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

AUGUST
2021

DOMESTIC ENERGY SUPPLY

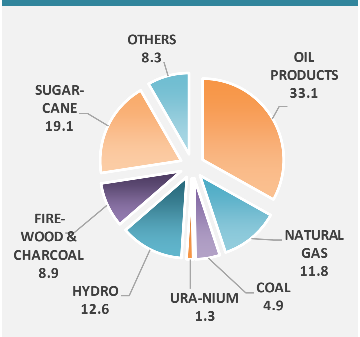
With the information available until October 27, it is estimated that fossil fuels will expand by more than 10% in 2021, because two main reasons: recovery of setbacks that occurred in 2020 due to the COVID pandemic (transport and industry) and greater themal electricity generation due to the drought that worsened in 2021.

Renewable sources, on the other hand, are expected to decline 4%, despite increases above 20% in wind and 60% in solar. The greater weight of hydraulics, with a setback close to 10%, and bioenergy, with a setback close to 4%, affect the total indicator. Bioenergy has a strong decline in the sugar-alcohol sector and moderate in agriculture and cattle raising.

Thus, the Domestic Energy Supply – DES[1] is expected to grow 4.5% in 2021, with a expected share of renewables of about 44.4% (2020: 48.4%).

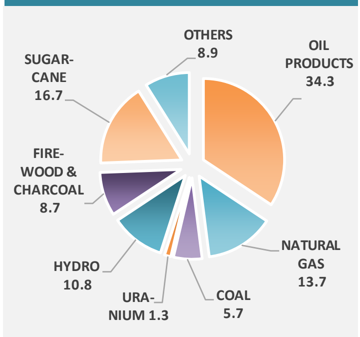
INCREASE IN TOTAL ENERGY DEMAND OF 2021 IS ESTIMATED AT 4.5%

DES 2020 (%)



287.6 million toe - 48.4% renewables

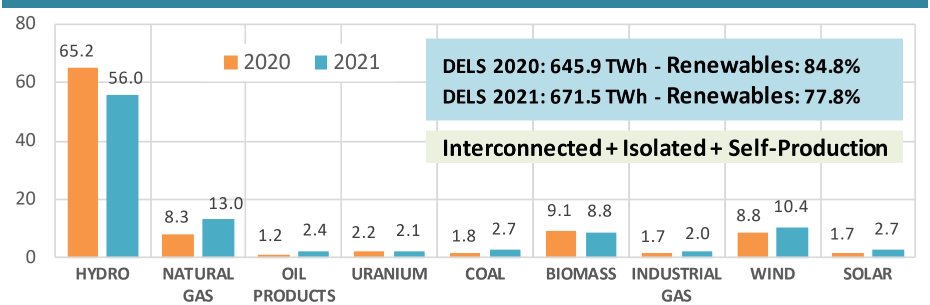
DES 2021 (%)



300.7 million toe - 44.4% renewables

For the Domestic Electricity Supply (DELS)[2] of 2021 an increase of 4% is expected, with non-renewables growing above 50%. The share of renewables should fall by 7 percentage points.

DOMESTIC ELECTRICITY SUPPLY, BY SOURCE (%)



HIGHLIGHTS IN AUGUST 2021

Oil production falling down

Oil production decreased 3.7% in August 2021, compared to the same month in 2020, accumulating a decrease of 3.3% in the year (-3.6% until June). Gas production grew 1.9% in August, and accumulated an increase of 5.0% in the year (-0.5% until February).

Mining and metallurgy in high

Steel production grew 16.4% over August 2020, accumulating an increase of 22.7% in the year (9.1% until February). Iron ore exports grew 8.4% in the month and 10.9% in the year. Pellets exports show an increase of 20.6% in the year accumulated (12.8% until July).

Hydraulic supply downward

Hydraulic energy supply shows a recoil of 7.7% in the accumulated result for the year (-10% is estimated for the whole year). Itaipu's supply is -31.1% in the year accumulated.

Oil derivatives in recovery

Apparent consumption of oil products grew 14.1% in August (excluding ethanol and biodiesel), and has already accumulated an increase of 10% in the year (-0.5% until February). Diesel consumption (biodiesel included) rose 10.2% in the month (10.1% in the year), and gasoline C consumption rose 16.8% in the month (11.0% in the year). Automotive ethanol consumption dropped 5.4% in the month, but accumulates a 3.1% increase in the year. The total gas demand accumulates an increase of 26.7% in the year, having in the electricity generation an expansion of 196% in the month and 90% in the year.

The Otto's cycle (gasoline, ethanol and natural gas) light vehicles energy consumption has already increased by 7.3% in the year (in 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).

High in electricity slows down

Electricity consumption, without self-producers, grew 3.8% over August 2020, and accumulates an increase of 7.1% in the year (7.5% until July). Still in the year, residential consumption grew 3.6%, industrial consumption grew 12.9% and commercial consumption showed an increase of 5.2% (-10.6% in the entire year of 2020).

Biodiesel production recoils

Biodiesel production fell by 8.2% over the same month in 2020, but accumulated a 6.1% increase in the year. The annual rate has been over 9% for the past four years.

Pulp production is estimated to increase by 7.9% in the year (+43% from 2013 to 2020). Cement consumption accumulates an increase of 13% in the year (10% in the twelve months of 2020).

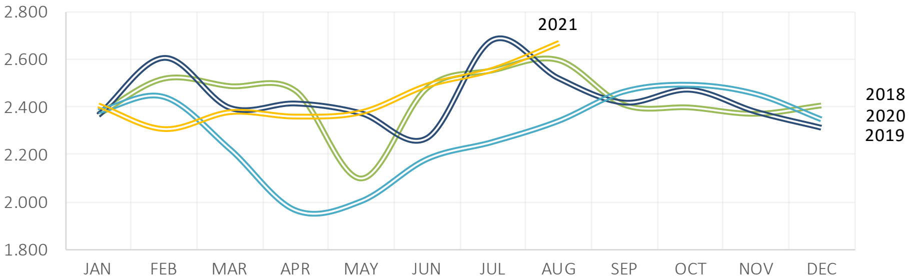
Electricity tariffs in high

The national average tariff for residential electricity accumulates 11.4% high in the year (-3.1% in 2020, 8% in 2019 and 12.6% in 2018). Commercial tariff accumulates 12.3% high (-1.6% in 2020, 7.4% in 2019 and 12.4% in 2018) and industrial, 11.3% high (-0.3% in 2020, 5.7% in 2019 and 13.4% in 2018).

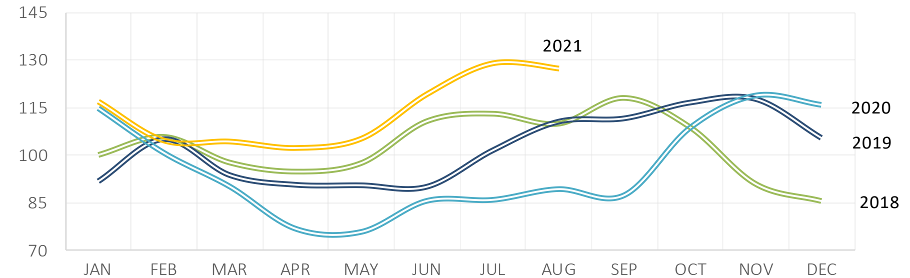
SPECIFICATION	AUGUST						
	IN THE MONTH			ACCUMULATED IN THE YEAR			
	2021	2020	%21/20	2021	2020	%21/20	%
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	3,072	3,191	-3.7	3,002	3,106	-3.3	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	84	41	103.6	64	56	14.6	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,670	2,340	14.1	2,444	2,222	10.0	100.0
hereof: DIESEL with biodiesel - (10^3 b/day)	1,211	1,099	10.2	1,111	1,008	10.1	43.2
hereof: GASOLINE C (10^3 b/day)	695	595	16.8	640	576	11.0	20.9
CONSUMER PRICE - DIESEL (R$/l)	4.67	3.36	39.1	4.35	3.38	28.4	-
CONSUMER PRICE - GASOLINE C (R$/l)	5.93	4.24	40.0	5.44	4.23	28.7	-
CONSUMER PRICE - LPG (R$/13 kg)	93.5	70.0	33.6	85.4	69.8	22.3	-
NATURAL GAS							
PRODUCTION (106 m3/day)	136.6	134.1	1.9	133.9	127.6	5.0	-
IMPORTS (106 m^3/day)	61.5	18.7	229.9	44.0	20.0	119.6	-
NON-UTILIZED AND REINJECTION (106 m^3/day)	70.9	63.6	11.4	64.2	57.9	11.0	-
AVAILABILITY FOR CONSUMPTION (106 m^3/day)	127.3	89.2	42.7	113.7	89.7	26.7	100.0
INDUSTRIAL CONSUMPTION (106 m^3/day)	42.5	38.4	10.7	40.7	34.8	17.1	35.8
POWER GENERATION CONS. (106 m^3/day)	51.6	17.5	195.9	40.2	21.2	89.9	35.4
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	15.9	8.4	88.6	13.3	11.9	11.2	-
MOTOR PRICE SP (US$/MMBtu)	17.0	13.9	22.9	14.6	16.0	-8.4	-
RESIDENTIAL PRICE SP (US$/MMBtu)	40.1	31.4	27.5	34.7	35.2	-1.4	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	66,702	63,620	4.8	68,380	64,171	6.6	100.0
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	37,823	36,688	3.1	39,260	36,976	6.2	57.4
SOUTH POWER LOAD (MWavg)	11,541	10,890	6.0	12,111	11,373	6.5	17.7
NORTHEAST POWER LOAD (MWavg)	11,048	10,217	8.1	11,093	10,358	7.1	16.2
NORTH POWER LOAD (MWavg)	6,290	5,825	8.0	5,917	5,463	8.3	8.7
TOTAL CONSUMPTION (TWh) (**)	40.6	39.1	3.8	330.2	308.4	7.1	100.0
RESIDENTIAL	11.8	11.9	-0.6	100.3	96.8	3.6	30.4
INDUSTRIAL	15.4	14.5	5.8	120.4	106.6	12.9	36.5
COMMERCIAL	6.8	6.3	7.9	56.7	53.9	5.2	17.2
OTHER SECTORS	6.7	6.5	3.2	52.9	51.1	3.4	16.0
PLANTS ENTRY INTO OPERATING (MW)	688	173	296.8	3,020	3,319	-9.0	-
RESIDENTIAL PRICE (R$/MWh)	907	743	22.0	823	739	11.4	-
COMMERCIAL PRICE (R$/MWh)	849	677	25.5	753	670	12.3	-
INDUSTRIAL PRICE (R$/MWh)	805	639	26.0	717	644	11.3	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	116	126	-8.2	115	108	6.1	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	453	479	-5.4	480	466	3.1	-
ETHANOL EXPORTS (10^3 b/d)	17	68	-74.7	33	38	-11.1	-
HYDRATED ETHANOL PRICE (R$/l)	4.48	2.77	61.7	4.00	2.89	38.1	-
COAL							
ELECTRICITY GENERATION (MWavg)	2,433	690	252.6	1,781	978	82.1	-
IMPORT PRICE (US$ FOB/t)	148.2	82.9	78.7	100.9	94.3	7.1	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,489	873	70.6	9,039	8,610	5.0	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	102	87	16.4	99	81	22.7	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.0	2.0	1.1	2.1	1.8	16.2	-
IRON ORE EXPORTS (10^3 t/day)	1,051	969	8.4	909	820	10.9	-
PELLETS EXPORTS (10^3 t/day)	71	40	77.9	51	42	20.6	-
PAPER PRODUCTION (10^3 t/day)	29.6	27.4	8.0	29.2	27.5	6.4	-
PULP PRODUCTION (10^3 t/day)	60.1	57.7	4.0	61.3	56.8	7.9	-
SUGAR PRODUCTION (10^3 t/daY)	190	203	-6.1	105	111	-5.3	-
SUGAR EXPORTS (10^3 t/day)	82	105	-22.2	73	76	-3.4	-

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

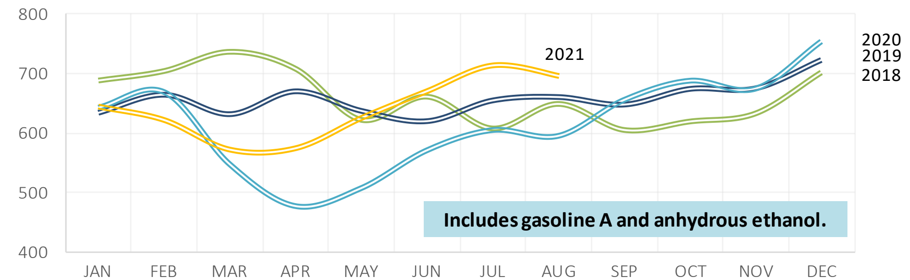
OIL PRODUCTS TOTAL CONSUMPTION (10^3 bbl/d)



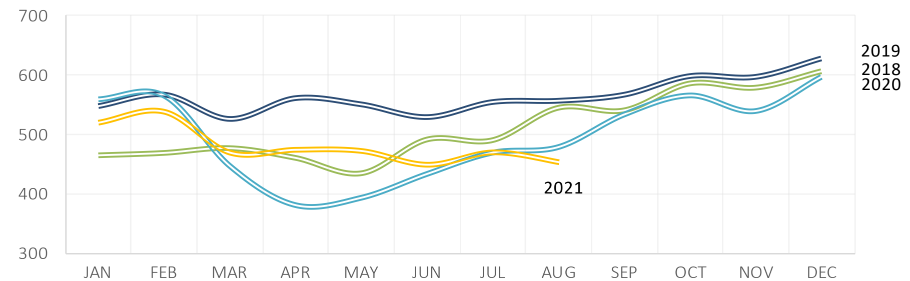
NATURAL GAS TOTAL DEMAND (million m^3/d)



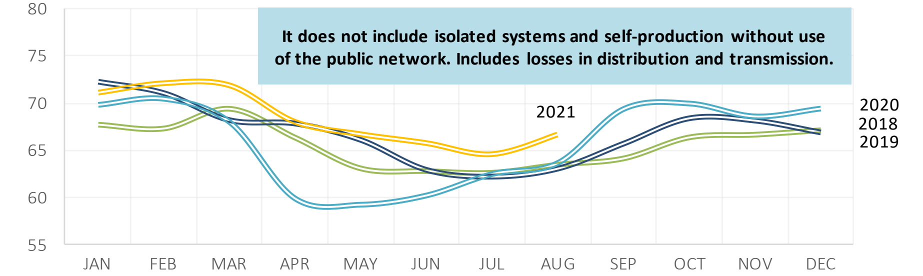
C GASOLINE CONSUMPTION (10^3 bbl/d)



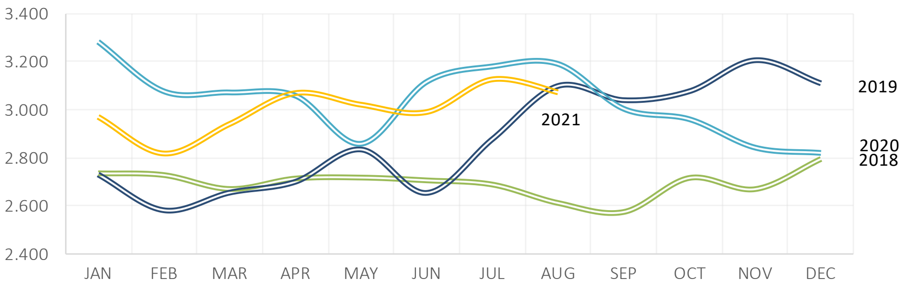
MOTOR ETHANOL TOTAL CONSUMPTION (10^3 bbl/d)



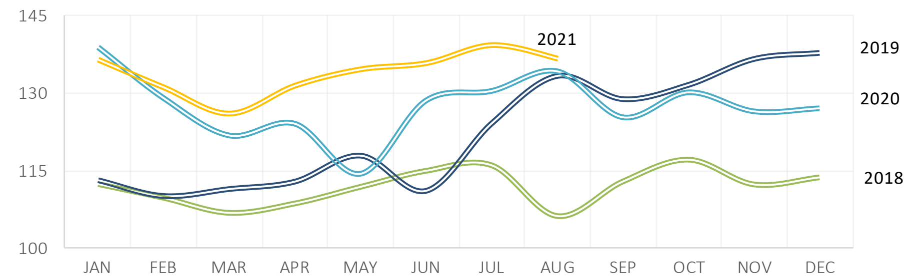
NATIONAL INTERCONNECTED SYSTEM POWER LOAD (GWavg)



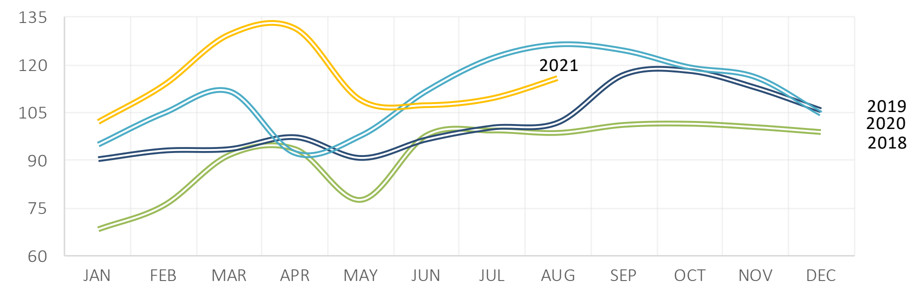
OIL PRODUCTION (10^3 bbl/d)



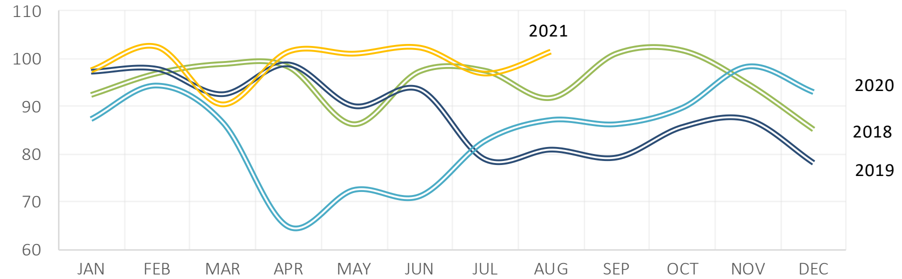
NATURAL GAS PRODUCTION (million m^3/d)



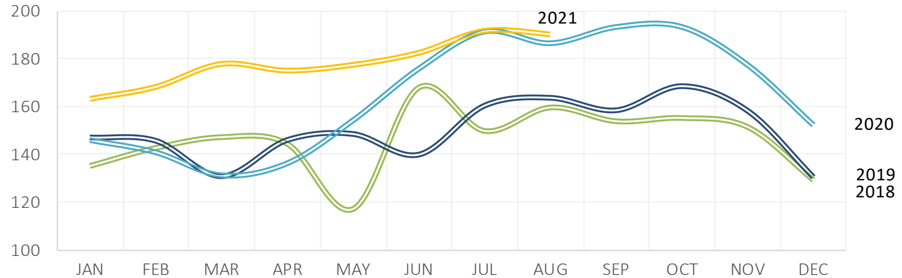
BIODIESEL PRODUCTION (10^3 bbl/d)



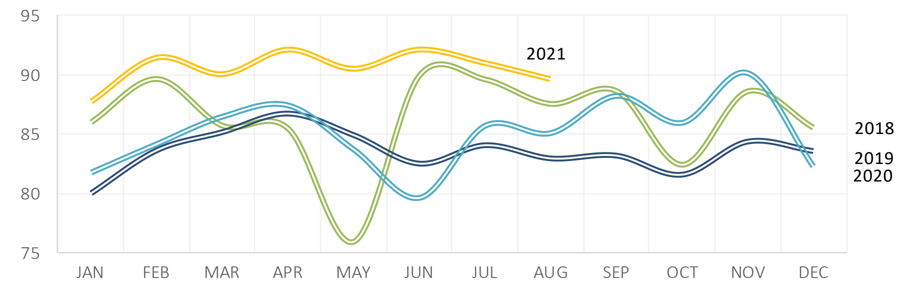
STEEL PRODUCTION (10^3 t/d)



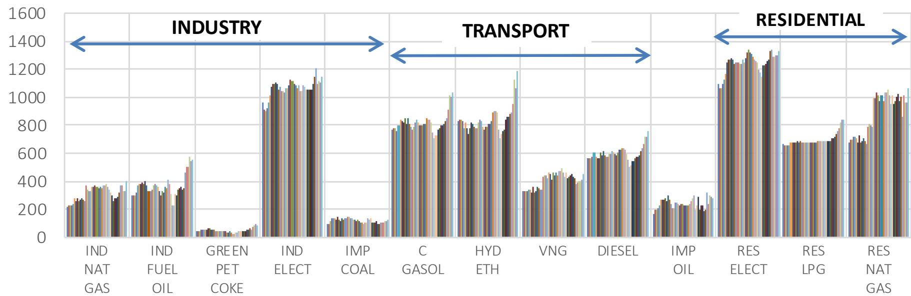
CEMENT SALES (10^3 t/d)



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



CONSUMER PRICES - Jan 2018 to Aug 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

PÁTRIA AMADA
BRASIL
GOVERNO FEDERAL

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