

# 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

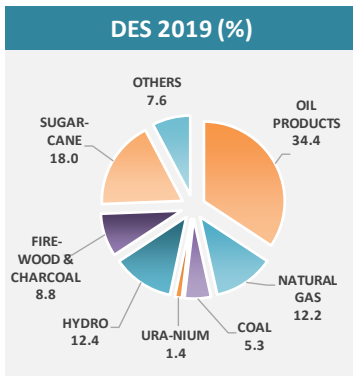
**MARCH**  
**2020**

# DOMESTIC ENERGY SUPPLY

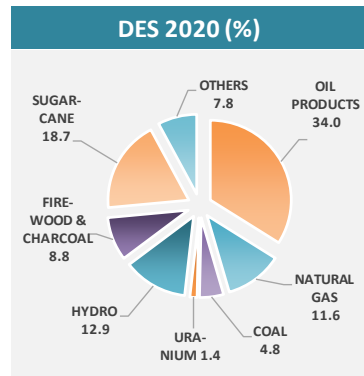
In March 2020, energy consumption in light vehicles decreased 14.4% and commercial electricity consumption decreased 3%, compared to the same month of 2019. Cooking gas rose 11.9% and residential electricity increased 0.8%. They are already effects of the social isolation started in the 2nd half of March, resulting from COVID-19.

An analysis of the probable monthly evolution of the several energy sources consumption in Brazil until December 2020, with the information available until May 29, indicates that the Domestic Energy Supply (DES)<sup>1</sup> may decrease a little more than 3% in the year. The figure is similar to that of 2012 and 7% lower than 2014's (record).

## TOTAL ENERGY DEMAND FOR 2020 MAY RECOIL MORE THAN 3%



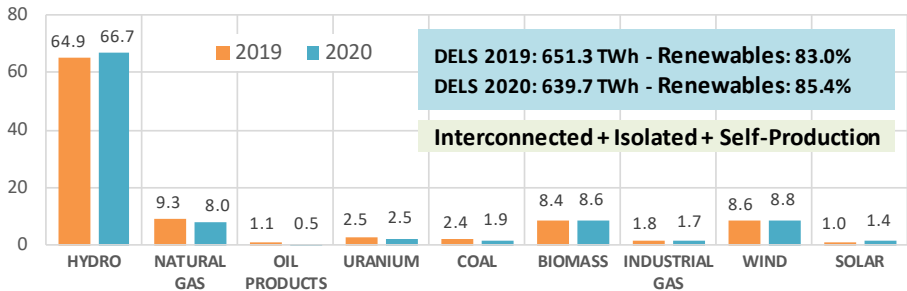
294.0 million toe - 46.1% renewables



284.8 million toe - 47.7% renewables

For the 2020 Domestic Electricity Supply (DELS)<sup>2</sup> is expected a decrease of 1.8%. The share of renewables rises and should stay above 85%, because intermittent sources are less affected by the pandemic.

## DOMESTIC ELECTRICITY SUPPLY, BY SOURCE (%)



# HIGHLIGHTS IN MARCH 2020

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## ■ Oil production continues rising

Oil production grew 15.7% in March 2020, over the same month of 2019, accumulating an increase of 18.4% in the year (average of 7.6% in 2019). Natural gas production accumulated an increase of 16.3% in the year (average of 9.5% in 2019). These highs will provide Brazil's energy surplus above 10% in 2020.

## ■ Mining and metallurgy in down

Steel production accumulates 8% down in the year. Iron ore exports accumulate 14.5% down and pellets, 54% down.

## ■ Hydraulic supply downwards

The hydraulic energy supply accumulated a drop of 2.2% in the year, contributing to the increase in tariffs, due to higher costs of thermal generation. Itaipu generation accumulates a low of 0.8%.

## ■ Oil derivatives recoil

Apparent consumption of oil products fell 4.8% in March, compared to the same month of 2019, and accumulated a 2% decrease in the year (excluding ethanol and biodiesel). Diesel consumption (including biodiesel) dropped by 0.2%, and gasoline by 3.8%. Automotive ethanol consumption dropped 4.5% in the year. Total natural gas demand is still up 2.9% in the year (9.7% through February), leveraged by a 20% rise in electricity generation.

Energy consumption in light vehicles of the Otto cycle (gasoline, ethanol and natural gas) recoiled 14.4% in March and 3.2 in the year (4.5% in 2019, -1.2% in 2018, + 1.7% in 2017, -1.1% in 2016 and + 6.2% in 2014).

## ■ Electricity consumption in down

Electricity consumption, without self-producers, was down 0.6% in the year. Commercial consumption accumulates -2% and residential consumption, -0.1%. The industrial was stable. The 13% drop in April consumption shows, more strongly, the effects of COVID-19.

## ■ Biodiesel production in high

Biodiesel production increased by 18.8% in March, and accumulated an increase of 10.9% in the year. Previous three years rates were positive in double digits.

Pulp production accumulated a decrease of 2.7% 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 decreased by 1.3% in the year (+ 2.6% in the twelve months of 2019).

## ■ Electricity tariffs are up

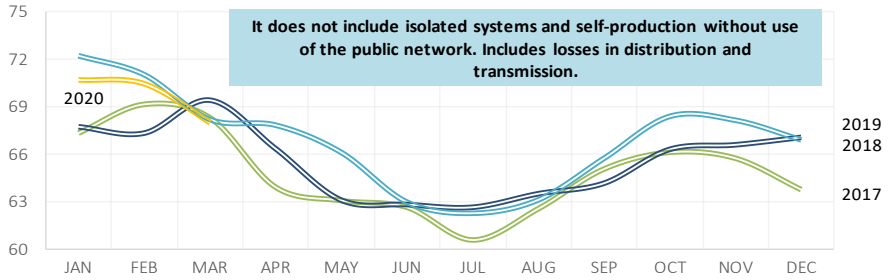
The average domestic tariff for residential electricity increased by 0.6% in March (8.0% in 2019, 12.6% in 2018, stable in 2017 and 5.8% in 2016). Commercial tariff rose by 0.9% (7.4% in 2019, 12.4% in 2018, 0.7% in 2017 and 5.7% in 2016) and industrial, decreased by 0.1% (5, 7% in 2019, 13.4% in 2018, 1.2% in 2017 and 3.6% in 2016).

SPECIFICATION	MARCH						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2020	2019	%20/19	2020	2019	%20/19	%
<b>OIL</b>							
PRODUCTION - with Shale Oil and NGL(10 <sup>3</sup> b/d)	3,073	2,655	15.7	3,147	2,658	18.4	-
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	62	60	2.2	62	60	2.2	-
<b>OIL PRODUCTS</b>							
TOTAL CONSUMPTION (10 <sup>3</sup> b/day)	2,283	2,397	-4.8	2,403	2,451	-2.0	100.0
hereof: DIESEL with biodiesel - (10 <sup>3</sup> b/day)	1,007	973	3.5	996	997	-0.2	39.4
hereof: GASOLINE C (10 <sup>3</sup> b/day)	547	631	-13.3	618	642	-3.8	20.6
CONSUMER PRICE - DIESEL (R\$/l)	3.57	3.53	1.2	3.69	3.47	6.3	-
CONSUMER PRICE - GASOLINE C (R\$/l)	4.46	4.31	3.6	4.53	4.25	6.5	-
CONSUMER PRICE - LPG (R\$/13 kg)	69.9	69.2	1.1	69.9	69.2	1.0	-
<b>NATURAL GAS</b>							
PRODUCTION (106 m <sup>3</sup> /day)	121.7	111.5	9.1	129.9	111.7	16.3	-
IMPORTS (106 m <sup>3</sup> /day)	21.4	23.8	-10.1	25.8	25.5	1.3	-
NON-UTILIZED AND REINJECTION (106 m <sup>3</sup> /day)	59.4	41.7	42.5	56.4	40.7	38.4	-
AVAILABILITY FOR CONSUMPTION (106 m <sup>3</sup> /day)	83.6	93.5	-10.6	99.2	96.4	2.9	100.0
INDUSTRIAL CONSUMPTION (106 m <sup>3</sup> /day)	35.7	36.4	-1.8	36.4	37.6	-3.3	36.7
POWER GENERATION CONS. (106 m <sup>3</sup> /day)	19.5	21.5	-9.3	28.6	23.8	20.3	28.9
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) - consumption range of 20,000 m <sup>3</sup> /day	13.0	15.4	-15.2	14.3	15.0	-4.5	-
MOTOR PRICE SP (US\$/MMBtu)	16.7	20.2	-17.5	18.4	19.1	-3.9	-
RESIDENTIAL PRICE SP (US\$/MMBtu)	36.1	36.9	-2.1	40.0	35.6	12.2	-
<b>ELECTRICITY</b>							
NATIONAL INTERCONNECTED SYSTEM	67,935	68,154	-0.3	69,662	70,448	-1.1	100.0
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	39,282	39,763	-1.2	40,190	41,200	-2.5	57.7
SOUTH POWER LOAD (MWavg)	12,341	11,796	4.6	12,741	12,486	2.0	18.3
NORTHEAST POWER LOAD (MWavg)	10,818	11,084	-2.4	11,202	11,275	-0.6	16.1
NORTH POWER LOAD (MWavg)	5,494	5,511	-0.3	5,529	5,487	0.8	7.9
TOTAL CONSUMPTION (TWh) (**)	40.9	41.0	-0.2	122.8	123.5	-0.6	100.0
RESIDENTIAL	12.4	12.3	0.8	37.7	37.8	-0.1	30.7
INDUSTRIAL	14.1	14.0	0.9	41.3	41.3	0.0	33.6
COMMERCIAL	7.8	8.1	-3.0	23.9	24.4	-2.0	19.4
OTHER SECTORS	6.6	6.7	-1.0	19.9	20.1	-1.2	16.2
PLANTS ENTRY INTO OPERATING (MW)	21	346	-94.0	498	1,169	-57.4	-
RESIDENTIAL PRICE (R\$/MWh)	754	750	0.6	763	754	1.2	-
COMMERCIAL PRICE (R\$/MWh)	672	666	0.9	676	667	1.5	-
INDUSTRIAL PRICE (R\$/MWh)	631	632	-0.1	642	638	0.5	-
<b>ETHANOL AND BIODIESEL</b>							
BIODIESEL PRODUCTION (10 <sup>3</sup> b/d)	111	94	18.8	103	93	10.9	-
MOTOR ETHANOL CONSUMPTION (10 <sup>3</sup> b/d)	448	527	-15.0	523	547	-4.5	-
ETHANOL EXPORTS (10 <sup>3</sup> b/d)	14	26	-46.0	21	24	-14.2	-
HYDRATED ETHANOL PRICE (R\$/l)	3.20	2.95	8.5	3.23	2.85	13.2	-
<b>COAL</b>							
ELECTRICITY GENERATION (MWavg)	865	1,253	-31.0	1,559	1,068	46.0	-
IMPORT PRICE (US\$ FOB/t)	88.8	152.6	-41.8	94.0	158.7	-40.8	-
<b>NUCLEAR ENERGY</b>							
ELECTRICITY GENERATION - (GWh)	1,282	1,284	-0.2	3,388	4,040	-16.1	-
<b>INDUSTRIAL SECTORS</b>							
STEEL PRODUCTION (10 <sup>3</sup> t/day)	85	93	-8.2	88	96	-8.1	-
ALUMINIUM PRODUCTION (10 <sup>3</sup> t/day)	1.7	1.6	4.9	1.9	1.6	13.3	-
IRON ORE EXPORTS (10 <sup>3</sup> t/day)	624	652	-4.4	721	843	-14.5	-
PELLETS EXPORTS (10 <sup>3</sup> t/day)	60	63	-4.6	43	93	-53.5	-
PAPER PRODUCTION (10 <sup>3</sup> t/day)	29.0	29.2	-0.8	28.5	28.5	0.0	-
PULP PRODUCTION (10 <sup>3</sup> t/day)	55.0	56.0	-1.6	53.0	54.4	-2.7	-
SUGAR PRODUCTION (10 <sup>3</sup> t/day)	3	6	-52.4	11	8	38.0	-
SUGAR EXPORTS (10 <sup>3</sup> t/day)	46	36	27.0	47	37	26.4	-

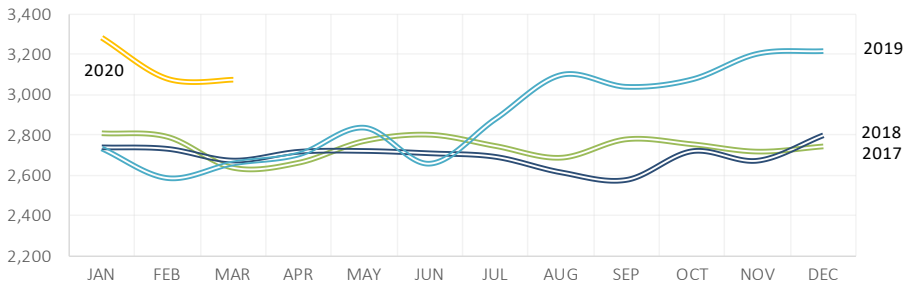
(\*) SP is the acronym of the state of São Paulo. (\*\*) The traditional self-producers (consumers that do not use public grid) is not included.



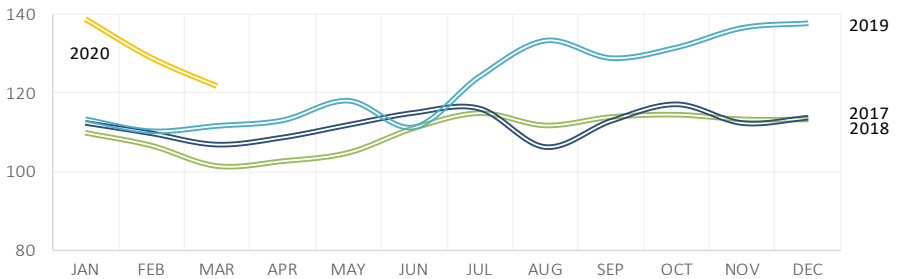
## NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)



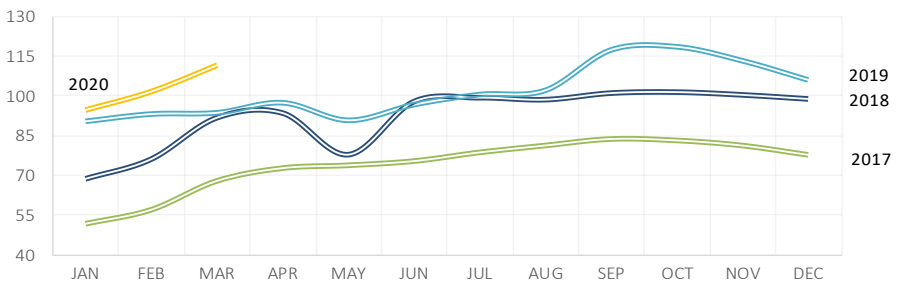
## OIL PRODUCTION (10<sup>3</sup> bbl/d)



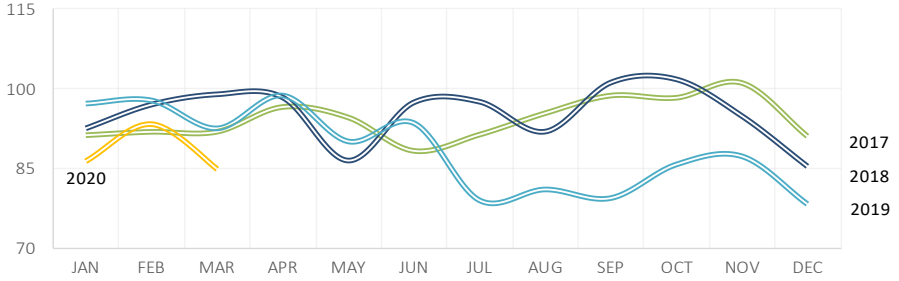
## NATURAL GAS PRODUCTION (million m<sup>3</sup>/d)



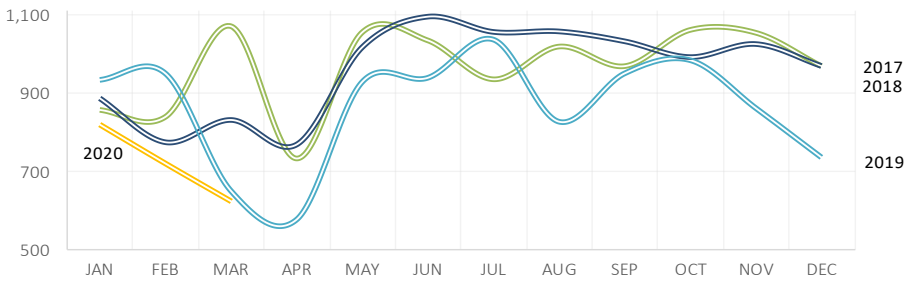
## BIODIESEL PRODUCTION (10<sup>3</sup> bbl/d)



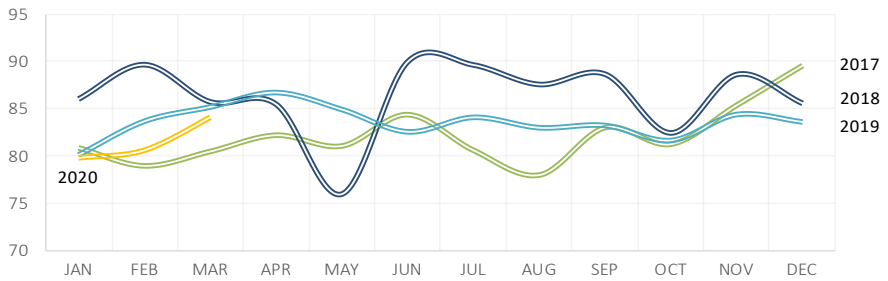
## STEEL PRODUCTION (10<sup>3</sup> t/d)



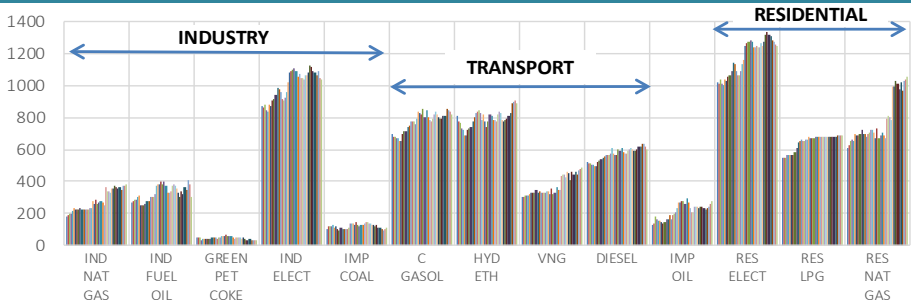
## IRON ORE EXPORTS (10<sup>3</sup> t/d)



## PAPER AND PULP PRODUCTION (10<sup>3</sup> t/d)



## CONSUMER PRICES - Jan 2017 to Mar 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.

<sup>1</sup> 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.

<sup>2</sup> 2019 data from DEL and DELS reflect the final results of the National Energy Balance (BEB), cycle 2020, concluded in May by the Energy Research Company (EPE), in partnership with MME and its companies and agencies.

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