MONTHLY ENERGY BULLETIN

BRAZIL

MINISTRY OF MINES AND ENERGY - MME
SECRETARIAT OF ENERGY PLANNING AND DEVELOPMENT - SPE
DEPARTMENT OF INFORMATION AND STUDIES ON ENERGY - DIE

REFERENCE MONTH
JANUARY
2020

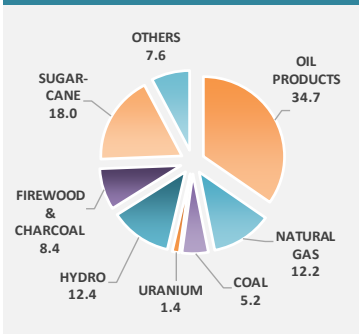
DOMESTIC ENERGY SUPPLY

2020 begins by requiring less air conditioning use and a 10% drop in hydraulic generation. As a result, January showed a negative rate of 0.2% in electricity consumption, 113% increase in natural gas generation and 295% in coal generation. Energy consumption in light vehicles increased by 1.4%, much lower than the average of 4.5% in 2019.

With the advent of the coronavirus, the uncertainties for estimating the 2020 Domestic Energy Supply (DES)[1] increase. It is possibile that the lowest world growth affects exports and the highest unemployment affects domestic consumption. The first evaluation is a stagnation in total energy demand.

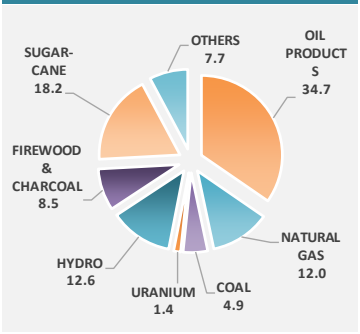
TOTAL ENERGY DEMAND FOR 2020 MAY STABILIZE

DES 2019 (%)



294.1 million toe - 45.8% renewables

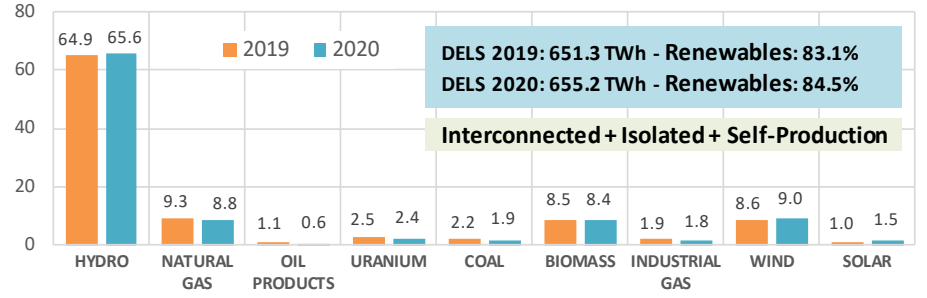
DES 2020 (%)



293.1 million toe - 46.4% renewables

For the 2020 Domestic Electricity Supply (DELS)[2] is expected a tiny increase of 0.6%. The share of renewables should stay above 84%, with wind and solar energy continuing steady in their increasingly participations.

DOMESTIC ELECTRICITY SUPPLY, BY SOURCE (%)



HIGHLIGHTS IN JANUARY 2020

Oil production with a strong rise

Oil production grew 20.3% in January 2020, compared to the same month of 2019 (average of 7.6% in 2019). Natural gas production rose by 22.6% in the month (average of 9.5% in 2019). These highs will provide Brazil's energy surplus above 10% in 2020.

The year starts bad for mining and metallurgy

Steel production starts the year down 11.1%. Iron ore exports were down 12.4% in January and pellets, down 70%.

Hydraulic supply has sharp drop

The supply of hydraulic energy is down 10% in January, contributing to higher tariffs, due to higher thermal generation costs. The generation of Itaipu increased by 2.2%.

Oil derivatives with a trong high

Apparent consumption of oil products grew by 5.2% (excluding ethanol and biodiesel), showing a strong increase in the availability of petrochemical naphtha. Diesel consumption (biodiesel included) increased by 4.4%, and gasoline C consumption, by 1.4%. The consumption of hydrated ethanol grew by 2.2%. Total natural gas demand increased by 25.1%, with a 4.7% reduction in industrial consumption and an 113% increase in electricity generation.

Energy consumption in light vehicles of the Otto cycle (gasoline, ethanol and natural gas) grew 1.4% in this year (4.5% in 2019, -1.2% in 2018, + 1.7% in 2017, -1.1% in 2016 and + 6.2% in 2014).

Electricity consumption is down

Electricity consumption, without self-producers, decreased 0.2% in January. A milder summer demanded less use of air conditioning, in contrast to January 2019. Residential consumption grew 0.8%, commercial consumption decreased 0.7% and industrial consumption also decreased 1.4%.

Biodiesel production in high

Biodiesel production increased by 2.6% in January. In previous years the rates were: 10.3% in 2019, 25% in 2018, 12.9% in 2017, -3.6% in 2016 and 15% in 2015.

Pulp production decreased 1.6% in January (-6.0% in 2019, and positive of 7.1% in 2018, 3.8% in 2017, 7.8% in 2016, 8.5% in 2015 and 9.2% in 2014). Cement consumption starts the year with a negative rate of 0.8% (+ 2.6% in the twelve months of 2019).

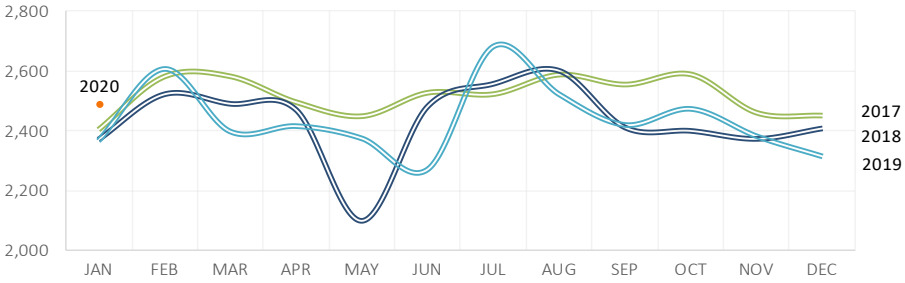
Electricity tariffs are up

The average domestic tariff for residential electricity increased by 2.4% in January (8.0% in 2019, 12.6% in 2018, stable in 2017 and 5.8% in 2016). The commercial tariff rose by 3.0% (7.4% in 2019, 12.4% in 2018, 0.7% in 2017 and 5.7% in 2016) and the industrial tarrif, by 1.6% (5, 7% in 2019, 13.4% in 2018, 1.2% in 2017 and 3.6% in 2016).

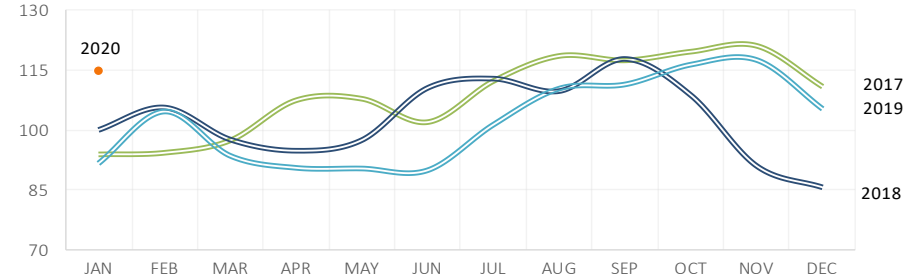
SPECIFICATION	JANUARY						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2020	2019	%20/19	2020	2019	%20/19	%
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	3,283	2,730	20.3	3,283	2,730	20.3	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	65	74	-11.4	65	74	-11.4	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,489	2,366	5.2	2,489	2,366	5.2	100.0
hereof: DIESEL with biodiesel - (10^3 b/day)	1,029	985	4.4	1,029	985	4.4	39.3
hereof: GASOLINE C (10^3 b/day)	643	634	1.4	643	634	1.4	20.7
CONSUMER PRICE - DIESEL (R$/l)	3.79	3.44	10.2	3.79	3.44	10.2	-
CONSUMER PRICE - GASOLINE C (R$/l)	4.58	4.27	7.3	4.58	4.27	7.3	-
CONSUMER PRICE - LPG (R$/13 kg)	69.7	69.3	0.7	69.7	69.3	0.7	-
NATURAL GAS							
PRODUCTION (10^6 m3/day)	138.8	113.2	22.6	138.8	113.2	22.6	-
IMPORTS (10^6 m^3/day)	31.9	17.6	81.1	31.9	17.6	81.1	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	56.1	39.3	43.0	56.1	39.3	43.0	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	114.6	91.6	25.1	114.6	91.6	25.1	100.0
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	36.3	38.1	-4.7	36.3	38.1	-4.7	31.7
POWER GENERATION CONS. (10^6 m^3/day)	40.5	19.0	112.9	40.5	19.0	112.9	35.3
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	15.3	12.4	24.2	15.3	12.4	24.2	-
MOTOR PRICE SP (US$/MMBtu)	19.7	16.7	17.5	19.7	16.7	17.5	-
RESIDENTIAL PRICE SP (US$/MMBtu)	42.9	32.5	32.1	42.9	32.5	32.1	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	69,761	72,198	-3.4	69,761	72,198	-3.4	100.0
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	40,095	42,492	-5.6	40,095	42,492	-5.6	57.5
SOUTH POWER LOAD (MWavg)	12,819	13,056	-1.8	12,819	13,056	-1.8	18.4
NORTHEAST POWER LOAD (MWavg)	11,368	11,279	0.8	11,368	11,279	0.8	16.3
NORTH POWER LOAD (MWavg)	5,479	5,371	2.0	5,479	5,371	2.0	7.9
TOTAL CONSUMPTION (TWh) (**)	41.1	41.2	-0.2	41.1	41.2	-0.2	100.0
RESIDENTIAL	12.9	12.8	0.8	12.9	12.8	0.8	31.4
INDUSTRIAL	13.5	13.7	-1.4	13.5	13.7	-1.4	32.8
COMMERCIAL	8.0	8.1	-0.7	8.0	8.1	-0.7	19.5
OTHER SECTORS	6.7	6.7	0.7	6.7	6.7	0.7	16.3
PLANTS ENTRY INTO OPERATING (MW)	93	322	-71.2	93	322	-71.2	-
RESIDENTIAL PRICE (R$/MWh)	772	754	2.4	772	754	2.4	-
COMMERCIAL PRICE (R$/MWh)	683	663	3.0	683	663	3.0	-
INDUSTRIAL PRICE (R$/MWh)	659	649	1.6	659	649	1.6	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	93	91	2.6	93	91	2.6	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	559	548	1.9	559	548	1.9	-
ETHANOL EXPORTS (10^3 b/d)	16	21	-25.4	16	21	-25.4	-
HYDRATED ETHANOL PRICE (R$/l)	3.23	2.81	14.9	3.23	2.81	14.9	-
COAL							
ELECTRICITY GENERATION (MWavg)	2,376	602	294.7	2,376	602	294.7	-
IMPORT PRICE (US$ FOB/t)	94.7	158.5	-40.3	94.7	158.5	-40.3	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,158	1,418	-18.3	1,158	1,418	-18.3	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	86	97	-11.1	86	97	-11.1	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.0	1.7	21.3	2.0	1.7	21.3	-
IRON ORE EXPORTS (10^3 t/day)	820	936	-12.4	820	936	-12.4	-
PELLETS EXPORTS (10^3 t/day)	40	133	-69.7	40	133	-69.7	-
PAPER PRODUCTION (10^3 t/day)	28.0	27.5	2.0	28.0	27.5	2.0	-
PULP PRODUCTION (10^3 t/day)	51.7	52.6	-1.6	51.7	52.6	-1.6	-
SUGAR PRODUCTION (10^3 t/daY)	26	13	96.9	26	13	96.9	-
SUGAR EXPORTS (10^3 t/day)	52	35	47.1	52	35	47.1	-

(*) SP is the acronym of the state of São Paulo. (**) The traditional self-producers (consumers that do not use public grid) is not included.

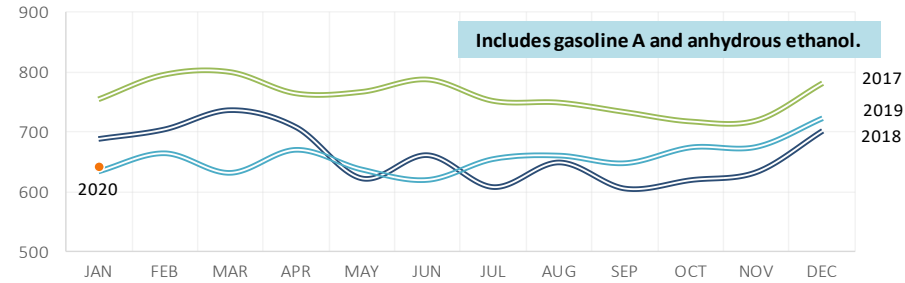
OIL PRODUCTS TOTAL CONSUMPTION (10^3 bbl/d)



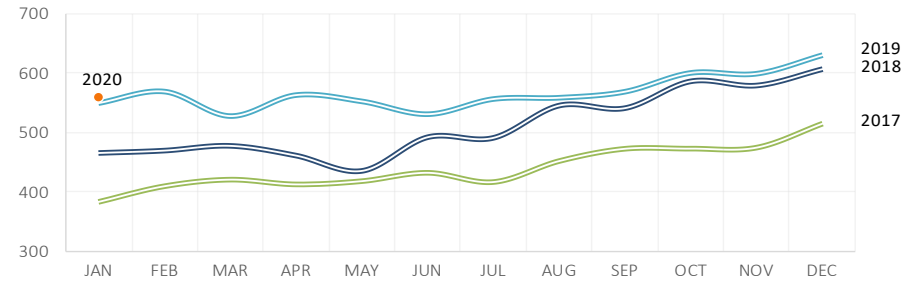
NATURAL GAS TOTAL DEMAND (million m^3/d)



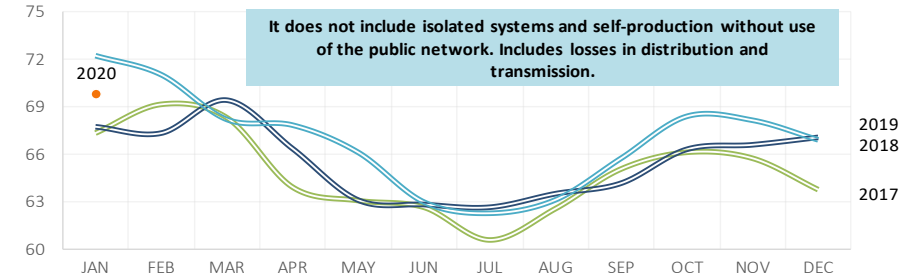
C GASOLINE CONSUMPTION (10^3 bbl/d)



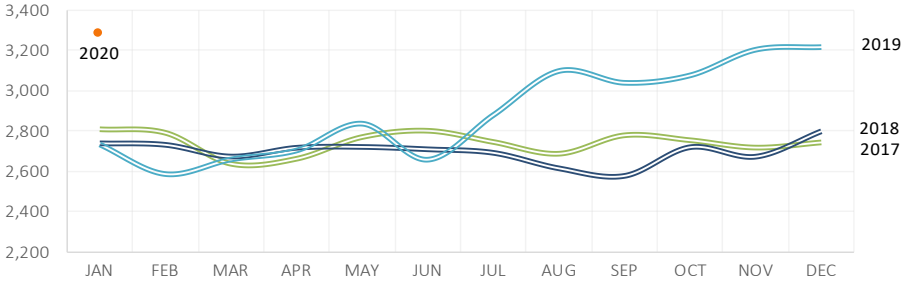
MOTOR ETHANOL TOTAL CONSUMPTION (10^3 bbl/d)



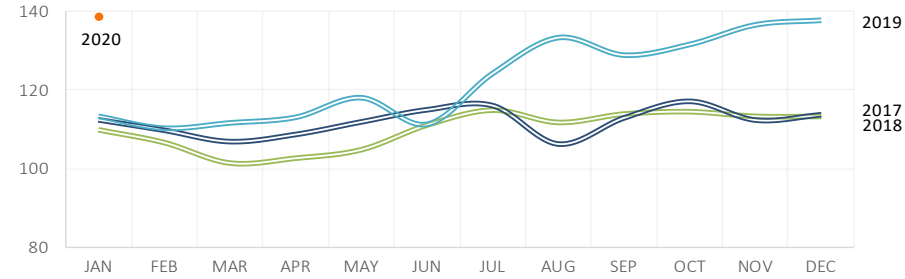
NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)



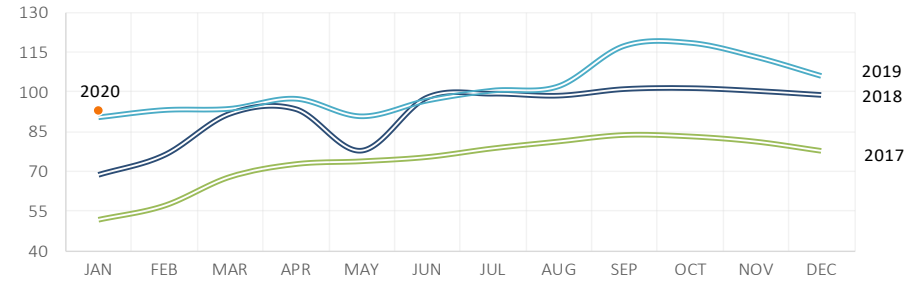
OIL PRODUCTION (10^3 bbl/d)



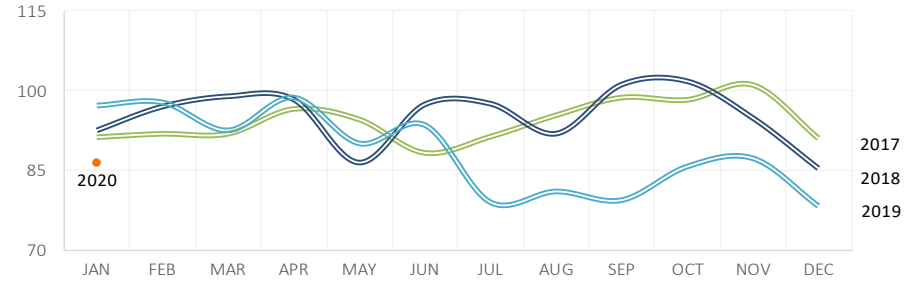
NATURAL GAS PRODUCTION (million m^3/d)



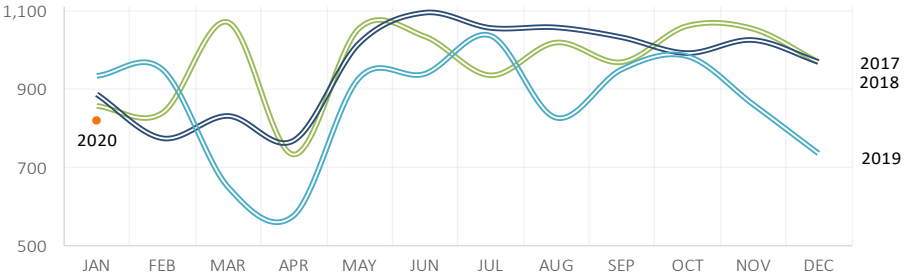
BIODIESEL PRODUCTION (10^3 bbl/d)



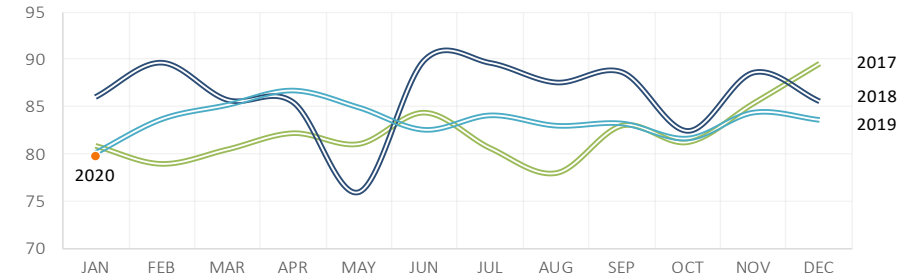
STEEL PRODUCTION (10^3 t/d)



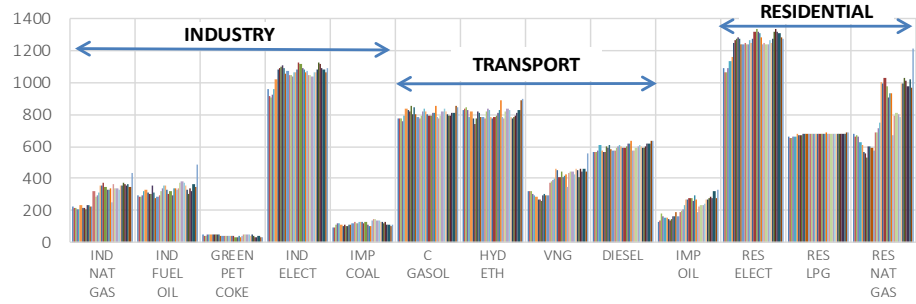
IRON ORE EXPORTS (10^3 t/d)



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



CONSUMER PRICES - Jan 2017 to Jan 2020 (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 NOTES

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]2019 data from DES and DELS are still preliminary. The results of the National Energy Balance (BEB), cycle 2020, should be concluded in May by the Energy Research Company (EPE), in partnership with MME and its companies and agencies.

MINISTÉRIO DE
MINAS E ENERGIA

PÁTRIA AMADA
BRASIL
GOVERNO FEDERAL

www.mme.gov.br

Direction: André Osório *Coordination:* Rodolfo Zamian

Team: João Patusco, Gilberto Kwitko, Daniele Bandeira, Mônica Manhães, Ana Carolina e Azenaite Roriz

Department of Information and Studies on Energy – DIE/SPE/MME

die.spe@mme.gov.br

+55 61 2032 5967 / 2032 5764