

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.

¹Domestic 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 May 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, Gilberto Kwitko, Daniele Bandeira, Mônica Manhães, Ana Carolina Faria 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 and 2032-5764

Monthly Energy Bulletin – Brazil

Reference Month: October 2019

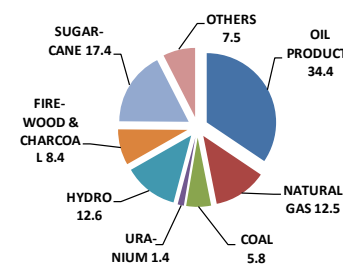
Domestic Energy Supply

In 2019, there is an excellent recovery of indicators directly related to household consumption. Until October 2019, residential electricity grew 3.9%, commercial electricity rose 3.3%, light vehicle energy rose 4.6%, and cement consumption increased 2.5%. In the same period of 2018, these indicators stood at 1.3%, 0.5%, -1.9% and -1.3%, respectively.

Concerning Domestic Energy Supply (DES)¹ throughout 2019, the current constraints lead to an estimated growth of 1.7% (-1.7% in 2018). A better sugarcane crop and higher thermal electric generation raise the OIE rate in this edition. Even so, the 2019 per capita OIE will be 7% lower than in 2014, and equal to 2011.

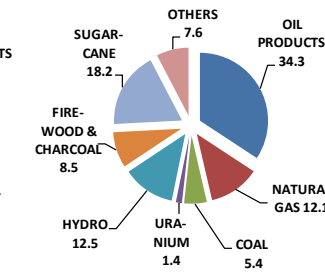
Total energy demand for 2019 is expected to increase about 1.7%

DES 2018 (%)



288.4 million toe
45.3% renewables

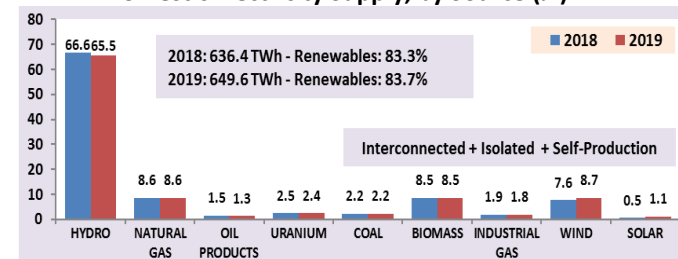
DES 2019 (%)



293.4 million toe
46.2% renewables

The Domestic Electricity Supply (DELS)² of 2019 was estimated at 649.6 TWh, showing an increase of 2% over 2018. The share of renewables should stay at 84%, with wind and solar energy continuing to increase their participations.

Domestic Electricity Supply, by Source (%)



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



Highlights in October 2019

Oil production still growing

Oil production grew 13.2% in October 2019, compared to the same month of 2018, accumulating high of 5.5% in the year (4.7% until September). Natural gas production increased 12.4% in the month, and accumulates 7.0% growth in the year (6.4% up to September). These highs will provide Brazil's energy surplus above 5% in 2019.

Steel production in fall

Steel production accumulated a fall of 8.0% in the year. Iron ore exports were down 7.8% in the year, and pellet exports down 26.6% (-6.3% until April).

Hydraulic supply slows down

Hydraulic generation accumulates a high of 2.9% in the year (3.9% to September) and should end 2019 with an increase of only 0.3%.

Oil derivatives recovering

Petroleum products apparent consumption grew 3.1% in October and accumulated 0.5% high in the year (excluding ethanol and biodiesel). Diesel consumption (biodiesel included) accumulates 9.5% high in the year. C gasoline consumption accumulated 1.6% decrease in the year (-2.7% until September). Hydrous ethanol, with a cumulative increase of 20%, has kept the total consumption in light vehicles up. Total natural gas demand accumulated a decrease of 5.3% in the year, with electricity generation having an accumulated decrease of 10.1% (-21% until July - record).

Energy consumption in light vehicles of the Otto cycle (gasoline, ethanol and natural gas) accumulates a high of 4.6% (4.5% up to September, -1.2% in 2018, + 1.7% in 2017, -1.1% in 2016 and + 6.2% in 2014). This indicator directly reflects the purchasing power of the population, as well as the expectation of economic improvement.

Electricity consumption in high

Electricity consumption, without energy self-producers, grew 3.1% in October, and accumulated high of 1.6% in the year (1.4% until Sept.). Residential consumption increased by 3.9% and commercial consumption by 3.3%. Already industrial consumption accumulates low 1.6%.

Biodiesel production is still in high

Biodiesel production accumulates high of 10.4% in the year (9.6% up to September). In the 12 months of previous years, the rates were: 25% in 2018, 12.9% in 2017, -3.6% in 2016 and 15% in 2015.

Pulp production decreased by 4.4% 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). Cement consumption shows recovery, with a positive rate of 2.5% in the year (-1.3% in the same period of 2018).

Accumulated electricity tariffs recoil

The average domestic tariff for residential electricity accumulates 9% in the year (12.6% in 2018, stable in 2017, 5.8% in 2016 and 42.5% in 2015). The commercial tariff increased 8.4% (12.4% in 2018, 0.7% in 2017, 5.7% in 2016 and 43.8% in 2015) and the industrial increased 6.3% (13.4% in 2018, 1.2% in 2017, 3.6% in 2016 and 51.7% in 2015).

Basic Data

SPECIFICATION	OCTOBER							
	IN THE MONTH				ACCUMULATED IN THE YEAR			
	2019	2018	% 19/18	2019	2018	% 19/18	98	
OIL								
PRODUCTION - with Shale Oil and NGL(10 ³ b/d)	3,075	2,717	13.2	2,836	2,687	5.5	-	
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	66	78	-15.2	68	73	-6.3	-	
OIL PRODUCTS								
TOTAL CONSUMPTION (10 ³ b/day)	2,472	2,398	3.1	2,451	2,438	0.5	100.0	
hereof: DIESEL with biodiesel - (10 ³ b/day)	1,149	1,026	11.9	1,053	962	9.5	40.8	
hereof: GASOLINE C (10 ³ b/day)	674	619	8.8	649	659	-1.6	21.2	
CONSUMER PRICE - DIESEL (R\$/l)	3.71	3.52	5.5	3.56	3.45	3.2	-	
CONSUMER PRICE - GASOLINE C (R\$/l)	4.38	4.37	0.2	4.36	4.35	0.2	-	
CONSUMER PRICE - LPG (R\$/13 kg)	68.8	69.4	-0.9	69.1	67.8	1.8	-	
NATURAL GAS								
PRODUCTION (10 ⁶ m ³ /day)	131.6	117.0	12.4	119.6	111.7	7.0	-	
IMPORTS (10 ⁶ m ³ /day)	35.4	29.9	18.4	26.1	32.3	-19.2	-	
NON-UTILIZED AND REINJECTION (10 ⁶ m ³ /day)	50.6	38.1	32.8	45.7	38.4	19.0	-	
AVAILABILITY FOR CONSUMPTION (10 ⁶ m ³ /day)	116.3	108.8	6.9	100.0	105.6	-5.3	100.0	
INDUSTRIAL CONSUMPTION (10 ⁶ m ³ /day)	36.5	40.5	-9.9	37.3	40.2	-7.3	37.3	
POWER GENERATION CONS. (10 ⁶ m ³ /day)	42.3	33.2	27.3	27.2	30.3	-10.1	27.2	
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) -	15.6	12.7	22.8	0.0	12.1	-100.0	-	
MOTOR PRICE SP (US\$/MMBtu)	19.7	15.8	24.4	19.6	16.4	19.6	-	
RESIDENTIAL PRICE SP (US\$/MMBtu)	43.2	32.7	32.3	40.3	34.3	17.4	-	
ELECTRICITY								
NATIONAL INTERCONNECTED SYSTEM	68,409	66,312	3.2	66,760	65,341	2.2	100.0	
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	39,896	38,490	3.7	38,892	38,019	2.3	58.3	
SOUTH POWER LOAD (MWavg)	11,550	11,049	4.5	11,295	11,329	-0.3	16.9	
NORTHEAST POWER LOAD (MWavg)	11,312	11,278	0.3	10,827	10,626	1.9	16.2	
NORTH POWER LOAD (MWavg)	5,651	5,495	2.8	5,549	5,401	2.7	8.3	
TOTAL CONSUMPTION (TWh) (**)	41.0	39.7	3.1	398.4	392.2	1.6	100.0	
RESIDENTIAL	11.9	11.4	4.5	117.3	112.9	3.9	29.4	
INDUSTRIAL	14.3	14.3	0.0	138.8	141.1	-1.6	34.8	
COMMERCIAL	7.8	7.4	4.9	75.9	73.5	3.3	19.1	
OTHER SECTORS	7.0	6.6	5.2	66.5	64.7	2.7	16.7	
PLANTS ENTRY INTO OPERATING (MW)	187	837	-77.6	5,230	4,195	24.7	-	
RESIDENTIAL PRICE (R\$/MWh)	796	776	2.6	771	708	9.0	-	
COMMERCIAL PRICE (R\$/MWh)	709	701	1.2	690	636	8.4	-	
INDUSTRIAL PRICE (R\$/MWh)	657	670	-1.9	647	609	6.3	-	
ETHANOL AND BIODIESEL								
BIODIESEL PRODUCTION (10 ³ b/d)	118	101	16.5	100	91	10.4	-	
MOTOR ETHANOL CONSUMPTION (10 ³ b/d)	599	586	2.3	556	496	12.1	-	
ETHANOL EXPORTS (10 ³ b/d)	42	57	-26.1	32	30	7.7	-	
HYDRATED ETHANOL PRICE (R\$/l)	2.91	2.93	-0.8	2.87	2.89	-0.6	-	
COAL								
ELECTRICITY GENERATION (MWavg)	2,000	1,587	26.1	1,450	1,550	-6.4	-	
IMPORT PRICE (US\$ FOB/t)	119.8	131.2	-8.7	141.5	141.8	-0.2	-	
NUCLEAR ENERGY								
ELECTRICITY GENERATION - (GWh)	1,455	1,407	3.4	13,204	13,298	-0.7	-	
INDUSTRIAL SECTORS								
STEEL PRODUCTION (10 ³ t/day)	84	102	-17.6	89	96	-8.0	-	
ALUMINIUM PRODUCTION (10 ³ t/day)	1.9	1.6	16.8	1.7	1.8	-5.8	-	
IRON ORE EXPORTS (10 ³ t/day)	986	992	-0.7	879	953	-7.8	-	
PELLETS EXPORTS (10 ³ t/day)	90	107	-15.8	69	93	-26.6	-	
PAPER PRODUCTION (10 ³ t/day)	29.1	30.0	-3.0	28.7	28.8	-0.4	-	
PULP PRODUCTION (10 ³ t/day)	51.6	52.5	-1.6	54.7	57.2	-4.4	-	
SUGAR PRODUCTION (10 ³ t/day)	131	81	62.2	91	84	7.9	-	
SUGAR EXPORTS (10 ³ t/day)	62	66	-6.7	48	61	-22.2	-	

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

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

