

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
2021

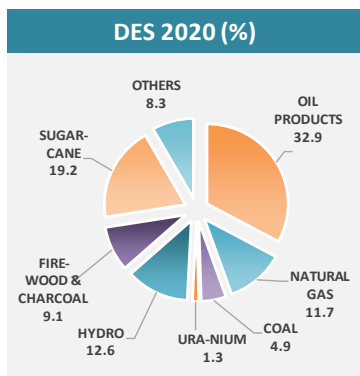
DOMESTIC ENERGY SUPPLY

Two good indicators from January 2021 over January 2020 are noteworthy: the 11.9% increase in cement sales and 8.1% in industrial power consumption. In the same period, the effects of the COVID-19 pandemic persist on some indicators: in households there was a 5.4% increase in electricity consumption and a 2.1% increase in cooking gas consumption; in the commerce sector there was a decrease of 7.1% in the use of electricity; in aviation

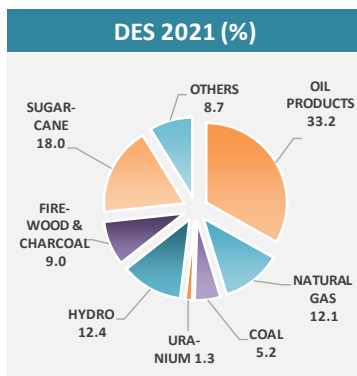
there was a 37% drop in the use of kerosene; and in light vehicles there was a 3.7% drop in fuel use.

For the Domestic Energy Supply – DES¹ of January, an increase of 1.5% was estimated, but for the entire year of 2021 the estimate is that it will increase between 3.0 and 4.0%. With the current information, the indicator was estimated at 3.5%.

TOTAL ENERGY DEMAND IN 2021 MAY RISE 3.5%



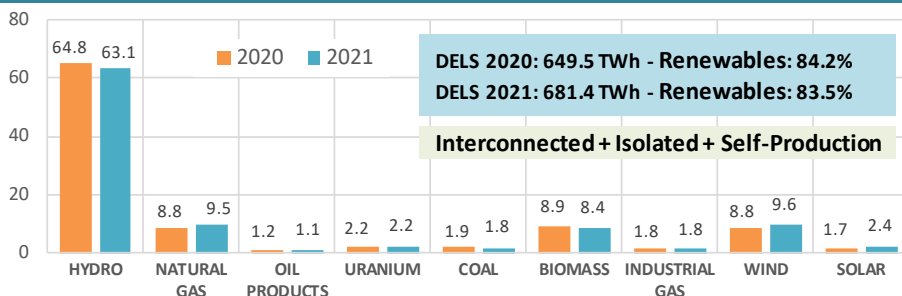
287.6 million toe - 48.6% renewables



297.5 million toe - 47.5% 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 share of renewables should be between 83 and 85%.

DOMESTIC ELECTRICITY SUPPLY, BY SOURCE (%)



HIGHLIGHTS IN JANUARY 2021

■ *Oil production recoils*

Oil production dropped 9.6% in January 2021, compared to the same month in 2020, but grew 5.2% over the previous month, reversing the falling curve observed in the last months of 2020. Natural gas production followed the same logic, with a decrease of 1.7% and an increase of 7.4%, respectively.

■ *Mining and metallurgy in high*

Steel production grew 10.8% over January 2020. Iron ore exports grew 9.9%, but pellet exports fell by almost 20%, following the trend of 2020.

■ *Hydraulic supply declines*

The hydraulic energy supply fell 9.1% over the same month in 2020, but grew 6% over the previous month. Itaipu's indicators were -17% and + 14%, respectively.

■ *Oil derivatives increase*

Apparent consumption of oil products rose 1% over January 2020 (excluding ethanol and biodiesel). Diesel consumption (including biodiesel) increased by 0.7%, and gasoline C increased by 0.2%. Automotive ethanol consumption fell by 7%. Total natural gas demand decreased by 1.6%, with increases in industrial consumption and power generation and a decrease of over 10% in other uses.

The Otto's cycle (gasoline, ethanol and natural gas) light vehicles energy consumption recoiled 3.7% over January 2020 (-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 3% over January 2020, showing a strong increase in industrial consumption, of 8.1%. Residential consumption also grew, with a rate of 5.3%. Commercial consumption, on the other hand, continued to fall by 7.1% (-10.6% in the whole of 2020).

■ *Increasing in Biodiesel production*

Biodiesel production grew 7.6% over the same month in 2020, but decreased 2.4% over the previous month. The annual indicator has been over 9% in the past four years.

Pulp production was estimated to increase by 0.6% in January, compared to January 2020 (+43% from 2013 to 2020). Cement consumption increased by 11.9% over January 2020 (10% in 2020).

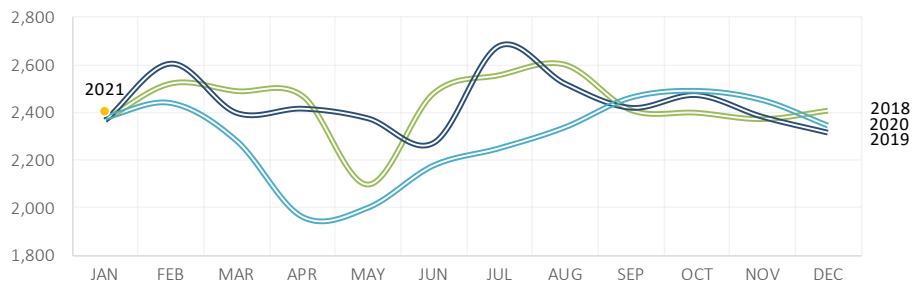
■ *Electricity tariffs rise*

The national average tariff for residential electricity rose 3.6% in January (-2.6% in 2020, 8.0% in 2019, 12.6% in 2018 and stable in 2017). Commercial tariff increased by 1.3% (-2.1% in 2020, 7.4% in 2019, 12.4% in 2018 and 0.7% in 2017) and industrial rose 3.3% (0.1% in 2020, 5.7% in 2019, 13.4% in 2018 and 1.2% in 2017).

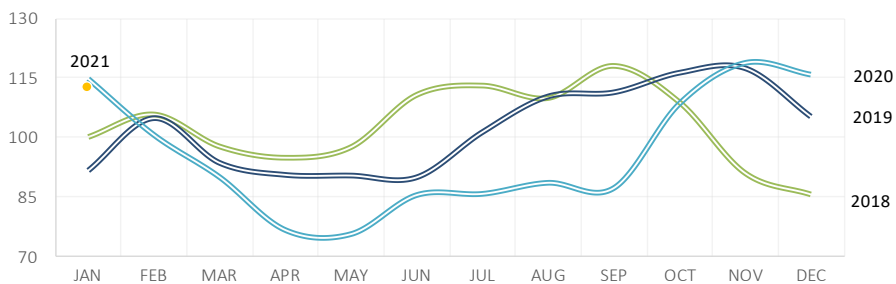
SPECIFICATION	JANUARY						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2021	2020	%21/20	2021	2020	%21/20	%
OIL							
PRODUCTION - with Shale Oil and NGL(10 ³ b/d)	2,969	3,283	-9.6	2,969	3,283	-9.6	-
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	68	65	4.9	68	65	4.9	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10 ³ b/day)	2,406	2,381	1.0	2,406	2,381	1.0	100.0
hereof: DIESEL with biodiesel - (10 ³ b/day)	957	950	0.7	957	950	0.7	37.8
hereof: GASOLINE C (10 ³ b/day)	644	643	0.2	644	643	0.2	21.4
CONSUMER PRICE - DIESEL (R\$/l)	3.70	3.79	-2.4	3.70	3.79	-2.4	-
CONSUMER PRICE - GASOLINE C (R\$/l)	4.62	4.58	0.9	4.62	4.58	0.9	-
CONSUMER PRICE - LPG (R\$/13 kg)	76.9	69.7	10.2	76.9	69.7	10.2	-
NATURAL GAS							
PRODUCTION (106 m3/day)	136.4	138.8	-1.7	136.4	138.8	-1.7	-
IMPORTS (106 m ³ /day)	37.1	32.0	16.0	37.1	32.0	16.0	-
NON-UTILIZED AND REINJECTION (106 m ³ /day)	60.7	56.1	8.2	60.7	56.1	8.2	-
AVAILABILITY FOR CONSUMPTION (106 m ³ /day)	112.8	114.7	-1.6	112.8	114.7	-1.6	100.0
INDUSTRIAL CONSUMPTION (106 m ³ /day)	37.0	36.3	1.8	37.0	36.3	1.8	32.8
POWER GENERATION CONS. (106 m ³ /day)	42.5	40.5	5.1	42.5	40.5	5.1	37.7
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) - consumption range of 20,000 m ³ /day	10.9	15.3	-29.1	10.9	15.3	-29.1	-
MOTOR PRICE SP (US\$/MMBtu)	14.4	19.7	-26.8	14.4	19.7	-26.8	-
RESIDENTIAL PRICE SP (US\$/MMBtu)	34.1	42.9	-20.5	34.1	42.9	-20.5	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	71,122	69,759	2.0	71,122	69,759	2.0	100.0
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	41,435	40,095	3.3	41,435	40,095	3.3	58.3
SOUTH POWER LOAD (MWavg)	12,868	12,817	0.4	12,868	12,817	0.4	18.1
NORTHEAST POWER LOAD (MWavg)	11,242	11,368	-1.1	11,242	11,368	-1.1	15.8
NORTH POWER LOAD (MWavg)	5,577	5,479	1.8	5,577	5,479	1.8	7.8
TOTAL CONSUMPTION (TWh) (**)	42.4	41.2	3.0	42.4	41.2	3.0	100.0
RESIDENTIAL	13.6	12.9	5.3	13.6	12.9	5.3	32.0
INDUSTRIAL	14.6	13.5	8.1	14.6	13.5	8.1	34.4
COMMERCIAL	7.5	8.0	-7.1	7.5	8.0	-7.1	17.6
OTHER SECTORS	6.8	6.7	0.6	6.8	6.7	0.6	15.9
PLANTS ENTRY INTO OPERATING (MW)	144	93	55.3	144	93	55.3	-
RESIDENTIAL PRICE (R\$/MWh)	800	772	3.6	800	772	3.6	-
COMMERCIAL PRICE (R\$/MWh)	690	681	1.3	690	681	1.3	-
INDUSTRIAL PRICE (R\$/MWh)	680	658	3.3	680	658	3.3	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10 ³ b/d)	102	95	7.6	102	95	7.6	-
MOTOR ETHANOL CONSUMPTION (10 ³ b/d)	520	559	-7.0	520	559	-7.0	-
ETHANOL EXPORTS (10 ³ b/d)	38	16	141.9	38	16	141.9	-
HYDRATED ETHANOL PRICE (R\$/l)	3.22	3.23	-0.3	3.22	3.23	-0.3	-
COAL							
ELECTRICITY GENERATION (MWavg)	2,152	2,376	-9.4	2,152	2,376	-9.4	-
IMPORT PRICE (US\$ FOB/t)	81.9	94.7	-13.4	81.9	94.7	-13.4	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,376	1,158	18.8	1,376	1,158	18.8	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10 ³ t/day)	97	87	10.8	97	87	10.8	-
ALUMINIUM PRODUCTION (10 ³ t/day)	1.9	1.9	-1.5	1.9	1.9	-1.5	-
IRON ORE EXPORTS (10 ³ t/day)	901	820	9.9	901	820	9.9	-
PELLETS EXPORTS (10 ³ t/day)	32	40	-19.7	32	40	-19.7	-
PAPER PRODUCTION (10 ³ t/day)	28.4	27.9	1.7	28.4	27.9	1.7	-
PULP PRODUCTION (10 ³ t/day)	54.2	53.9	0.6	54.2	53.9	0.6	-
SUGAR PRODUCTION (10 ³ t/day)	13	16	-16.9	13	16	-16.9	-
SUGAR EXPORTS (10 ³ t/day)	65	52	26.5	65	52	26.5	-

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

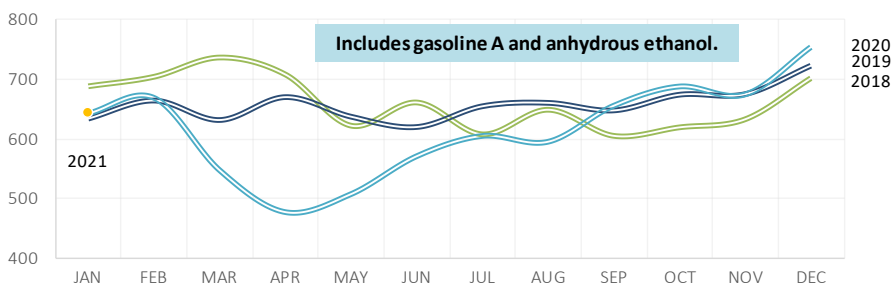
OIL PRODUCTS TOTAL CONSUMPTION (10³ bbl/d)



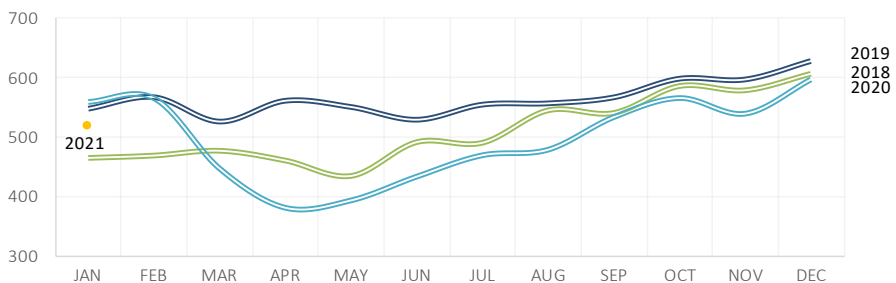
NATURAL GAS TOTAL DEMAND (million m³/d)



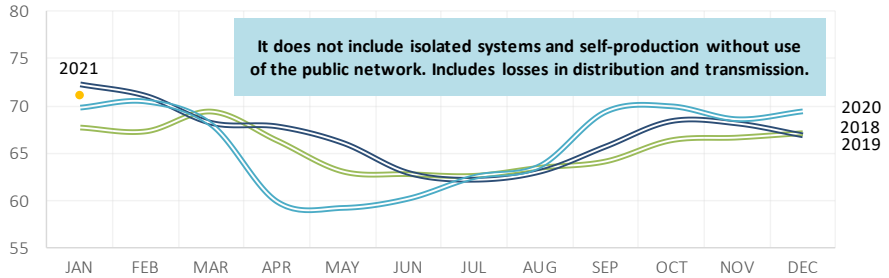
C GASOLINE CONSUMPTION (10³ bbl/d)



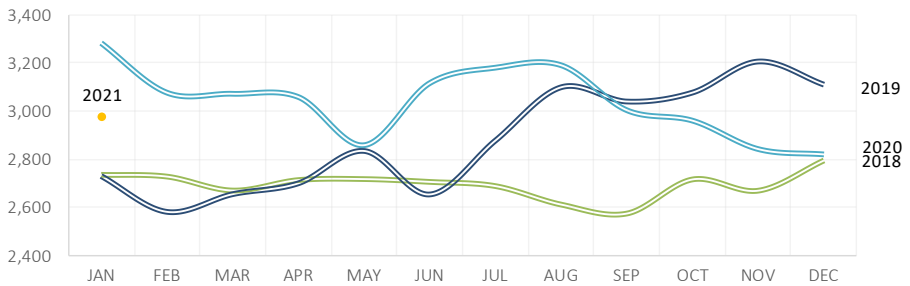
MOTOR ETHANOL TOTAL CONSUMPTION (10³ bbl/d)



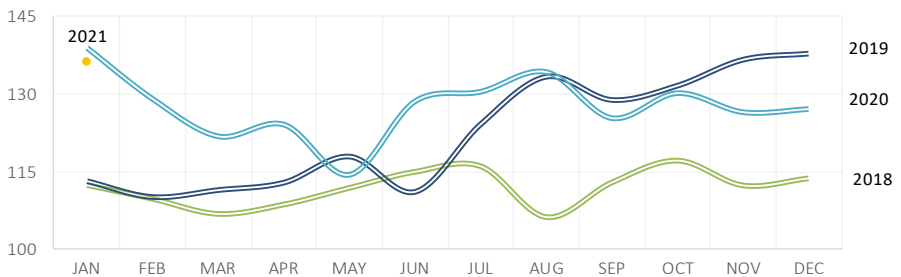
NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)



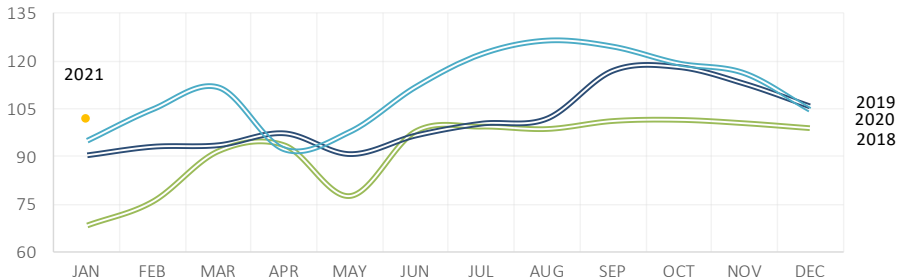
OIL PRODUCTION (10³ bbl/d)



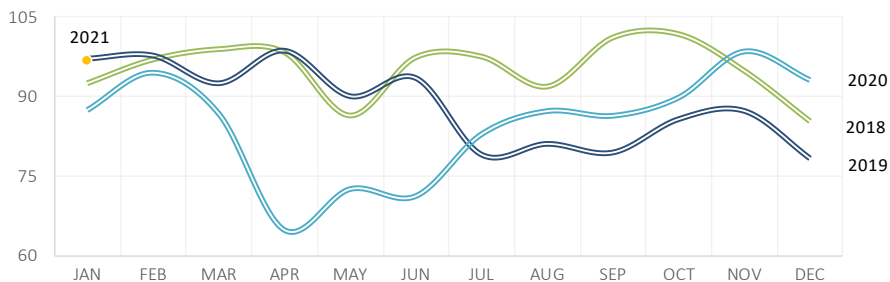
NATURAL GAS PRODUCTION (million m³/d)



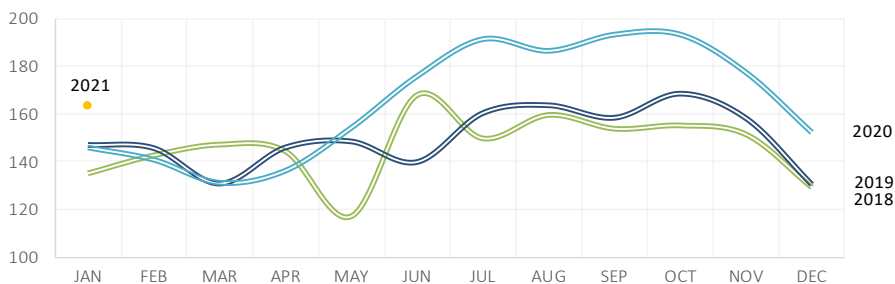
BIODIESEL PRODUCTION (10³ bbl/d)



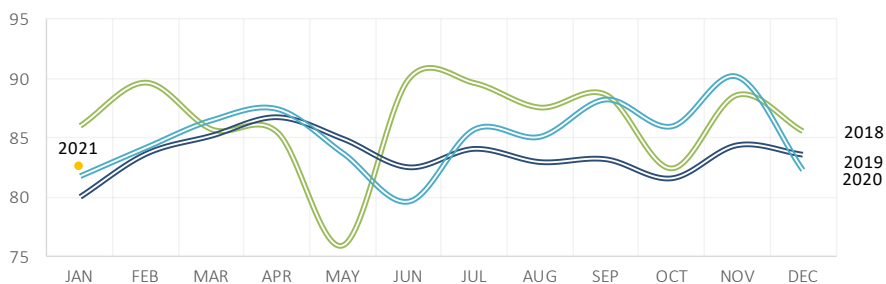
STEEL PRODUCTION (10³ t/d)



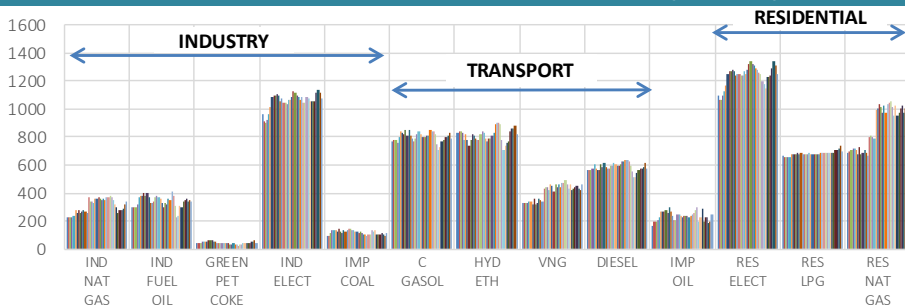
CEMENT SALES (10³ t/d)



PAPER AND PULP PRODUCTION (10³ t/d)



CONSUMER PRICES - Jan 2018 to Jan 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 DEL and DELS reflect the results of the December 2020 edition of this Bulletin, in combination with partial results from the 2021 cycle of the National Energy Balance (in progress by the Energy Research Company) and with the partnership of SPE/MME with energy sector companies and agencies.

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