

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 Remarks

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 is equal to domestic production (+) import (-) unused (-) reinjection.

Apparent consumption of oil derivatives is equal distributors' sales (+) Petrobras' own consumption (including refinery gas) (+) Petrobras' direct sales. The monthly data published in the press and on the ANP website do not consider the own consumption and direct sales of Petrobras, whose volume is about 20% of the total oil products consumption.

(*) Domestic Energy Supply (DES), or Total Energy Demand, includes final energy consumption in the residential sector and in the other economic sectors, includes losses in transmission and distribution, and losses on power transformation. 2015 data reflect the 2016 cycle of the National Energy Balance, completed in April by the Energy Research Company (EPE), with the support of MME and its institutions.

Monthly Energy Bulletin - Brazil

Reference Month: February 2016

Domestic Energy Supply

In the bulletin of December 2015 it was estimated that the Domestic Energy Supply - DES (*) and the Domestic Electricity Supply - DELS would retreat 1.6% and 1.8%, respectively.

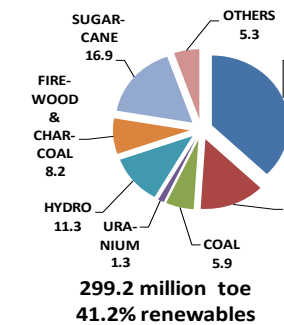
The Energy Research Company - EPE, with the support of the Ministry of Mines and Energy - MME and entities of the energy sector has just concluded the final data consolidation of National Energy Balance 2015, showing a reduction of both DES (2%) and DELS (1.4%). These indicators diverged 0.4% of numbers estimated in the monthly bulletin of December 2015.

Although with some recovery, accumulated indicators up to February 2016 also show sharp declines in overall energy demand. DES, was estimated in -5.5%, up February 2016.

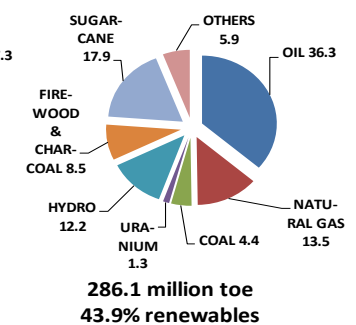
Total 2016 energy demand should recede between 4 and 5%

If the recessionary forces of the economy remain, it is possible that the 2016 DES will retreat between 4 and 5%. During the elaboration of this bulletin, the estimated figure was -4.4%.

DES 2015 (%)

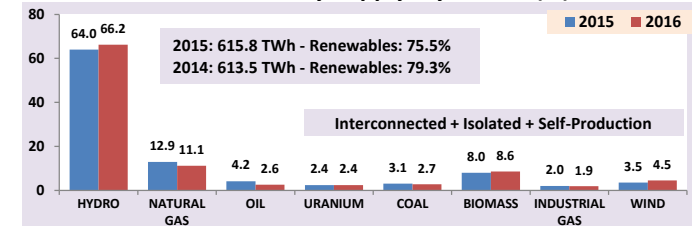


DES 2016 (%)



The 2016 DELS was estimated at 613.5 TWh, showing a decrease of 0.4% over 2015. Renewable sources may increase their share, as a result of increases in hydro, wind and biomass generations.

Domestic Electricity Supply, by Source (%)



Highlights of February 2016

Oil production in low

Up to February 2016, oil production reduced 3.5% over the same period of 2015. In contrast, the natural gas production increased 3.3% in the same period.

Steel production decreases

Steel production fell 8.7% in February, accumulating a recoil of 13.6 p.a. In the year to date. Iron ore exports rose 20.1% and pellets exports fell 23.1%.

Hydraulic supply in on the up

The hydraulic power supply rose 9.7% in February, with Itaipu having a high of 28% (Paraguayan part). In the year, the national hydro generation increased 3.8%.

Oil products consumption in recovery

The apparent consumption of oil products increased 7.2% in February (fell from 17.2% in January), but in the year still accumulates -6.1%. The diesel increased 5.2% and C gasoline increased 11.4% in the month. In the year, the diesel and C gasoline indicators are still negative, -6.1% and -2.6%, respectively. The total demand for natural gas is -11.8% in the year (-10.8% in January).

The consumption in the Otto cycle transport (gasoline, ethanol and natural gas) had good recovery in February, but still shows decrease of 3.3% in the year (-0.1% in the whole year of 2015 and +6.2% in 2014).

Electricity consumption with strong fall

Electricity consumption (excluding captive self-producer) recoils 4.9% in February 2016 (-6% in January) and, in the year, it accumulates -5.5%. The industry is the biggest reduction in February, 6.5%. Residential consumption accumulated decrease of 4.4% in the year, and commercial consumption, 4.2%.

Biodiesel production with strong decrease

Biodiesel production declined 1.2% in February (-15.1% in January). In 2015, the rate was 15% positive.

The pulp production continues with high performance, showing an increase of 7.1% in February (9.2% in January). Throughout the year 2015, production showed significant increase of 8.5%. In 2014, the increase was even higher, 9.2%.

Electricity rates

In February 2016, the national average residential electricity tariff rose 33.6% over the same month of 2015. The commercial tariff grew 35.8%, and the industrial, 39%.

Basic data of 2015 and 2016

SPECIFICATION	FEBRUARY						
	IN THE MONTH		ACCUMULATED IN THE YEAR				
	2016	2015	% 16/15	2016	2015	% 16/15	%2015
OIL							
PRODUCTION - with Shale Oil and NGL(10 ³ b/d)	2,501	2,533	-1.3	2,465	2,554	-3.5	-
IMPORTS AVERAGE PRICE (US\$/bbl FOB)	42	72	-42.6	43	80	-45.6	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10 ³ b/day)	2,684	2,504	7.2	2,423	2,579	-6.1	100.0
hereof: DIESEL with biodiesel - (10 ³ b/day)	1,017	966	5.2	929	989	-6.1	36.4
hereof: GASOLINE C (10 ³ b/day)	778	699	11.4	723	743	-2.6	23.9
CONSUMER PRICE - DIESEL (R\$/l)	3.02	2.79	8.2	3.01	2.70	11.5	-
CONSUMER PRICE - GASOLINE C (R\$/l)	3.71	3.30	12.4	3.69	3.17	16.6	-
CONSUMER PRICE - LPG (R\$/13 kg)	53.9	44.9	20.2	53.9	44.8	20.5	-
NATURAL GAS							
PRODUCTION (10 ⁶ m ³ /day)	101.2	95.4	6.1	99.1	96.0	3.3	-
IMPORTS (10 ⁶ m ³ /day)	42.0	53.9	-22.0	44.0	52.2	-15.8	-
NON-UTILIZED AND REINJECTION (10 ⁶ m ³ /day)	34.1	24.0	42.0	33.9	24.4	38.9	-
AVAILABILITY FOR CONSUMPTION (10 ⁶ m ³ /day)	109.2	125.2	-12.8	109.2	123.8	-11.8	100.0
INDUSTRIAL CONSUMPTION (10 ⁶ m ³ /day)	40.3	45.0	-10.5	39.9	44.2	-9.7	36.6
POWER GENERATION CONS. (10 ⁶ m ³ /day)	36.4	50.6	-28.0	38.0	49.9	-23.7	34.8
INDUSTRIAL PRICE SP(*) (US\$/MMBtu) - consumption range of 20,000 m ³ /day	11.3	14.6	-22.6	11.2	15.1	-25.9	-
MOTOR PRICE SP (US\$/MMBtu)	13.1	16.8	-22.4	13.0	17.3	-24.8	-
RESIDENTIAL PRICE SP (US\$/MMBtu)	32.1	42.8	-25.0	31.8	44.3	-28.2	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	68,747	67,899	1.2	67,177	68,481	-1.9	100.0
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	40,674	39,220	3.7	39,562	40,616	-2.6	58.9
SOUTH POWER LOAD (MWavg)	12,395	12,287	0.9	12,128	12,269	-1.1	18.1
NORTHEAST POWER LOAD (MWavg)	10,438	10,564	-1.2	10,258	10,590	-3.1	15.3
NORTH POWER LOAD (MWavg)	5,239	5,010	4.6	5,229	5,006	4.5	7.8
TOTAL CONSUMPTION (TWh) (**)	38.5	40.5	-4.9	37.6	41.1	-5.5	100.0
RESIDENTIAL	11.4	11.7	-3.4	23.2	24.2	-4.4	30.2
INDUSTRIAL	13.4	14.3	-6.5	25.9	28.1	-7.8	33.8
COMMERCIAL	7.7	8.1	-4.8	15.5	16.2	-4.2	20.2
OTHER SECTORS	6.0	6.3	-4.5	12.1	12.6	-3.8	15.8
PLANTS ENTRY INTO OPERATING (MW)	174	656	-73.5	1,153	1,085	6.2	-
RESIDENTIAL PRICE (R\$/MWh)	670	501	33.6	672	491	37.0	-
COMMERCIAL PRICE (R\$/MWh)	601	443	35.8	600	430	39.5	-
INDUSTRIAL PRICE (R\$/MWh)	565	407	39.0	568	399	42.4	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10 ³ b/d)	67	68	-1.2	61	66	-8.3	-
MOTOR ETHANOL CONSUMPTION (10 ³ b/d)	452	460	-1.7	464	464	-0.1	-
ETHANOL EXPORTS (10 ³ b/d)	66	16	315.3	44	24	85.0	-
HYDRATED ETHANOL PRICE (R\$/l)	2.81	2.22	26.3	2.76	2.14	29.0	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,836	2,119	-13.3	1,774	2,230	-20.4	-
IMPORT PRICE (US\$/t FOB/t)	74.4	99.8	-25.4	74.9	97.7	-23.3	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,389	1,146	21.2	2,879	2,596	10.9	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10 ³ t/day)	87	95	-8.7	83	96	-13.6	-
ALUMINIUM PRODUCTION (10 ³ t/day)	2.1	2.3	-6.9	2.1	2.3	-7.7	-
IRON ORE EXPORTS (10 ³ t/day)	980	762	28.7	826	688	20.1	-
PELLETS EXPORTS (10 ³ t/day)	86	141	-38.7	104	135	-23.1	-
PAPER PRODUCTION (10 ³ t/day)	29.0	29.0	0.1	28.2	28.5	-1.2	-
PULP PRODUCTION (10 ³ t/day)	49.7	46.4	7.1	50.5	46.9	7.6	-
SUGAR PRODUCTION (10 ³ t/day)	10	17	-42.0	13	19	-32.2	-
SUGAR EXPORTS (10 ³ t/day)	93	37	149.9	70	58	21.2	-

(*) SP is the acronym of the state of São Paulo.

(**) The traditional self-producers (consumers that do not use public grid) is not included.

