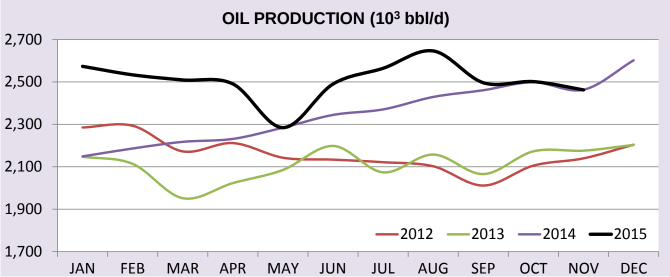

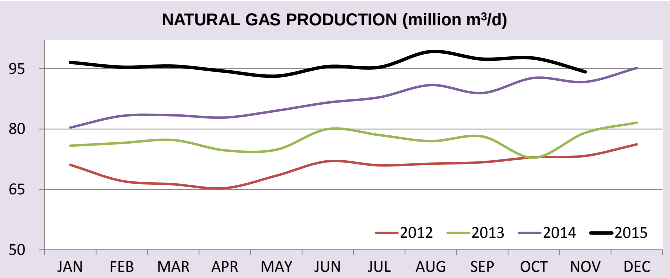

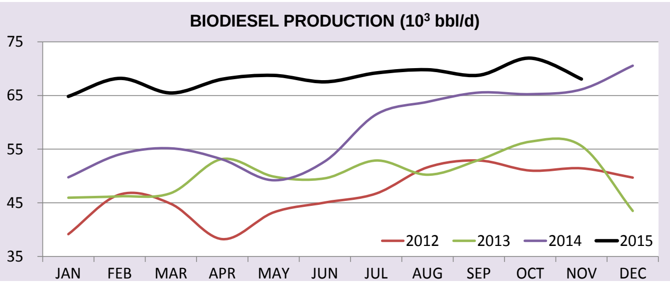

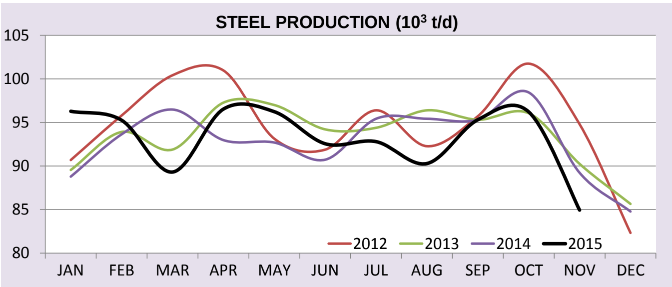

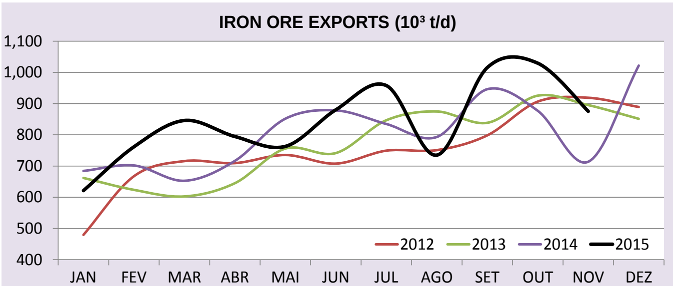

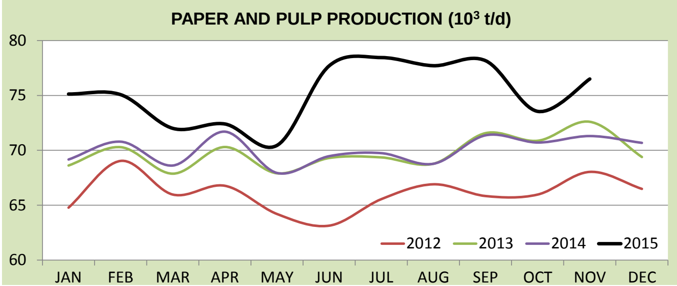

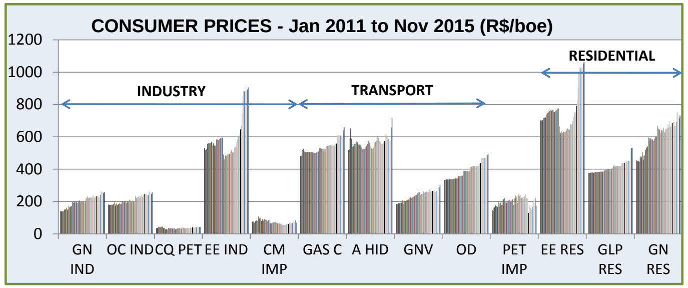

Note: For a better visualization, the minimum scale of the graphs was raised to the level close to the lowest value of the curves.

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.

(**) 2014 data reflect the **2015 cycle** of the **National Energy Balance**, completed in July by the Energy Research Company (EPE), with the support of MME and its institutions.

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Monthly Energy Bulletin - Brazil

Reference Month: November 2015

Domestic Energy Supply

Up to November, economic and energy indicators indicates that **Domestic Energy Supply (DES) (*)** (**), the energy required to move the economy of a country or region, receded by 1.3%.

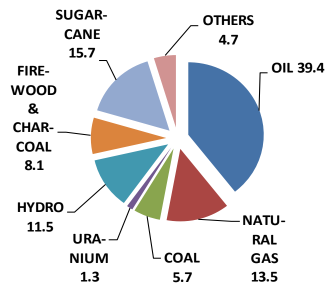
Increases in interest rates, inflation, unemployment and administered prices have been greatly affecting the domestic demand for goods and services, with repercussions in energy demand.

Energy Demand recoil in 2015

For the full year 2015, the DES evolution rate may stand between -1.5 and -2.0%. Despite the good performance of some commodities for export, the poor performance of domestic demand for goods and services affects practically all economy sectors, particularly the industrial sector, that is more energy intensive.

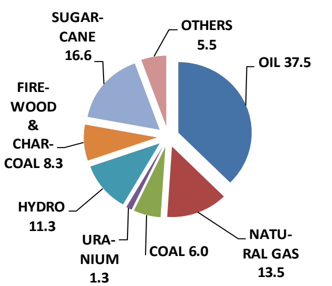
Until this report elaboration, the estimated DES's rate for 2015 was -1.7% (-1.5% in the last bulletin). Renewable sources must maintain a near 40% share in the DES of 2015.

DES 2014 (%)



305.6 million toe
39.4% renewables

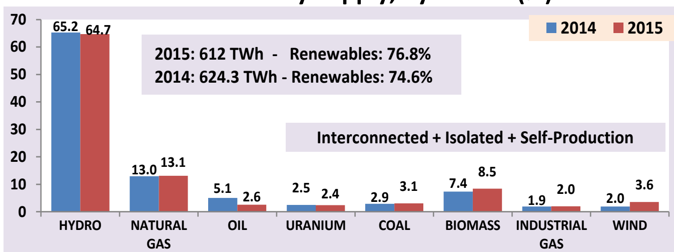
DES 2015 (%)



300.5 million toe
41.0% renewables

The **Domestic Electricity Supply** was estimated at 612 TWh for 2015(**), with a decrease of 1.8% over 2014. The wind generation should overcome 22 TWh, with an increase of over 80%.

Domestic Electricity Supply, by Source (%)



MME
MINISTRY OF MINES AND ENERGY - MME
SECRETARIAT OF ENERGY PLANNING AND DEVELOPMENT
OFFICE OF STRATEGIC ENERGY STUDIES

Highlights of November 2015

Oil production still accumulates significant rise

Referring to November 2015 production, oil stayed stable and natural gas increased by 2.7%. Year to date, the rates are 7.5% and 10.6% respectively.

Minerals exports levels maintained

Steel production declined 4.8% in November, accumulating an increase of 0.4% in the year. Iron ore exports rose 22.6% in the month, and 7.2% in the year. Pellets exports recoiled 62% in November, and rose 1.5% in the year.

Mild Hydraulic Recovery

The hydro power supply increased 2.8% in November over the same month of 2014, increasing Itaipu generation by 24%. Up this month, the hydraulic supply recoiled 3.5% (-4.1% until October).

Oil products consumption remains in low

In November, oil products apparent consumption recoiled 7.7% and accumulates -5.8% in the year. C gasoline recoiled 8.1% (-13.2% in October and -12.2% in September) and diesel oil decreased 6.8%. In the year, rates are negative: -7.6% for gasoline and -3.3% for diesel. The increase by 20.0% in light vehicles ethanol consumption offsets the gasoline negative effects.

In the same month, gas consumption decreased by 9.0%, accumulating a -0.8% in the year (0.1% until October). Natural gas sales for electricity generation decreased 11.3% in the month.

The energy consumption of the Otto cycle transport (gasoline, ethanol and natural gas), in gasoline equivalent, accumulates 1.1% in the year, much lower than the expressive rate of 5.9%, recorded in the same period of 2014.

Electricity consumption is falling

Electricity consumption – excluding captive self-production – recoiled by 4.1% in November (-2.4% in October and -3.1 in September), accumulating -1.7% in the year. Industrial consumption, with a negative rate of 8.0% in November, accumulates a reduction of 4.6% in the year. The industrial sector is in large part affected by strong decline in aluminum production, which is energy-intensive. Residential consumption, with a recoil of 2.2%, accumulates -0.7% in the year. The commercial sector recoils 2.4% in the month, but still up positive rate of 0.8% in the year.

Biodiesel production still high

Biodiesel production stood at 68 kbbl/day in November, with a high of 2.9% over the same month of 2014. In the year, it accumulates an increase of 18.0%.

Retreat electricity rates

In the year to date, the national average residential electricity tariff rose 42.9% (43.4% until October), the commercial tariff grew 45.4% (45.5%), and the industrial, 52.3% (53.3%).

Basic data of 2014 and 2015

SPECIFICATION	NOVEMBER – IN THE MONTH			NOVEMBER – ACCUMULATED IN THE YEAR			
	2015	2014	% 15/14	2015	2014	% 15/14	%2015
OIL							
PRODUCTION - with Shale Oil and NGL(10^3 b/d)	2,462	2,463	0.0	2,505	2,331	7.5	-
IMPORTS AVERAGE PRICE (US$/bbl FOB)	52	99	-47.6	62	112	-44.6	-
OIL PRODUCTS							
TOTAL CONSUMPTION (10^3 b/day)	2,606	2,823	-7.7	2,640	2,803	-5.8	**100.0**
hereof: DIESEL with biodiesel - (10^3 b/day)	1,008	1,082	-6.8	1,057	1,093	-3.3	38.0
hereof: GASOLINE C (10^3 b/day)	681	741	-8.1	700	757	-7.6	21.2
CONSUMER PRICE - DIESEL (R$/l)	2.97	2.56	15.6	2.83	2.50	12.9	-
CONSUMER PRICE - GASOLINE C (R$/l)	3.58	3.01	18.8	3.35	2.97	12.6	-
CONSUMER PRICE - LPG (R$/13 kg)	54.2	44.6	21.5	47.8	43.1	10.9	-
NATURAL GAS							
PRODUCTION (10^6 m^3/day)	94.2	91.7	2.7	95.9	86.7	10.6	-
IMPORTS (10^6 m^3/day)	52.0	53.5	-2.9	50.8	52.9	-3.9	-
NON-UTILIZED AND REINJECTION (10^6 m^3/day)	33.2	21.2	57.2	27.8	19.8	40.6	-
AVAILABILITY FOR CONSUMPTION (10^6 m^3/day)	113.0	124.1	-9.0	118.9	119.8	-0.8	**100.0**
INDUSTRIAL CONSUMPTION (10^6 m^3/day)	39.7	44.2	-10.2	42.8	43.2	-0.9	36.0
POWER GENERATION CONS. (10^6 m^3/day)	43.4	48.9	-11.3	46.2	47.1	-1.8	38.9
INDUSTRIAL PRICE SP(*) (US$/MMBtu) - consumption range of 20,000 m^3/day	11.9	15.8	-24.8	13.3	17.3	-23.4	-
MOTOR PRICE SP (US$/MMBtu)	13.9	18.6	-25.4	14.9	19.9	-25.4	-
RESIDENTIAL PRICE SP (US$/MMBtu)	33.8	46.2	-27.0	38.4	50.1	-23.3	-
ELECTRICITY							
NATIONAL INTERCONNECTED SYSTEM	64,945	66,472	-2.3	63,867	65,038	-1.8	**100.0**
SOUTHEAST/MIDWEST POWER LOAD (MWavg)	38,076	39,135	-2.7	37,369	38,728	-3.5	58.5
SOUTH POWER LOAD (MWavg)	10,482	11,661	-10.1	10,871	11,155	-2.5	17.0
NORTHEAST POWER LOAD (MWavg)	10,857	10,488	3.5	10,365	9,918	4.5	16.2
NORTH POWER LOAD (MWavg)	5,530	5,188	6.6	5,260	5,204	1.1	8.2
TOTAL CONSUMPTION (TWh) (**)	39.1	40.8	-4.1	426.4	433.8	-1.7	**100.0**
RESIDENTIAL	11.1	11.4	-2.2	120.2	121.0	-0.7	28.2
INDUSTRIAL	13.9	15.1	-8.0	156.1	163.6	-4.6	36.6
COMMERCIAL	7.8	8.0	-2.4	82.6	81.9	0.8	19.4
OTHER SECTORS	6.3	6.4	-0.7	67.5	67.2	0.4	15.8
PLANTS ENTRY INTO OPERATING (MW)	649	520	24.8	5,134	6,440	-20.3	-
RESIDENTIAL PRICE (R$/MWh)	643	455	41.3	594	416	42.9	-
COMMERCIAL PRICE (R$/MWh)	576	403	43.0	532	366	45.4	-
INDUSTRIAL PRICE (R$/MWh)	549	367	49.5	504	331	52.3	-
ETHANOL AND BIODIESEL							
BIODIESEL PRODUCTION (10^3 b/d)	68	66	2.9	68	58	18.0	-
MOTOR ETHANOL CONSUMPTION (10^3 b/d)	594	424	40.1	508	423	20.0	-
ETHANOL EXPORTS (10^3 b/d)	41	19	111.8	30	24	25.1	-
HYDRATED ETHANOL PRICE (R$/l)	2.58	2.02	27.9	2.19	2.07	5.9	-
COAL							
ELECTRICITY GENERATION (MWavg)	1,928	2,057	-6.2	2,050	1,968	4.2	-
IMPORT PRICE (US$ FOB/t)	75.4	103.7	-27.3	90.0	107.4	-16.2	-
NUCLEAR ENERGY							
ELECTRICITY GENERATION - (GWh)	1,425	1,398	1.9	13,244	13,886	-4.6	-
INDUSTRIAL SECTORS							
STEEL PRODUCTION (10^3 t/day)	85	89	-4.8	93	94	-0.4	-
ALUMINIUM PRODUCTION (10^3 t/day)	2.0	2.3	-11.5	2.1	2.7	-20.8	-
IRON ORE EXPORTS (10^3 t/day)	875	714	22.6	844	787	7.2	-
PELLETS EXPORTS (10^3 t/day)	58	151	-61.6	134	132	1.5	-
PAPER PRODUCTION (10^3 t/day)	28.5	28.7	-0.7	28.4	28.6	-0.6	-
PULP PRODUCTION (10^3 t/day)	48.0	42.6	12.7	46.8	41.4	13.1	-
SUGAR PRODUCTION (10^3 t/daY)	118	86	37.4	97	103	-5.9	-
SUGAR EXPORTS (10^3 t/day)	78	68	15.8	65	66	-1.4	-

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

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