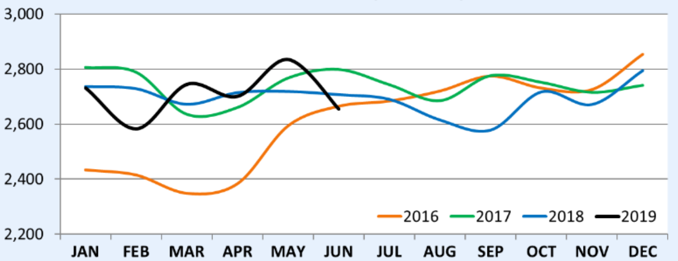
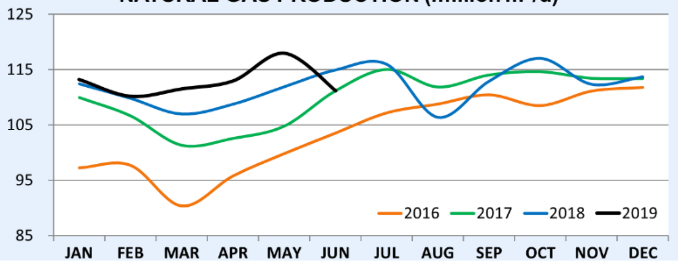
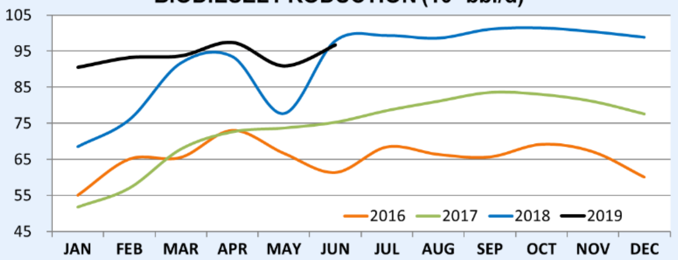
OIL PRODUCTION (10^3 bbl/d)



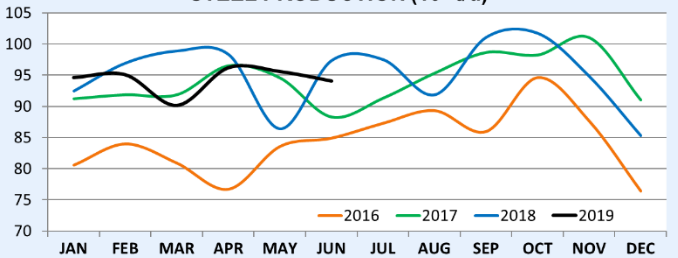
NATURAL GAS PRODUCTION (million m³/d)



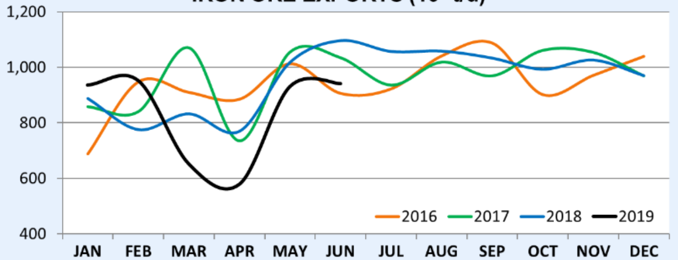
BIODIESEL PRODUCTION (10^3 bbl/d)



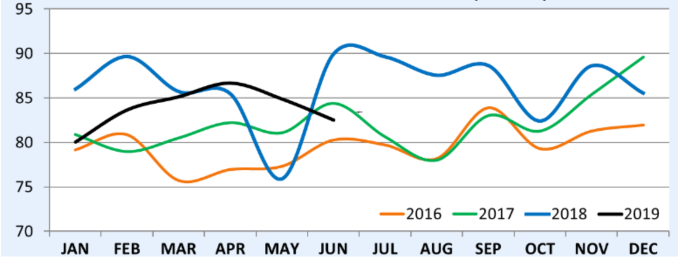
STEEL PRODUCTION (10^3 t/d)



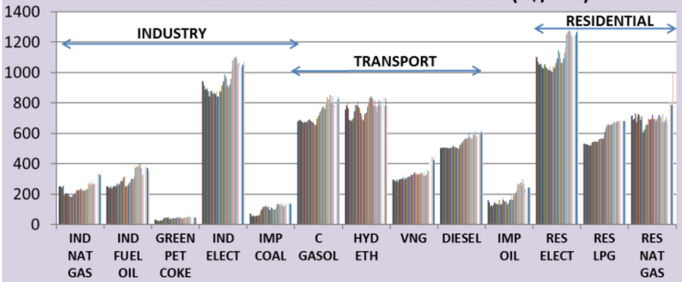
IRON ORE EXPORTS (10^3 t/d)



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



CONSUMER PRICES - Jan 2016 to June 2019 (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 = domestic production (+) import (-) unused (-) reinjection.

[1]**Domestic Energy Supply (DES), or Brazilian 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 2018 reflect the final results of the Brazilian Energy Balance (BEN), concluded in June by the Energy Research Office (EPE) in cooperation with the MME and its entities and agencies.

Direction: André Osório **Coordination:** Rodolfo Zamian
Team: João Patusco, Adriano Jerônimo, Gilberto Kwitko, Daniele Bandeira, Mônica Manhães, Ana Carolina Faria, Suellen Lopes and Azenaite Roriz.

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: **June 2019**

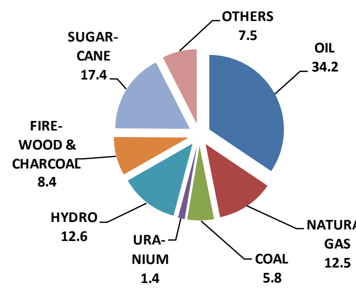
Domestic Energy Supply

Until June 2019, electricity consumption grew by 2%, ethanol consumption grew by 17%, and consumption of petroleum products remained stable. These indicators, in the same period of 2018 were respectively at 1.1%, 12.9% and -4.2% over 2017. Thus, it is observed a performance well above the previous year.

Concerning Domestic Energy Supply (DES)[1] of 2019, the current constraints lead to an estimated growth of 1.45% (-1.7% in 2018). With the high of 2019, the DES per capita will still be 8% lower than 2014, and equal to 2011.

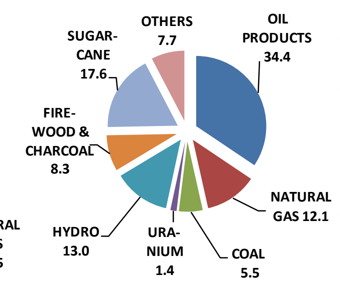
Total energy demand for 2019 is expected to increase about 1.5%

DES 2018 (%)



288.4 million toe
45.3% renewables

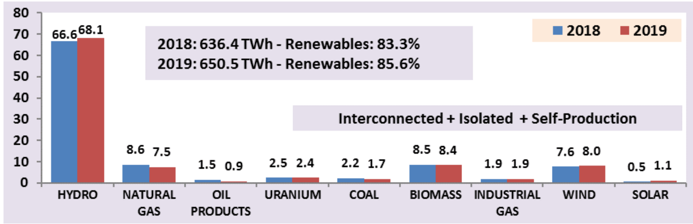
DES 2019 (%)



292.6 million toe
46% renewables

The Domestic Electricity Supply (DELS)[2] of 2019 was estimated at 650.5 TWh, showing an increase of 2.2% over 2018. The share of renewables should exceed 85%, with wind and solar energy continuing to increase their participations.

Domestic Electricity Supply, by Source (%)



Highlights in June 2019

Oil production recoils

Oil production retreated 1.9% in June 2019, over the same month of 2018, accumulating a 0.1% drop in the year. Natural gas production fell 3.3% in the month, and accumulated high 1.9% in the year.

Steel production in fall

Steel production fell 3.4% in June, and accumulated fall of 0.8% in the year. Iron ore exports fell by 7.5% in the year, and pellet exports by 25.1% (-6.3% until April).

Hydraulic on the up

Hydraulic generation accumulated a high of 4.6% in the year (3.1% to March). Itaipu's generation accumulated a 23.3% drop.

Oil derivatives falling down

Apparent consumption of petroleum products declined 3.4% in June and was stable year-to-date (excluding ethanol and biodiesel). Diesel consumption (included biodiesel) fell by 2.1%, but accumulated high of 10% in the year. Consumption of C gasoline also decreased (-6.2%), accumulating a drop of 6.4% in the year. Hydrous ethanol, with an accumulated increase of 33%, has kept the total consumption in light vehicles up. Total demand for natural gas accumulated a decrease of 7.7% in the year (-4.7% until April), with electricity generation having an accumulated decrease of 26.1% (-8.1% until April).

Energy consumption in light vehicles of the Otto cycle (gasoline, ethanol and natural gas) accumulates a high of 3.8% (2.7% up to April, -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 growing again

Electricity consumption, without self-producers, rose 1.1% in June (3.1% in May) and accumulates a high of 2.0% in the year. Residential consumption is up 4.3% and commercial consumption 3.5%. Industrial consumption, on the other hand, is down 1.3%.

Biodiesel production decelerates

Biodiesel production accumulates high of 11.3% in the year (14.3% until May). In full years, the previous rates were: 25% in 2018, 12.9% in 2017, -3.6% in 2016 and 15% in 2015).

Pulp production accumulated decrease of 3.3% in the year (positive 7.1% in 2018, 3.8% in 2017, 7.8% in 2016, 8.5% in 2015 and 9.2% in 2014). Paper production is up 1.4% in the year (0.8% in 2018, 1.7% in 2017).

Electricity tariffs in high

The average domestic tariff for residential electricity accumulates 14.1% in the year (12.6% in 2018, stable in 2017, 5.8% in 2016 and 42.5% in 2015). The commercial tariff increased 12.5% (12.4% in 2018, 0.7% in 2017, 5.7% in 2016 and 43.8% in 2015) and the industrial increased 11% (13.4% in 2018, 1.2% in 2017, 3.6% % in 2016 and 51.7% in 2015).

Basic Data

SPECIFICATION	JUNE: IN THE MONTH 2019	IN THE MONTH 2018	IN THE MONTH % 19/18	ACCUMULATED IN THE YEAR 2019	ACCUMULATED IN THE YEAR 2018	ACCUMULATED IN THE YEAR % 19/18	98
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	2,654	2,707	-1.9	2,710	2,712	-0.1	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	72	80	-10.5	68	69	-0.7	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,271	2,480	-8.4	2,402	2,402	0.0	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	1,029	1,051	-2.1	1,013	920	10.0	40.0
hereof: GASOLINE C (10^3 b/day)	620	661	-6.2	642	686	-6.4	21.4
CONSUMER PRICE - DIESEL (R$/l)	3.61	3.42	5.4	3.55	3.44	3.2	-
CONSUMER PRICE - GASOLINE C (R$/l)	4.47	4.55	-1.8	4.38	4.26	2.6	-
CONSUMER PRICE - LPG (R$/13 kg)	69.2	68.8	0.7	69.2	67.3	2.9	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	111.2	114.9	-3.3	112.9	110.8	1.9	-
IMPORTS (10^6 m^3/day)	22.0	34.3	-35.8	23.2	27.3	-15.0	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	43.3	38.6	12.2	42.8	37.1	15.5	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	89.9	110.6	-18.8	93.2	101.0	-7.7	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	37.8	41.1	-8.0	37.6	39.7	-5.3	40.3
POWER GENERATION CONS. (10^6 m^3/day)	18.0	34.9	-48.6	20.7	26.2	-21.2	22.2
INDUSTRIAL PRICE SP(*) (US$/MMBtu) -	16.5	12.6	30.6	15.2	12.1	26.1	-
MOTOR PRICE SP (US$/MMBtu)	21.2	15.5	37.0	19.6	17.2	14.1	-
RESIDENTIAL PRICE SP (US$/MMBtu)	46.1	32.5	41.8	37.5	36.2	3.5	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	62,906	62,819	0.1	68,006	66,130	2.8	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg	36,554	36,423	0.4	39,668	38,556	2.9	58.3
SOUTH POWER LOAD (MWavg)	10,884	10,619	2.5	11,547	11,573	-0.2	17.0
NORTHEAST POWER LOAD (MWavg)	10,175	10,213	-0.4	11,012	10,596	3.9	16.2
NORTH POWER LOAD (MWavg)	5,518	5,299	4.1	5,508	5,431	1.4	8.1
TOTAL CONSUMPTION (TWh) (**)	38.2	37.8	1.1	241.4	236.8	2.0	**100.0**
RESIDENTIAL	10.9	10.9	-0.4	72.1	69.1	4.3	29.9
INDUSTRIAL	13.8	13.5	1.7	82.6	83.7	-1.3	34.2
COMMERCIAL	7.1	7.0	2.2	47.1	45.5	3.5	19.5
OTHER SECTORS	6.5	6.4	1.0	39.7	38.6	3.0	16.5
PLANTS ENTRY INTO OPERATING (MW)	1,006	842	19.5	3,320	2,949	12.6	-
RESIDENTIAL PRICE (R$/MWh)	783	705	11.1	762	668	14.1	-
COMMERCIAL PRICE (R$/MWh)	697	640	8.9	673	598	12.5	-
INDUSTRIAL PRICE (R$/MWh)	652	617	5.7	637	573	11.0	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	97	98	-1.1	94	84	11.3	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	530	492	7.8	547	466	17.3	-
ETHANOL EXPORTS (10^3 b/d)	28	28	2.3	27	19	40.9	-
HYDRATED ETHANOL PRICE (R$/l)	2.82	2.93	-3.9	2.87	2.96	-2.8	-
COAL							
ELECTRICITY GENERATION (MWavg)	743	1,500	-50.5	1,064	1,442	-26.2	-
IMPORT PRICE (US$ FOB/t)	139.8	145.2	-3.7	151.3	143.9	5.1	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,427	1,446	-1.3	7,309	7,445	-1.8	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	94	97	-3.4	94	95	-0.8	-
ALUMINIUM PRODUCTION (10^3 t/day)	1.6	1.7	-2.2	1.6	2.0	-17.6	-
IRON ORE EXPORTS (10^3 t/day)	941	1,095	-14.1	830	898	-7.5	-
PELLETS EXPORTS (10^3 t/day)	39	82	-52.3	67	89	-25.1	-
PAPER PRODUCTION (10^3 t/day)	29.3	28.3	3.7	28.6	28.2	1.4	-
PULP PRODUCTION (10^3 t/day)	53.2	61.7	-13.7	55.2	57.1	-3.3	-
SUGAR PRODUCTION (10^3 t/daY)	121	141	-14.0	53	58	-8.6	-
SUGAR EXPORTS (10^3 t/day)	46	65	-28.8	42	58	-27.2	-

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

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