

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
2021

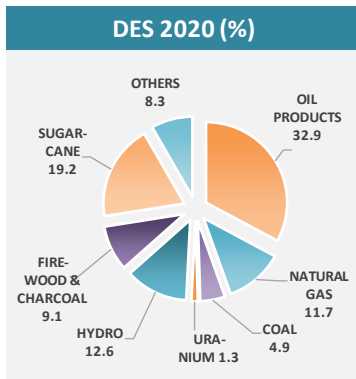
DOMESTIC ENERGY SUPPLY

Two indicators remained good in February 2021 over February 2020: a 19% increase in cement sales and a 4.5% increase in industrial electricity consumption. The COVID-19 pandemic continued to affect some indicators in the accumulated result for the year: in households, power consumption increased by 4.5% and cooking gas consumption by 2.5%; in the commercial sector there was a decrease of 7.2% in power use; in aviation there was a

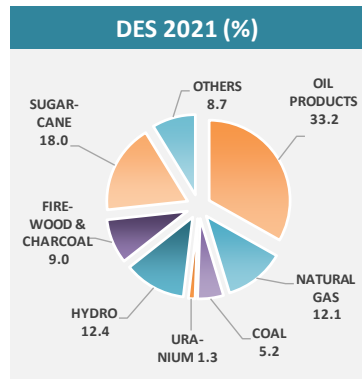
40.9% drop in kerosene use and in light vehicles there was a reduction of 6.1% in fuel use.

For the Domestic Energy Supply – DES¹ up to February, an increase of 2.7% was estimated, but for 2021 it is expected an increase between 3 and 4%. With the current information, the indicator was estimated at 3.5% (the same of the last).

TOTAL ENERGY DEMAND IN 2021 MAY RISE 3.5%



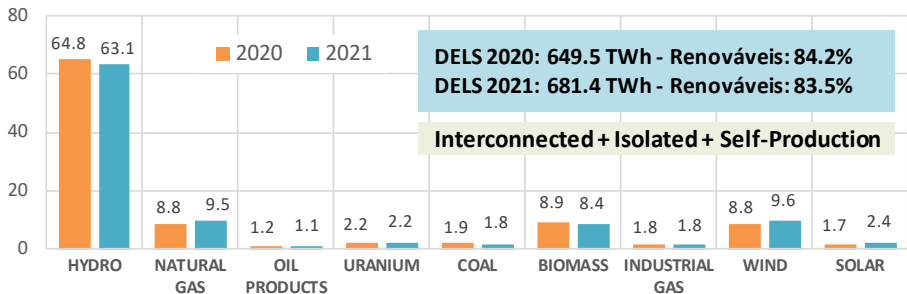
287.6 million toe - 48.6% renewables



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 FEBRUARY 2021

■ *Oil production recoils*

Oil production fell 8.5% in February 2021, compared to the same month in 2020, and accumulated a decrease of 9.1% in the year. The natural gas production decreased 2.1% in February and accumulated a decrease of 0.5% in the year.

■ *Mining and metallurgy in high*

Steel production grew 7.5% over February 2020, and accumulates an increase of 9.1% in the year. Iron ore exports grew 13.6% in the month, accumulating an increase of 11.7% in the year. Pellet exports continue to improve, with increases of 39% in the month and 3% in the accumulated result for the year.

■ *Hydraulic supply downward*

The hydraulic energy supply fell 5% over the same month in 2020, being -7% in the year's accumulated. Itaipu's supply is -5.2% in the year's accumulated.

■ *Oil derivatives increase*

Apparent consumption of oil products decreased 2.1% over February 2020 (excluding ethanol and biodiesel), and accumulated a decrease of 0.5% in the year. Diesel consumption (including biodiesel) increased by 0.6% (0.6% in the year) and gasoline C decreased by 7.1% (-3.4% in the year). Automotive ethanol consumption dropped 4.6% in the month and 5.9% in the year. The total demand for natural gas accumulates a 5.1% increase in the year, with an expansion of 14.2% in electricity generation.

The Otto's cycle (gasoline, ethanol and natural gas) light vehicles energy consumption accumulates -6.1% 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 1.3% over February 2020 and accumulates an increase of 2.2% in the year. Still in the accumulated result for the year, residential consumption increased 4.5%, industrial consumption grew 6.3% and commercial consumption decreased 7.2% (-10.6% in the whole year of 2020).

■ *Biodiesel production rises*

Biodiesel production grew 8.6% over the same month in 2020, but accumulated 8% in the year. The annual indicator has been over 9% in the past four years.

Pulp production was estimated to increase by 2% in the year's accumulated (+43% from 2013 to 2020). Cement consumption accumulates 15.4% in 2021 (10% in the 12 months of 2020).

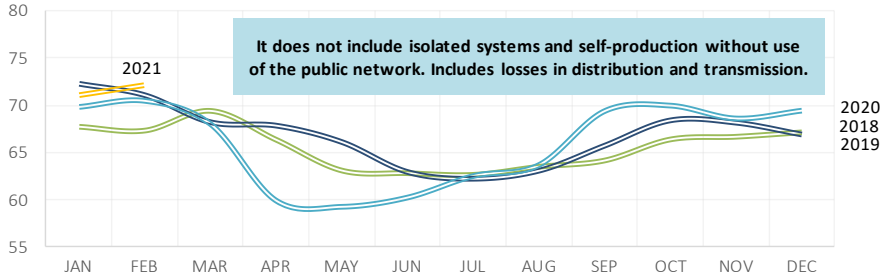
■ *Electricity tariffs rise*

The national average tariff for residential electricity accumulates 6.6% high in the year (-3.1% in 2020, 8.0% in 2019 and 12.6% in 2018). Commercial tariff accumulates 10.4% high (-1.6% in 2020, 7.4% in 2019 and 12.4% in 2018) and industrial, 14.2% high (-0.3% in 2020, 5.7% in 2019 and 13.4% in 2018).

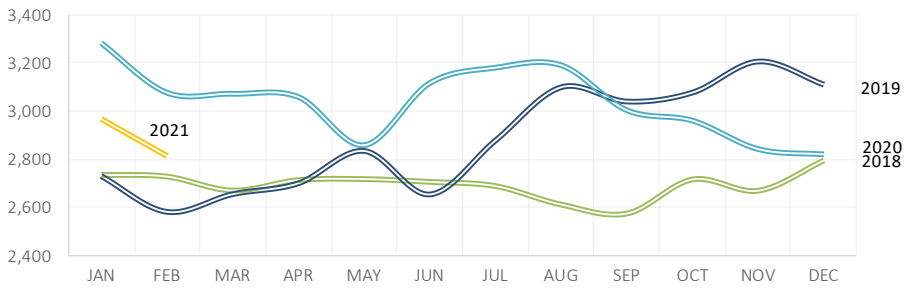
SPECIFICATION	FEBRUARY						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2021	2020	%21/20	2021	2020	%21/20	%
OIL							
PRODUCTION - with Shale Oil and NGL(10 ³ b/d)	2,816	3,078	-8.5	2,896	3,186	-9.1	-
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	49	65	-24.3	59	65	-9.7	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10 ³ b/day)	2,391	2,441	-2.1	2,399	2,410	-0.5	100.0
hereof: DIESEL with biodiesel - (10 ³ b/day)	1,043	1,037	0.6	998	992	0.6	39.5
hereof: GASOLINE C (10 ³ b/day)	621	669	-7.1	633	655	-3.4	21.1
CONSUMER PRICE - DIESEL (R\$/l)	4.20	3.71	13.1	3.95	3.75	5.2	-
CONSUMER PRICE - GASOLINE C (R\$/l)	5.44	4.55	19.6	5.03	4.56	10.2	-
CONSUMER PRICE - LPG (R\$/13 kg)	84.8	69.9	21.3	80.8	69.8	15.8	-
NATURAL GAS							
PRODUCTION (106 m ³ /day)	131.1	128.9	1.7	133.9	134.1	-0.2	-
IMPORTS (106 m ³ /day)	37.0	25.0	47.8	39.2	28.7	36.5	-
NON-UTILIZED AND REINJECTION (106 m ³ /day)	58.3	53.4	9.3	59.6	54.8	8.7	-
AVAILABILITY FOR CONSUMPTION (106 m ³ /day)	109.8	100.6	9.1	113.5	108.0	5.1	100.0
INDUSTRIAL CONSUMPTION (106 m ³ /day)	37.9	37.2	2.0	38.0	36.7	3.4	33.5
POWER GENERATION CONS. (106 m ³ /day)	31.6	25.6	23.1	38.2	33.4	14.2	33.6
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) - consumption range of 20,000 m ³ /day	13.0	14.7	-11.1	12.6	15.0	-15.9	-
MOTOR PRICE SP (US\$/MMBtu)	16.7	18.7	-10.8	14.7	19.2	-23.4	-
RESIDENTIAL PRICE SP (US\$/MMBtu)	36.1	41.0	-11.9	32.3	41.9	-22.9	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	72,107	70,399	2.4	71,615	70,079	2.2	100.0
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	41,650	40,492	2.9	41,543	40,294	3.1	58.0
SOUTH POWER LOAD (MWavg)	13,109	12,953	1.2	12,989	12,885	0.8	18.1
NORTHEAST POWER LOAD (MWavg)	11,631	11,339	2.6	11,437	11,354	0.7	16.0
NORTH POWER LOAD (MWavg)	5,717	5,615	1.8	5,647	5,547	1.8	7.9
TOTAL CONSUMPTION (TWh) (**)	41.2	40.7	1.3	83.7	81.9	2.2	100.0
RESIDENTIAL	12.8	12.4	3.6	26.4	25.3	4.5	31.6
INDUSTRIAL	14.4	13.7	4.5	29.0	27.2	6.3	34.6
COMMERCIAL	7.4	8.0	-7.3	14.9	16.1	-7.2	17.8
OTHER SECTORS	6.6	6.6	0.5	13.4	13.3	0.5	16.0
PLANTS ENTRY INTO OPERATING (MW)	160	384	-58.4	304	477	-36.3	-
RESIDENTIAL PRICE (R\$/MWh)	821	762	7.8	818	767	6.6	-
COMMERCIAL PRICE (R\$/MWh)	752	676	11.2	750	679	10.4	-
INDUSTRIAL PRICE (R\$/MWh)	744	636	17.1	739	647	14.2	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10 ³ b/d)	114	105	8.6	108	100	8.0	-
MOTOR ETHANOL CONSUMPTION (10 ³ b/d)	539	565	-4.6	529	562	-5.9	-
ETHANOL EXPORTS (10 ³ b/d)	35	33	4.6	37	24	51.1	-
HYDRATED ETHANOL PRICE (R\$/l)	3.79	3.25	16.8	3.49	3.24	7.8	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,877	1,437	30.6	2,015	1,907	5.7	-
IMPORT PRICE (US\$ FOB/t)	80.4	98.6	-18.4	81.2	96.6	-16.0	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,240	948	30.8	2,616	2,106	24.2	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10 ³ t/day)	102	94	7.5	99	91	9.1	-
ALUMINIUM PRODUCTION (10 ³ t/day)	2.0	1.9	3.6	2.0	1.9	0.9	-
IRON ORE EXPORTS (10 ³ t/day)	819	720	13.6	862	772	11.7	-
PELLETS EXPORTS (10 ³ t/day)	38	28	39.0	35	34	3.0	-
PAPER PRODUCTION (10 ³ t/day)	29.6	28.7	3.3	29.0	28.3	2.5	-
PULP PRODUCTION (10 ³ t/day)	57.5	55.5	3.6	55.8	54.7	2.0	-
SUGAR PRODUCTION (10 ³ t/day)	21	12	79.9	17	14	23.0	-
SUGAR EXPORTS (10 ³ t/day)	65	44	46.6	65	48	34.7	-

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

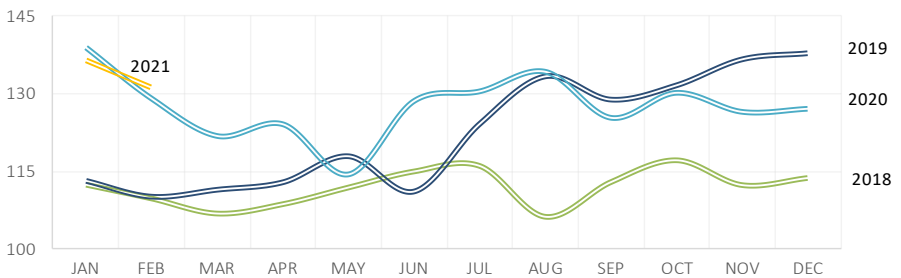
NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)



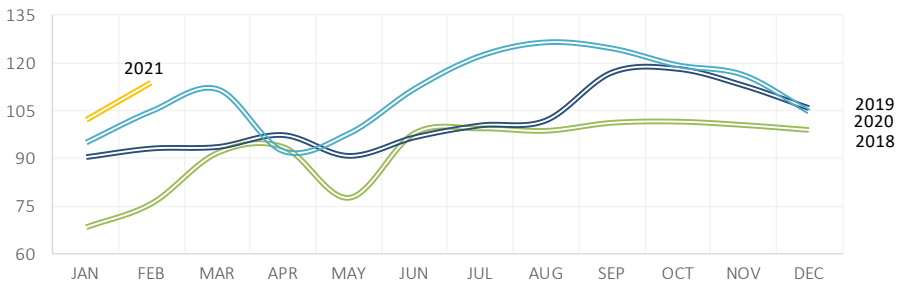
OIL PRODUCTION (10³ bbl/d)



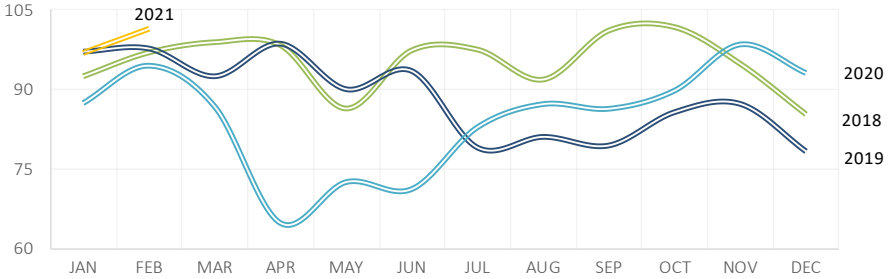
NATURAL GAS PRODUCTION (million m³/d)



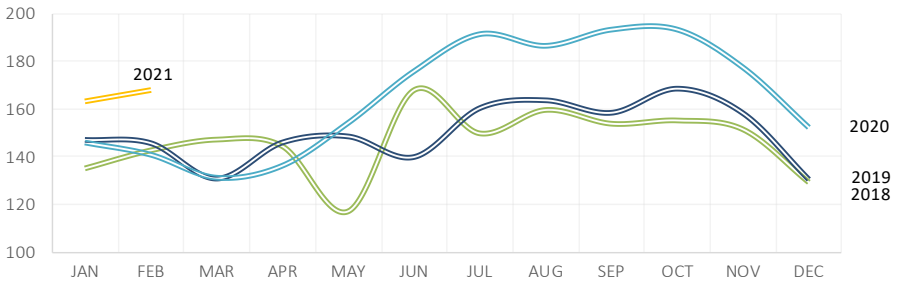
BIODIESEL PRODUCTION (10³ bbl/d)



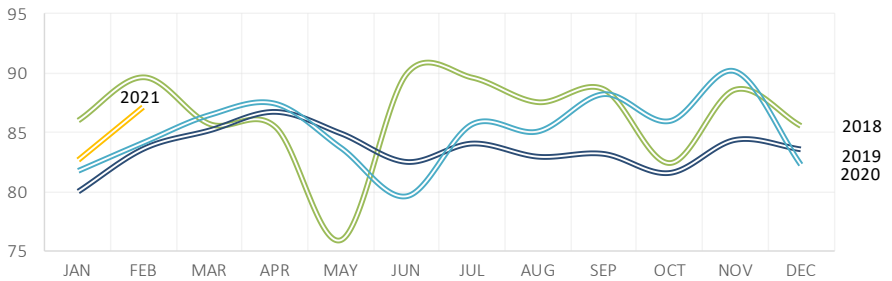
STEEL PRODUCTION (10³ t/d)



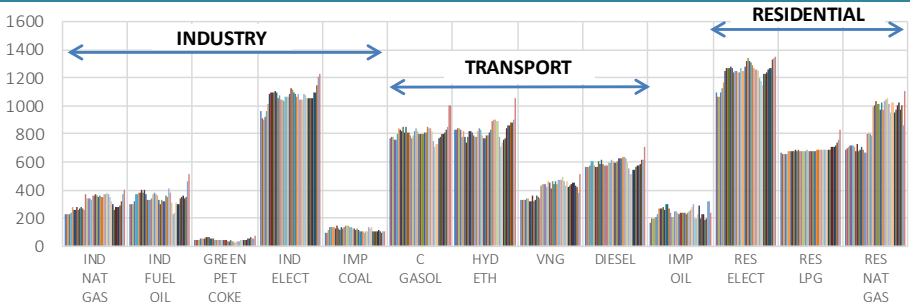
CEMENT SALES (10³ t/d)



PAPER AND PULP PRODUCTION (10³ t/d)



CONSUMER PRICES - Jan 2018 to Feb 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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