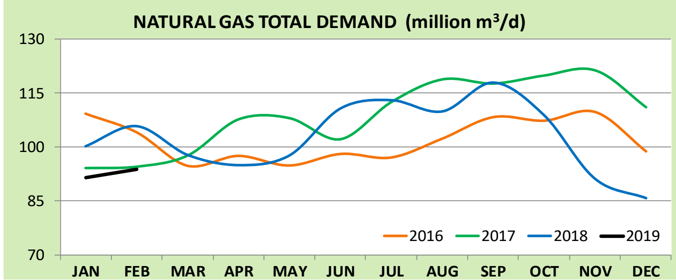
SPECIFICATION	FEBRUARY – IN THE MONTH 2019	2018	%19/18	ACCUMULATED IN THE YEAR 2019	2018	%19/18	98
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	2,582	2,728	-5.4	2,660	2,732	-2.6	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	63	68	-6.5	69	63	8.3	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,605	2,521	3.4	2,479	2,441	1.6	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	1,039	979	6.1	1,010	930	8.7	38.7
hereof: GASOLINE C (10^3 b/day)	664	704	-5.6	648	695	-6.7	20.9
CONSUMER PRICE - DIESEL (R$/l)	3.45	3.39	1.9	3.45	3.38	1.9	-
CONSUMER PRICE - GASOLINE C (R$/l)	4.19	4.21	-0.4	4.23	4.20	0.7	-
CONSUMER PRICE - LPG (R$/13 kg)	69.1	66.8	3.5	69.2	67.1	3.2	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	110.2	109.8	0.3	111.8	111.2	0.5	-
IMPORTS (10^6 m^3/day)	25.0	32.4	-22.9	21.1	26.8	-21.2	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	41.3	36.5	13.2	40.2	35.2	14.3	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	93.8	105.7	-11.3	92.6	102.8	-9.9	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	42.3	40.3	4.8	40.1	39.7	1.0	43.3
POWER GENERATION CONS. (10^6 m^3/day)	29.1	24.5	19.1	23.8	26.1	-8.8	25.7
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	12.5	12.4	1.0	12.4	12.4	-0.1	-
MOTOR PRICE SP (US$/MMBtu)	16.9	18.2	-7.5	16.8	18.3	-8.3	-
RESIDENTIAL PRICE SP (US$/MMBtu)	32.8	37.9	-13.5	32.6	38.1	-14.4	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	71,033	67,339	5.5	71,599	67,540	6.0	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	41,325	39,103	5.7	41,899	39,260	6.7	58.5
SOUTH POWER LOAD (MWavg)	12,159	12,837	-5.3	12,071	12,458	-3.1	16.9
NORTHEAST POWER LOAD (MWavg)	11,471	10,548	8.8	11,373	10,739	5.9	15.9
NORTH POWER LOAD (MWavg)	5,580	5,529	0.9	5,476	5,470	0.1	7.6
TOTAL CONSUMPTION (TWh) (**)	41.2	39.4	4.6	82.3	79.0	4.2	**100.0**
RESIDENTIAL	12.6	11.5	9.2	25.4	23.4	8.6	30.9
INDUSTRIAL	13.6	13.9	-2.1	27.2	27.5	-1.2	33.0
COMMERCIAL	8.2	7.6	7.2	16.3	15.3	6.6	19.8
OTHER SECTORS	6.8	6.3	7.7	13.5	12.8	5.0	16.4
PLANTS ENTRY INTO OPERATING (MW)	502	745	-32.7	823	997	-17.4	-
RESIDENTIAL PRICE (R$/MWh)	758	645	17.6	756	654	15.6	-
COMMERCIAL PRICE (R$/MWh)	664	579	14.7	663	585	13.3	-
INDUSTRIAL PRICE (R$/MWh)	628	553	13.7	637	568	12.2	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	93	76	22.7	92	72	27.4	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	568	469	21.0	558	467	19.5	-
ETHANOL EXPORTS (10^3 b/d)	24	14	69.4	20	20	2.8	-
HYDRATED ETHANOL PRICE (R$/l)	2.78	3.02	-7.9	2.80	3.00	-6.8	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,349	1,508	-10.5	976	1,452	-32.8	-
IMPORT PRICE (US$ FOB/t)	165.1	128.4	28.6	161.8	129.5	24.9	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,338	824	62.4	2,756	2,224	23.9	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	95	97	-1.9	95	95	0.3	-
ALUMINIUM PRODUCTION (10^3 t/day)	1.6	2.2	-25.0	1.6	2.2	-24.0	-
IRON ORE EXPORTS (10^3 t/day)	952	776	22.7	943	835	13.0	-
PELLETS EXPORTS (10^3 t/day)	81	73	10.4	108	84	28.7	-
PAPER PRODUCTION (10^3 t/day)	30.3	30.0	0.8	28.9	28.8	0.6	-
PULP PRODUCTION (10^3 t/day)	56.3	59.6	-5.6	56.0	58.9	-4.9	-
SUGAR PRODUCTION (10^3 t/daY)	6	5	17.3	9	9	1.1	-
SUGAR EXPORTS (10^3 t/day)	42	59	-28.9	37	54	-31.4	-

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

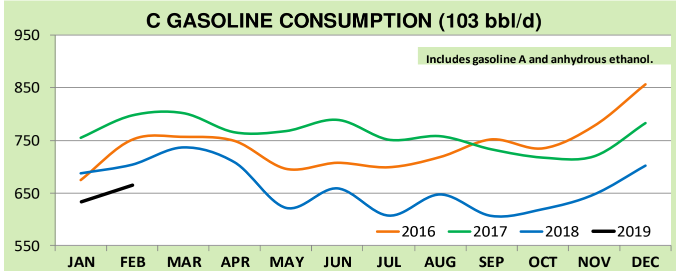
(**) The traditional self-producers (consumers that do not use public grid) is not included.



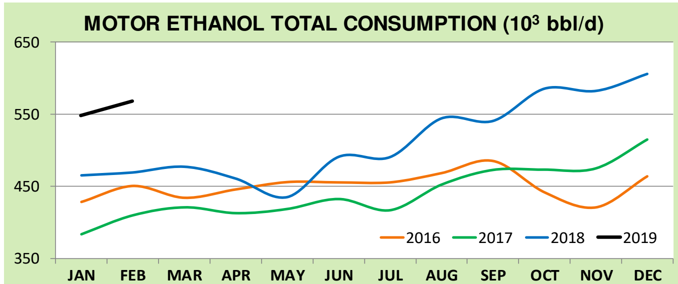
OIL PRODUCTS TOTAL CONSUMPTION (10^3 bbl/d)



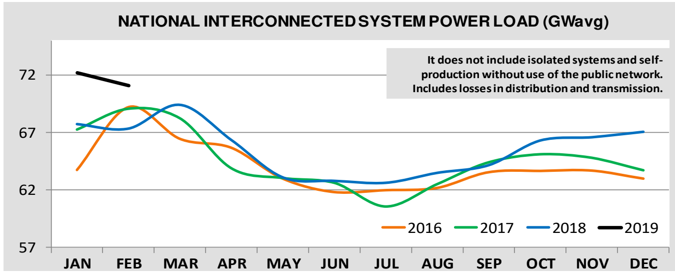
NATURAL GAS TOTAL DEMAND (million m^3/d)



C GASOLINE CONSUMPTION (103 bbl/d)



MOTOR ETHANOL TOTAL CONSUMPTION (10^3 bbl/d)



NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)