

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
2021

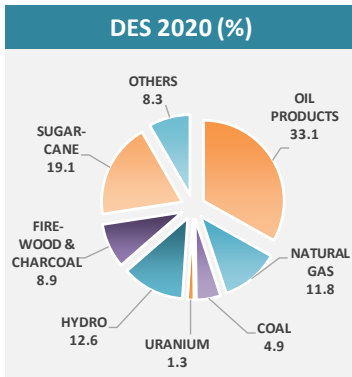
DOMESTIC ENERGY SUPPLY

Several March 2021 indicators indicate a good recovery in the economy over March 2020: increases of 35% in cement sales, 15.5% in diesel consumption, 11.5% in industrial electricity consumption, 6.1% in residential electricity consumption and 4.9% in energy consumption of light vehicles. In the year accumulated over the same previous period the COVID-19 pandemic continued to affect some indicators: decreases of 38% in aviation

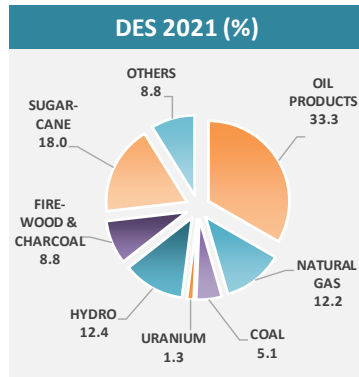
kerosene, 4.4% in commercial electricity and 3.1% in energy consumption of light vehicles.

For the Domestic Energy Supply – DES¹ up to March, an increase of 2.4% was estimated, but for the whole of 2021 the estimate is that it will increase between 3 and 4%. With the current information, the indicator was estimated at 3.4% (3.5% in the previous edition).

INCREASE IN TOTAL ENERGY DEMAND IS ESTIMATED AT 3.4% IN 2021



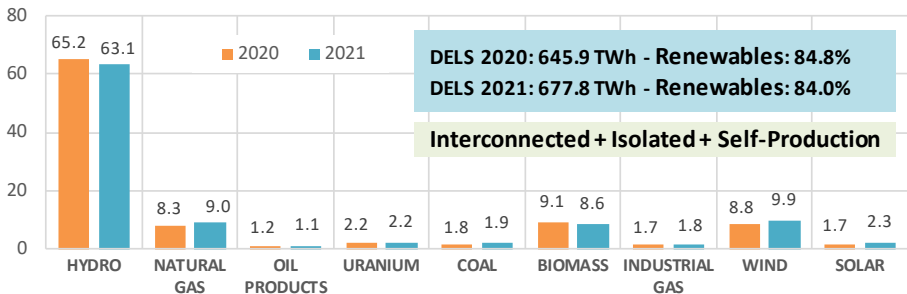
287.6 million toe - 48.4% renewables



297.3 million toe - 47.4% renewables

For the 2021's Domestic Electricity Supply (DELS)² an increase of 4 to 5% is expected. With the current information, the indicator was estimated at 4.9% (the same as the previous). The share of renewables should be between 83 and 85%.

DOMESTIC ELECTRICITY SUPPLY, BY SOURCE (%)



HIGHLIGHTS IN MARCH 2021

■ *Oil production recoils*

Oil production recoiled 4.4% in March 2021, compared to the same month in 2020, and accumulated a decrease of 7.5% in the year (-9.1% up to February). Natural gas production grew 3.6% in March and has accumulated an increase of 1.0% in the year (-0.5% until February).

■ *Mining and metallurgy in high*

Steel production grew 4.4% over March 2020 and accumulated an increase of 8.2% in the year (9.1% up to February). Iron ore exports grew 38.3% in the month, accumulating an increase of 19.4% in the year (11.7% until February). Pellets exports are down 2.3% in the year (+3% up to February).

■ *Hydraulic supply downward*

The hydraulic energy supply shows a decrease of 5.2% in the accumulated result for the year (-7.0% up to February). The supply from Itaipu is -6.7% in the year accumulated (-5.2% until February).

■ *Oil derivatives in recovery*

Apparent consumption of oil products grew 7.0% in March (excluding ethanol and biodiesel), and has already accumulated an increase of 0.8% in the year (-0.5% until February). Diesel consumption (biodiesel included) rose 15.5% in the month (5.8% in the year) and gasoline C grew 4.5% in the month (-1.0% in the year). Automotive ethanol consumption increased by 4.9% in the month, but still accumulates a low of 2.7% in the year. The total demand for natural gas accumulates an increase of 6.7% in the year, with electricity generation expanding by 65.5% in the month and 26.1% in the year.

The Otto's cycle (gasoline, ethanol and natural gas) light vehicles energy consumption accumulates -3.1% in the year (12 months: -9.3% in 2020, 4.5% in 2019, -1.2% in 2018, +1.7% in 2017, -1.1% in 2016 and +6.2% in 2014).

■ *Electricity consumption rises*

Electricity consumption, without self-producers, grew 6.1% over March 2020, and accumulates an increase of 3.5% in the year (2.2% until February). Still in the year, residential consumption rose 5.0%, industrial consumption grew 8.1% and commercial consumption still shows a decline of 4.4% (-10.6% in the entire year of 2020).

■ *Biodiesel production rises*

Biodiesel production grew 16.3% over the same month in 2020, and accumulates an increase of 11.1% in the year. The annual rate has been over 9% for the past four years.

Pulp production is estimated to increase by 2% in the yearly accumulate (+43% from 2013 to 2020). Cement consumption accumulates an increase of 21.9% in the year (10% in the twelve months of 2020).

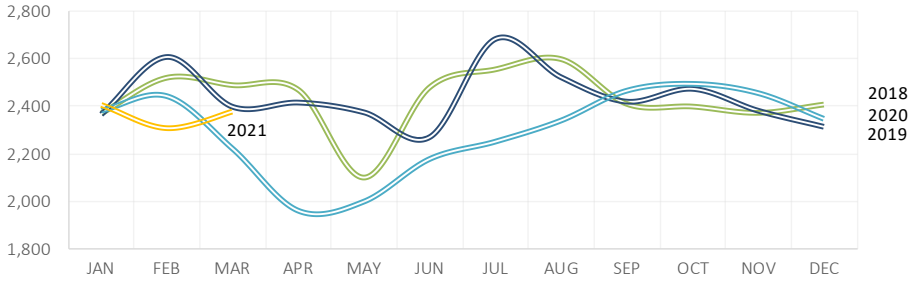
■ *Electricity tariffs rise*

The national average tariff for residential electricity accumulates 4.6% high in the year (-3.1% in 2020, 8.0% in 2019 and 12.6% in 2018). Commercial tariff accumulates 6.8% high (-1.6% in 2020, 7.4% in 2019 and 12.4% in 2018) and industrial, 8.8% high (-0.3% in 2020, 5.7% in 2019 and 13.4% in 2018).

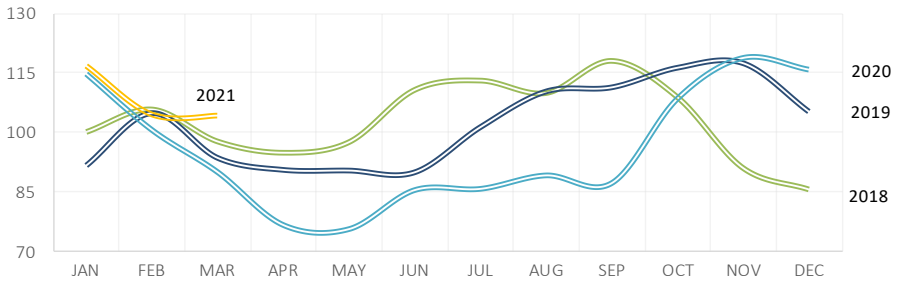
SPECIFICATION	MARCH							
	IN THE MONTH			ACCUMULATED IN THE YEAR				
	2021	2020	%21/20	2021	2020	%21/20	%	
OIL								
PRODUCTION - with Shale Oil and NGL(10 ³ b/d)	2,939	3,073	-4.4	2,911	3,147	-7.5	-	
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	61	61	-0.1	60	64	-6.6	-	
OIL PRODUCTS								
TOTAL CONSUMPTION (10 ³ b/day)	2,377	2,222	7.0	2,364	2,346	0.8	100.0	
hereof: DIESEL with biodiesel - (10 ³ b/day)	1,163	1,007	15.5	1,055	997	5.8	42.4	
hereof: GASOLINE C (10 ³ b/day)	572	547	4.5	612	618	-1.0	20.7	
CONSUMER PRICE - DIESEL (R\$/l)	4.25	3.57	19.0	3.97	3.69	7.4	-	
CONSUMER PRICE - GASOLINE C (R\$/l)	5.48	4.46	22.9	5.02	4.53	10.8	-	
CONSUMER PRICE - LPG (R\$/13 kg)	83.2	69.9	18.9	79.9	69.9	14.4	-	
NATURAL GAS								
PRODUCTION (106 m ³ /day)	126.1	121.7	3.6	131.2	129.9	1.0	-	
IMPORTS (106 m ³ /day)	40.6	27.7	46.5	39.3	28.4	38.7	-	
NON-UTILIZED AND REINJECTION (106 m ³ /day)	62.5	59.4	5.1	61.9	56.4	9.7	-	
AVAILABILITY FOR CONSUMPTION (106 m ³ /day)	104.2	90.0	15.8	108.6	101.8	6.7	100.0	
INDUSTRIAL CONSUMPTION (106 m ³ /day)	40.8	35.7	14.2	39.8	36.4	9.5	36.7	
POWER GENERATION CONS. (106 m ³ /day)	32.3	19.5	65.5	36.1	28.6	26.1	33.2	
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) - consumption range of 20,000 m ³ /day	10.5	13.0	-19.7	11.6	14.3	-19.3	-	
MOTOR PRICE SP (US\$/MMBtu)	12.6	16.7	-24.3	12.7	18.4	-30.6	-	
RESIDENTIAL PRICE SP (US\$/MMBtu)	30.2	36.1	-16.5	30.7	40.0	-23.3	-	
ELECTRICITY								
NATIONAL INTERCONNECTED SYSTEM	71,884	67,935	5.8	71,704	69,364	3.4	100.0	
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	41,812	39,282	6.4	41,632	39,956	4.2	58.1	
SOUTH POWER LOAD (MWavg)	12,931	12,341	4.8	12,969	12,704	2.1	18.1	
NORTHEAST POWER LOAD (MWavg)	11,310	10,818	4.5	11,394	11,175	2.0	15.9	
NORTH POWER LOAD (MWavg)	5,831	5,494	6.1	5,708	5,529	3.2	8.0	
TOTAL CONSUMPTION (TWh) (**)	43.4	40.9	6.1	127.1	122.8	3.5	100.0	
RESIDENTIAL	13.2	12.4	6.1	39.6	37.7	5.0	31.2	
INDUSTRIAL	15.7	14.1	11.5	44.7	41.3	8.1	35.1	
COMMERCIAL	7.9	7.8	1.3	22.8	23.9	-4.4	18.0	
OTHER SECTORS	6.6	6.6	0.3	20.0	19.9	0.5	15.7	
PLANTS ENTRY INTO OPERATING (MW)	388	1,606	-75.8	692	2,083	-66.8	-	
RESIDENTIAL PRICE (R\$/MWh)	800	754	6.0	798	763	4.6	-	
COMMERCIAL PRICE (R\$/MWh)	720	672	7.2	722	676	6.8	-	
INDUSTRIAL PRICE (R\$/MWh)	695	631	10.1	698	642	8.8	-	
ETHANOL AND BIODIESEL								
BIODIESEL PRODUCTION (10 ³ b/d)	130	112	16.3	115	104	11.1	-	
MOTOR ETHANOL CONSUMPTION (10 ³ b/d)	469	448	4.9	509	523	-2.7	-	
ETHANOL EXPORTS (10 ³ b/d)	38	14	171.0	37	21	79.3	-	
HYDRATED ETHANOL PRICE (R\$/l)	4.04	3.20	26.2	3.57	3.23	10.6	-	
COAL								
ELECTRICITY GENERATION (MWavg)	1,047	865	21.0	1,692	1,559	8.5	-	
IMPORT PRICE (US\$ FOB/t)	89.6	88.8	0.9	84.0	94.0	-10.7	-	
NUCLEAR ENERGY								
ELECTRICITY GENERATION - (GWh)	1,375	1,282	7.3	3,991	3,388	17.8	-	
INDUSTRIAL SECTORS								
STEEL PRODUCTION (10 ³ t/day)	91	87	4.4	97	89	8.2	-	
ALUMINIUM PRODUCTION (10 ³ t/day)	1.9	1.7	9.4	1.9	1.9	3.6	-	
IRON ORE EXPORTS (10 ³ t/day)	859	624	37.6	861	721	19.4	-	
PELLETS EXPORTS (10 ³ t/day)	56	60	-8.0	42	43	-2.3	-	
PAPER PRODUCTION (10 ³ t/day)	28.8	29.0	-0.4	28.9	28.5	1.5	-	
PULP PRODUCTION (10 ³ t/day)	58.7	57.5	2.0	56.8	55.7	2.0	-	
SUGAR PRODUCTION (10 ³ t/day)	11	6	74.0	15	11	33.1	-	
SUGAR EXPORTS (10 ³ t/day)	63	46	38.8	64	47	36.0	-	

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

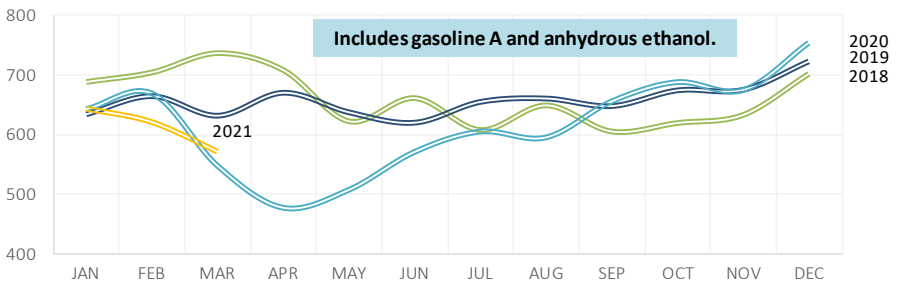
OIL PRODUCTS TOTAL CONSUMPTION (10³ bbl/d)



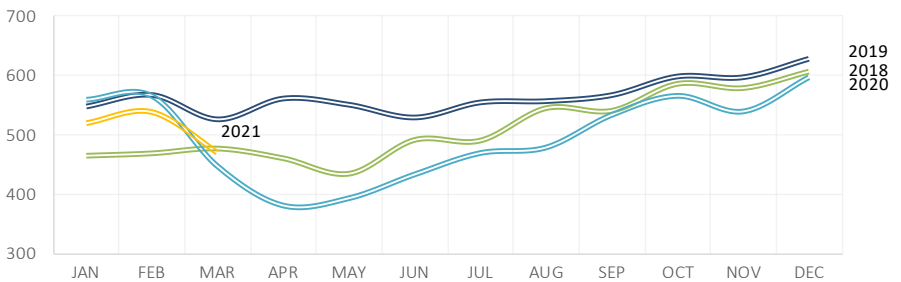
NATURAL GAS TOTAL DEMAND (million m³/d)



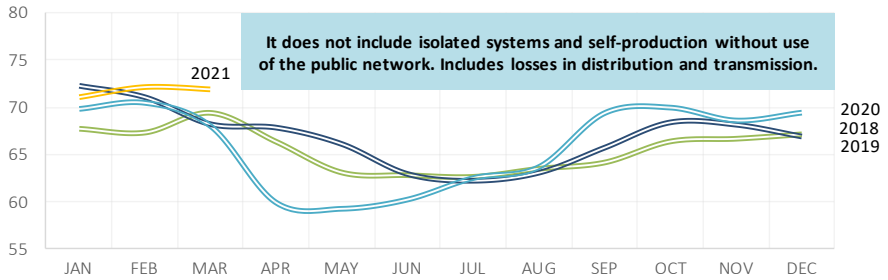
C GASOLINE CONSUMPTION (10³ bbl/d)



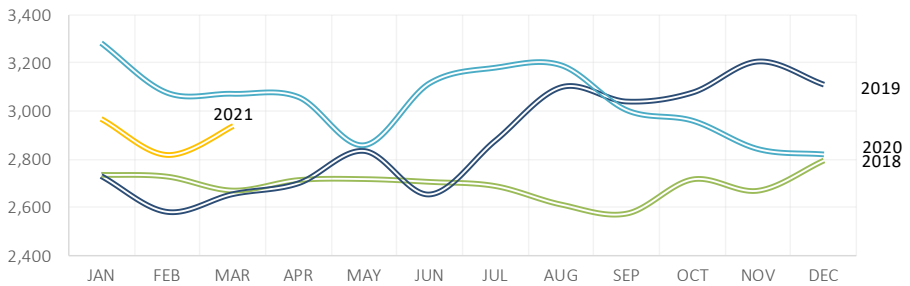
MOTOR ETHANOL TOTAL CONSUMPTION (10³ bbl/d)



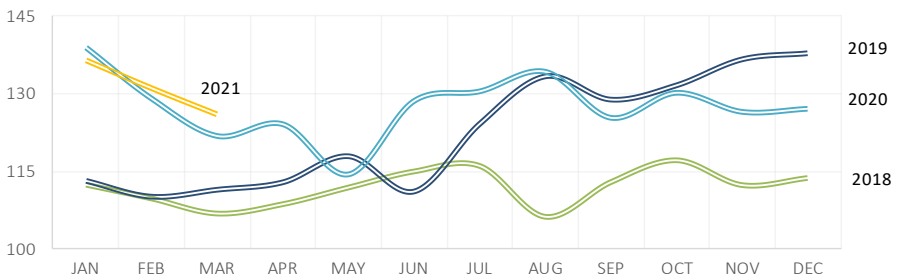
NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)



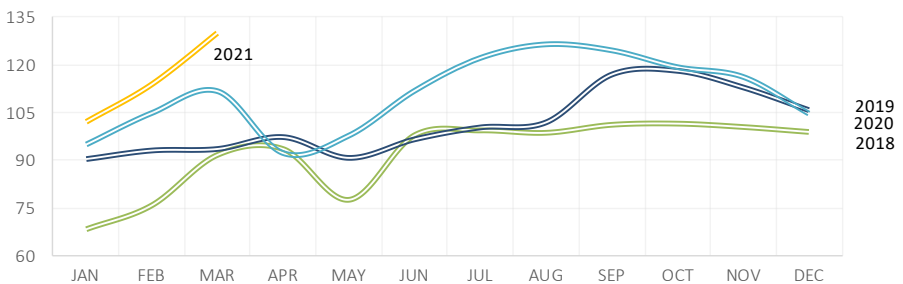
OIL PRODUCTION (10³ bbl/d)



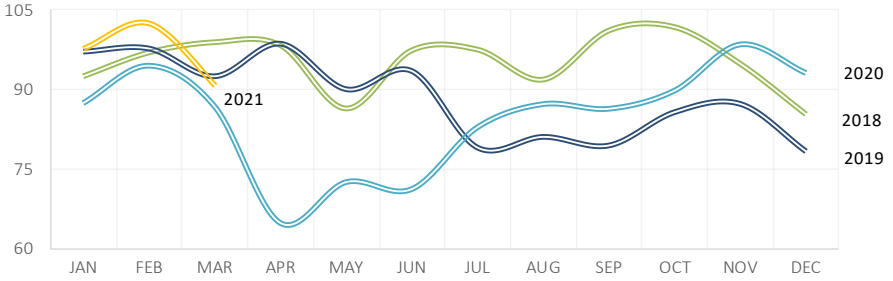
NATURAL GAS PRODUCTION (million m³/d)



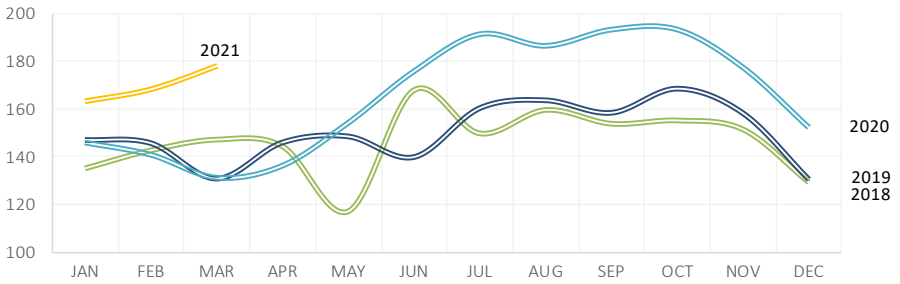
BIODIESEL PRODUCTION (10³ bbl/d)



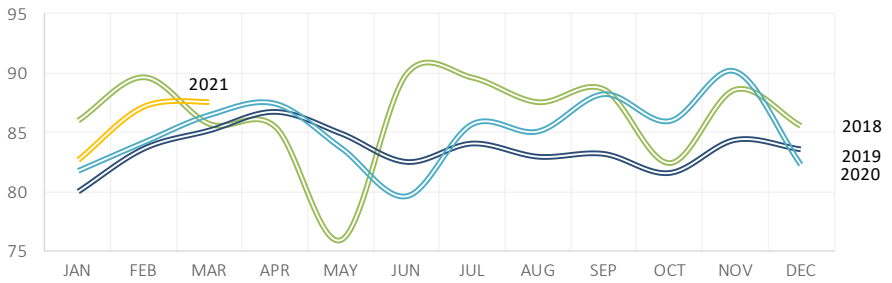
STEEL PRODUCTION (10³ t/d)



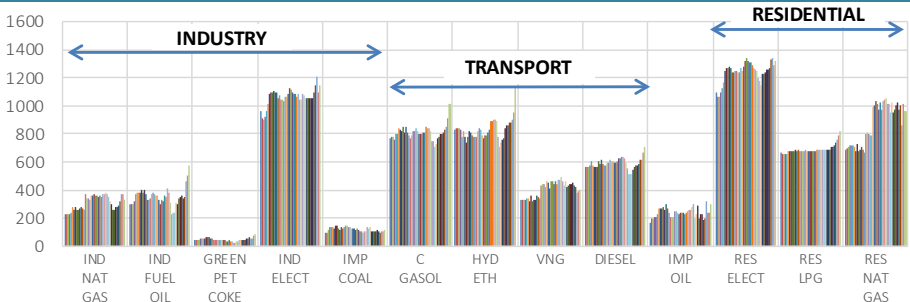
CEMENT SALES (10³ t/d)



PAPER AND PULP PRODUCTION (10³ t/d)



CONSUMER PRICES - Jan 2018 to Mar 2021 (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 2020 data from DES and DELS reflect the results of the 2021 Brazilian Energy Balance cycle, concluded by the Energy Research Company, with a partnership between SPE/MME and energy sector companies and agencies.

MINISTÉRIO DE
MINAS E ENERGIA



www.mme.gov.br



Direction: André Osório

Coordination: Gustavo Masili

Team: João Patusco, Daniele Bandeira, Gilberto Kwitko and Azenaite Roriz

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

die@mme.gov.br +55 61 2032 5986