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

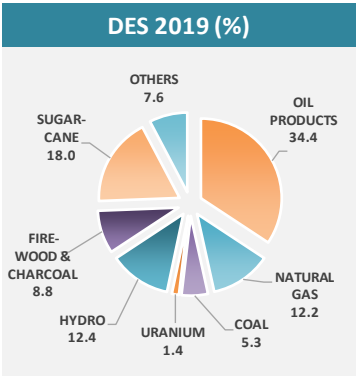
REFERENCE MONTH
FEBRUARY
2020

DOMESTIC ENERGY SUPPLY

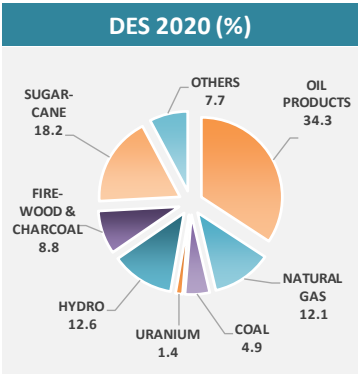
In the 2020 accumulated, hydraulic generation fell by almost 5%, requiring greater thermal generation by fossil fuels. Electricity consumption accumulates a drop of 0.8%, with commerce recoiling 1.4%. Energy consumption in light vehicles accumulates 2.5% high, amount still below the average of 4.5% in 2019.

With the advent of the coronavirus, there is an increase in uncertainties to estimate the 2020 Domestic Energy Supply (DES)[1]. 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

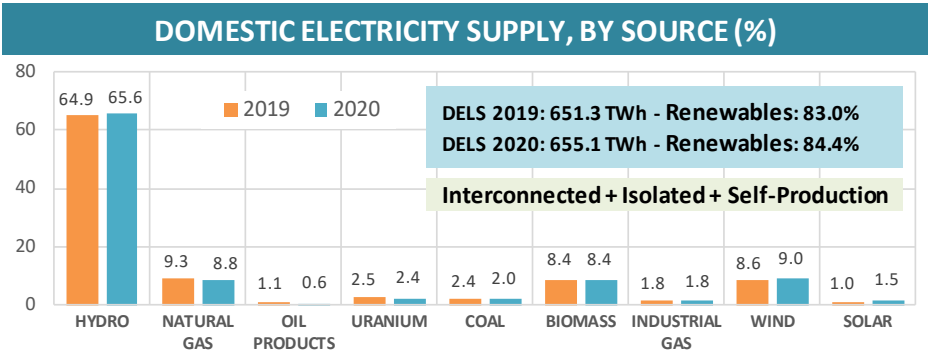


294.0 million toe - 46.1% renewables



293.1 million toe - 46.7% 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.



HIGHLIGHTS IN FEBRUARY 2020

Oil production with a strong rise

Oil production grew 19.2% in February 2020 over the same month of 2019, accumulating an increase of 19.8% in the year (average of 7.6% in 2019). Natural gas production accumulated a 20% increase in the year (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 accumulates 8% down in the year. Iron ore exports accumulate 18.2% down and pellets, 69% down.

Hydraulic supply downwards

The hydraulic energy supply accumulated -4.4% in 2020, contributing to an increasing on the tariffs, due to higher thermal generation costs. In contrast, Itaipu generation increased by 5.4% in the year.

Oil derivatives recoil

Oil products apparent consumption accumulated a decrease of 0.5% in the year (excluding ethanol and biodiesel). Diesel consumption (including biodiesel) reduced 2% and gasoline consumption rose 1.1%. Hydrated ethanol consumption has increased by 0.6% in the year. Total natural gas demand increased 9.7% in the year, with a 4.1% reduction in industrial consumption and 34% increase in electricity generation.

Energy consumption in light vehicles of the Otto cycle (gasoline, ethanol and natural gas) grew 2.5% 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 0.8% in February. A milder summer demanded less air conditioning using, in contrast to beginning 2019. All sectors have negative rates in the year: residential (-0.6%), commercial (-1.4%) and industrial (-0.4%).

Biodiesel production in high

Biodiesel production increased by 8.9% in February and accumulates 6.7% high in the year. Previous three years rates were positive in two digits.

Pulp production accumulates a 3.3% down in the year (-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 accumulates a reduction of 2% in the year (+ 2.6% in the twelve months of 2019).

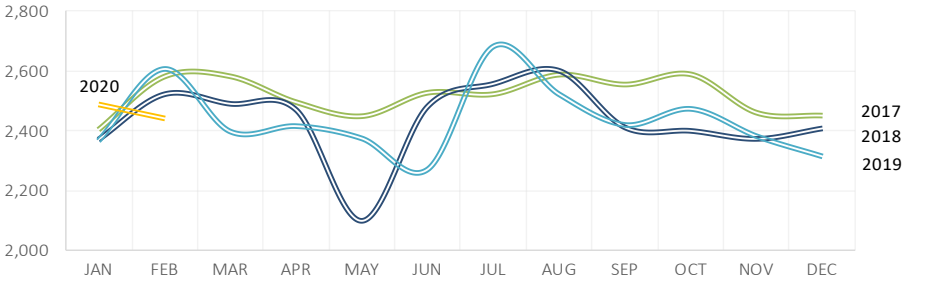
Electricity tariffs are up

The average domestic tariff for residential electricity increased by 0.6% in February (8.0% in 2019, 12.6% in 2018, stable in 2017 and 5.8% in 2016). Commercial tariff rose by 0.8% (7.4% in 2019, 12.4% in 2018, 0.7% in 2017 and 5.7% in 2016) and industrial, by 0.1% (5, 7% in 2019, 13.4% in 2018, 1.2% in 2017 and 3.6% in 2016).

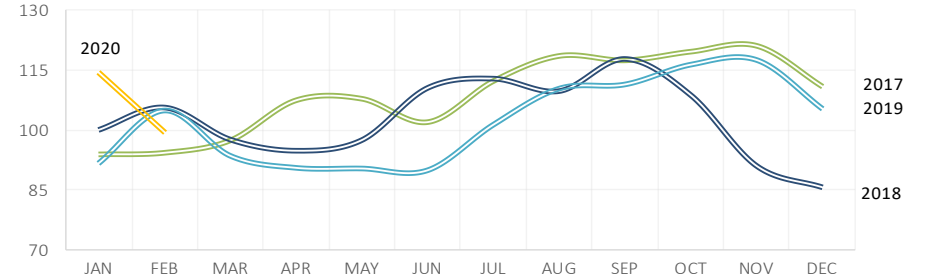
SPECIFICATION	FEBRUARY						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2020	2019	%20/19	2020	2019	%20/19	%
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	3,078	2,582	19.2	3,186	2,660	19.8	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	66	63	3.8	66	63	3.8	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,441	2,605	-6.3	2,466	2,479	-0.5	100.0
hereof: DIESEL with biodiesel - (10^3 b/day)	1,033	1,039	-0.5	990	1,010	-2.0	38.1
hereof: GASOLINE C (10^3 b/day)	669	664	0.7	655	648	1.1	21.3
CONSUMER PRICE - DIESEL (R$/l)	3.71	3.45	7.6	3.75	3.45	8.9	-
CONSUMER PRICE - GASOLINE C (R$/l)	4.55	4.19	8.6	4.56	4.23	7.9	-
CONSUMER PRICE - LPG (R$/13 kg)	69.9	69.1	1.2	69.8	69.2	0.9	-
NATURAL GAS							
PRODUCTION (106 m3/day)	128.9	110.2	17.1	134.1	111.8	20.0	-
IMPORTS (106 m^3/day)	23.8	36.0	-33.8	28.1	26.4	6.6	-
NON-UTILIZED AND REINJECTION (106 m^3/day)	53.4	41.3	29.2	54.8	40.2	36.3	-
AVAILABILITY FOR CONSUMPTION (106 m^3/day)	99.4	104.8	-5.2	107.4	97.9	9.7	100.0
INDUSTRIAL CONSUMPTION (106 m^3/day)	37.2	38.5	-3.4	36.7	38.3	-4.1	34.2
POWER GENERATION CONS. (106 m^3/day)	25.6	31.6	-19.0	33.4	25.0	33.7	31.1
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	15.3	17.3	-11.5	15.3	14.8	3.3	-
MOTOR PRICE SP (US$/MMBtu)	19.7	20.4	-3.5	19.7	18.6	5.9	-
RESIDENTIAL PRICE SP (US$/MMBtu)	42.9	37.6	14.1	42.9	35.0	22.4	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	69,975	70,993	-1.4	70,313	71,596	-1.8	100.0
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	40,649	41,345	-1.7	40,722	41,919	-2.9	57.9
SOUTH POWER LOAD (MWavg)	12,574	12,607	-0.3	12,751	12,832	-0.6	18.1
NORTHEAST POWER LOAD (MWavg)	11,262	11,461	-1.7	11,355	11,370	-0.1	16.1
NORTH POWER LOAD (MWavg)	5,490	5,580	-1.6	5,485	5,476	0.2	7.8
TOTAL CONSUMPTION (TWh) (**)	40.7	41.3	-1.4	81.8	82.5	-0.8	100.0
RESIDENTIAL	12.4	12.6	-1.9	25.3	25.4	-0.6	30.9
INDUSTRIAL	13.7	13.7	0.5	27.2	27.3	-0.4	33.2
COMMERCIAL	8.0	8.2	-2.2	16.1	16.3	-1.4	19.6
OTHER SECTORS	6.6	6.8	-3.1	13.3	13.5	-1.2	16.2
PLANTS ENTRY INTO OPERATING (MW)	384	502	-23.4	477	823	-42.1	-
RESIDENTIAL PRICE (R$/MWh)	762	757	0.6	767	755	1.5	-
COMMERCIAL PRICE (R$/MWh)	676	671	0.8	679	667	1.7	-
INDUSTRIAL PRICE (R$/MWh)	636	635	0.1	647	642	0.8	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	102	93	8.9	98	92	6.7	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	565	568	-0.5	562	558	0.8	-
ETHANOL EXPORTS (10^3 b/d)	33	25	31.3	24	23	4.6	-
HYDRATED ETHANOL PRICE (R$/l)	3.25	2.78	16.7	3.24	2.80	15.7	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,437	1,349	6.5	1,907	976	95.4	-
IMPORT PRICE (US$ FOB/t)	98.6	165.1	-40.3	96.6	161.8	-40.3	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	948	1,338	-29.1	2,106	2,756	-23.6	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	93	98	-4.7	90	98	-8.0	-
ALUMINIUM PRODUCTION (10^3 t/day)	1.9	1.6	19.3	1.9	1.6	17.6	-
IRON ORE EXPORTS (10^3 t/day)	720	952	-24.3	772	943	-18.2	-
PELLETS EXPORTS (10^3 t/day)	28	81	-65.9	34	108	-68.5	-
PAPER PRODUCTION (10^3 t/day)	28.5	28.9	-1.2	28.3	28.1	0.5	-
PULP PRODUCTION (10^3 t/day)	52.0	54.8	-5.0	51.9	53.6	-3.3	-
SUGAR PRODUCTION (10^3 t/daY)	5	6	-9.9	16	10	65.5	-
SUGAR EXPORTS (10^3 t/day)	44	42	6.9	48	38	26.1	-

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

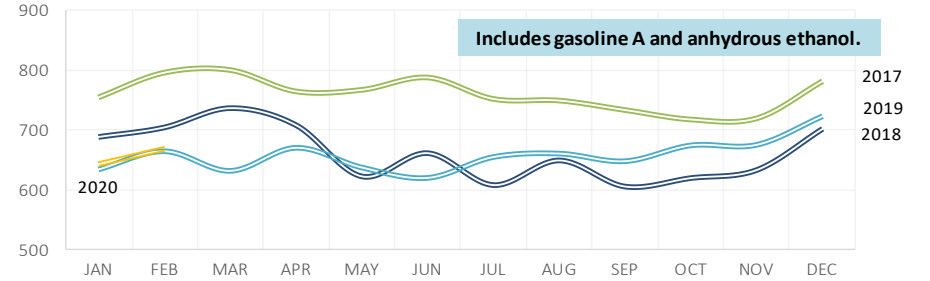
OIL PRODUCTS TOTAL CONSUMPTION (10^3 bbl/d)



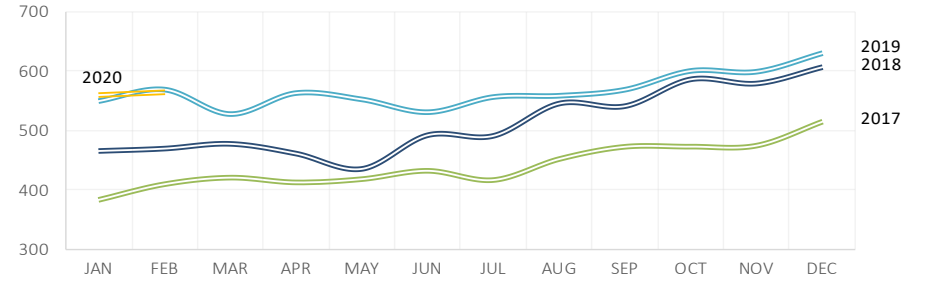
NATURAL GAS TOTAL DEMAND (million m^3/d)



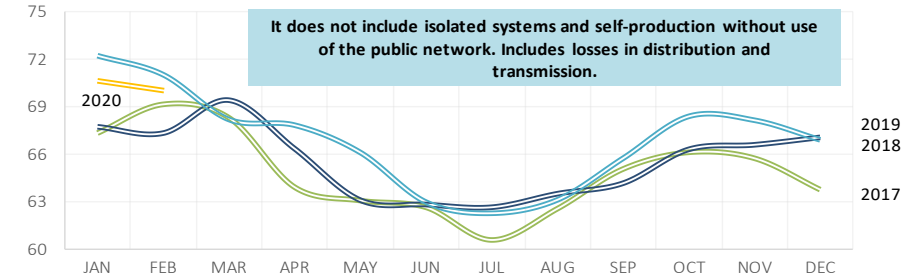
C GASOLINE CONSUMPTION (10^3 bbl/d)



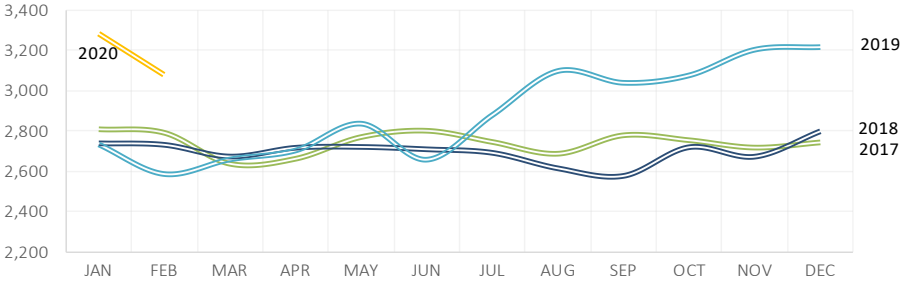
MOTOR ETHANOL TOTAL CONSUMPTION (10^3 bbl/d)



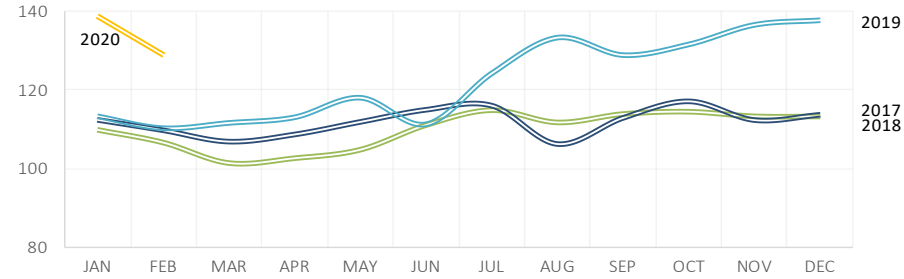
NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)



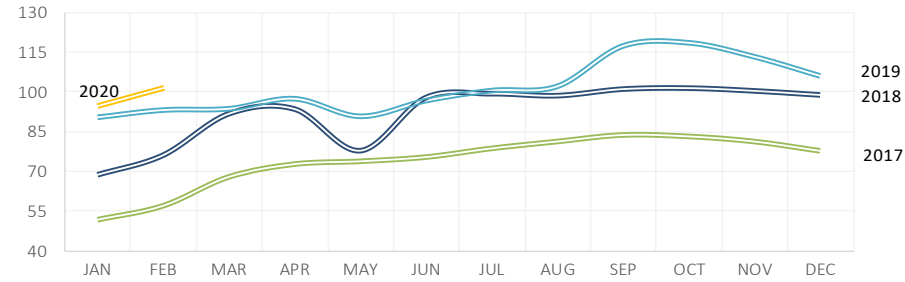
OIL PRODUCTION (10^3 bbl/d)



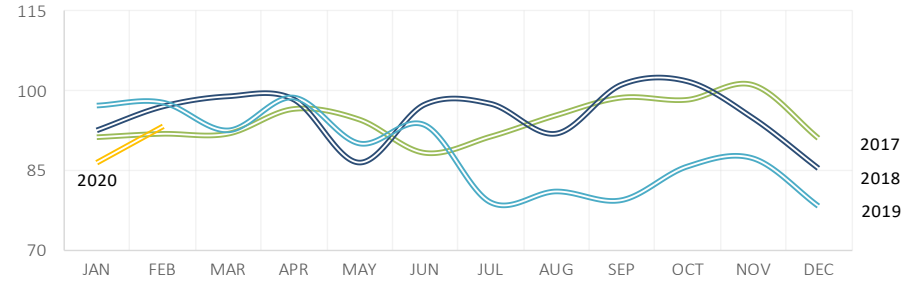
NATURAL GAS PRODUCTION (million m^3/d)



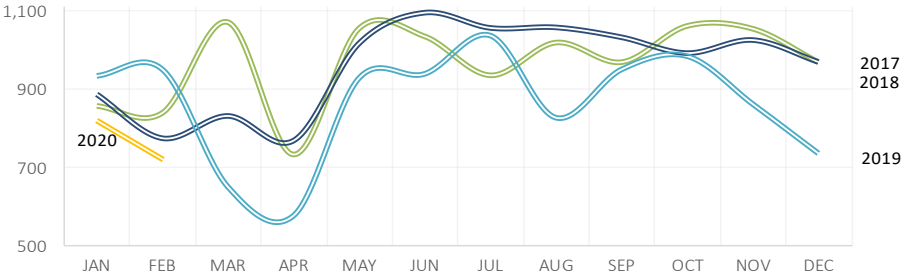
BIODIESEL PRODUCTION (10^3 bbl/d)



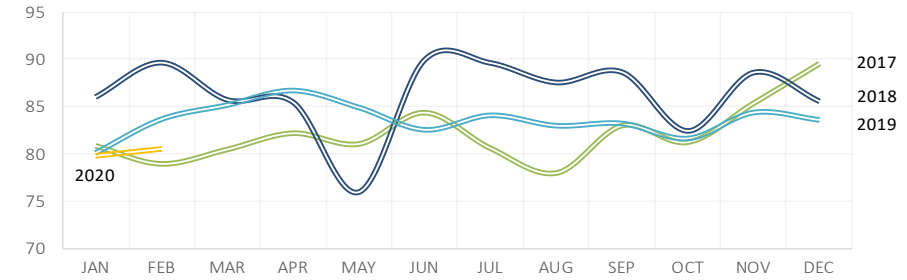
STEEL PRODUCTION (10^3 t/d)



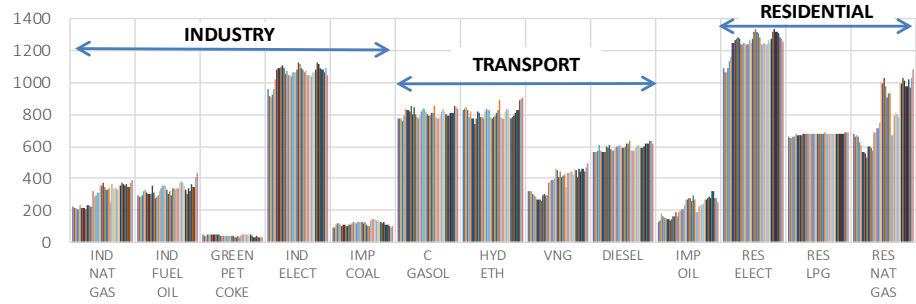
IRON ORE EXPORTS (10^3 t/d)



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



CONSUMER PRICES - Jan 2017 to Feb 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.

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