

9

Anexos
Annexes

Anexo I. Capacidade Instalada – Brasil

Annex I. Installed Capacity – Brazil

Tabela I.1 – Capacidade Instalada de Geração Elétrica
Table I.1 – Installed Capacity of Electricity Generation

	HIDRO ¹ / HYDRO			TERMO / THERMO			EÓLICA / WIND			SOLAR ⁴ / SOLAR ⁴			NUCLEAR NUCLEAR	TOTAL / TOTAL		
	SP e/ou PIE ²	APE ³	TOTAL	SP e/ou PIE	APE	TOTAL	SP e/ou PIE	APE	TOTAL	SP e/ou PIE	APE	TOTAL	SP e/ou PIE	SP e/ou PIE	APE	TOTAL
1974	13.224	500	13.724	2.489	1.920	4.409	0	0	0				0	15.713	2.420	18.133
1975	15.815	501	16.316	2.436	2.216	4.652	0	0	0				0	18.251	2.717	20.968
1976	17.343	561	17.904	2.457	2.223	4.680	0	0	0				0	19.800	2.784	22.584
1977	18.835	561	19.396	2.729	2.214	4.943	0	0	0				0	21.564	2.775	24.339
1978	21.104	561	21.665	3.048	2.259	5.307	0	0	0				0	24.152	2.820	26.972
1979	23.667	568	24.235	3.573	2.411	5.984	0	0	0				0	27.240	2.979	30.219
1980	27.081	568	27.649	3.484	2.339	5.823	-	-	-				0	30.565	2.907	33.472
1981	30.596	577	31.173	3.655	2.441	6.096	-	-	-				0	34.251	3.018	37.269
1982	32.542	614	33.156	3.687	2.503	6.190	-	-	-				0	36.229	3.117	39.346
1983	33.556	622	34.178	3.641	2.547	6.188	-	-	-				0	37.197	3.169	40.366
1984	34.301	622	34.923	3.626	2.547	6.173	-	-	-				0	37.927	3.169	41.096
1985	36.453	624	37.077	3.708	2.665	6.373	-	-	-				657	40.818	3.289	44.107
1986	37.162	624	37.786	3.845	2.665	6.510	-	-	-				657	41.664	3.289	44.953
1987	39.693	636	40.329	3.910	2.665	6.575	-	-	-				657	44.260	3.301	47.561
1988	41.583	645	42.228	4.025	2.665	6.690	-	-	-				657	46.265	3.310	49.575
1989	44.172	624	44.796	4.007	2.665	6.672	-	-	-				657	48.836	3.289	52.125
1990	44.934	624	45.558	4.170	2.665	6.835	-	-	-				657	49.761	3.289	53.050
1991	45.992	624	46.616	4.203	2.665	6.868	-	-	-				657	50.852	3.289	54.141
1992	47.085	624	47.709	4.019	2.665	6.684	0	0	0				657	51.761	3.289	55.050
1993	47.967	624	48.591	4.128	2.847	6.975	0	0	0				657	52.752	3.471	56.223
1994	49.297	624	49.921	4.151	2.900	7.051	1	0	1				657	54.106	3.524	57.630
1995	50.680	687	51.367	4.197	2.900	7.097	1	0	1				657	55.535	3.587	59.122
1996	52.432	687	53.119	4.105	2.920	7.025	1	0	1				657	57.195	3.607	60.802
1997	53.987	902	54.889	4.506	2.920	7.426	1	0	1				657	59.151	3.822	62.973
1998	55.857	902	56.759	4.793	2.995	7.788	6	0	6				657	61.313	3.897	65.210
1999	58.085	912	58.997	5.198	3.309	8.507	19	0	19				657	63.959	4.221	68.180
2000	60.095	968	61.063	6.548	4.075	10.623	19	0	19				1.966	68.628	5.043	73.671
2001	61.439	970	62.409	6.751	3.730	10.481	21	0	21				1.966	70.177	4.700	74.877
2002	63.324	1.150	64.474	9.714	4.099	13.813	22	0	22				2.007	75.066	5.249	80.315
2003	66.494	1.204	67.698	11.292	4.838	16.130	22	0	22				2.007	79.815	6.042	85.857
2004	67.659	1.429	69.088	14.405	5.151	19.556	27	2	29				2.007	84.097	6.582	90.679
2005	69.472	1.588	71.060	14.627	5.143	19.770	27	2	29				2.007	86.132	6.733	92.865
2006	72.006	1.672	73.678	13.886	6.486	20.372	235	2	237				2.007	88.136	8.159	96.295
2007	73.620	3.249	76.869	14.206	7.023	21.229	245	2	247				2.007	90.078	10.274	100.352
2008	74.235	3.310	77.545	14.766	8.233	22.999	396	2	398				2.007	91.404	11.545	102.949
2009	74.853	3.757	78.610	16.276	9.074	25.350	600	2	602				2.007	93.735	12.834	106.569
2010	76.631	4.072	80.703	17.659	12.030	29.689	925	2	927	1		1	2.007	97.223	16.104	113.327
2011	78.023	4.436	82.459	17.906	13.337	31.243	1.423	2	1.425	1		1	2.007	99.359	17.775	117.135
2012	79.673	4.621	84.294	18.558	14.220	32.778	1.890	2	1.892	2		2	2.007	102.131	18.842	120.973
2013	81.213	4.805	86.018	21.426	15.102	36.528	2.200	2	2.202	2	3	5	1.990	106.831	19.913	126.743
2014	84.330	4.863	89.193	21.800	16.027	37.827	4.886	2	4.888	6	9	15	1.990	113.011	20.901	133.913
2015	86.766	4.884	91.650	21.607	17.956	39.563	7.631	2	7.633	6	15	21	1.990	118.000	22.858	140.858
2016	91.982	4.943	96.925	22.101	19.174	41.275	10.122	2	10.124	20	4	24	1.990	126.215	24.123	150.338
2017	95.273	5.003	100.275	21.900	19.728	41.628	12.281	2	12.283	932	3	935	1.990	132.376	24.736	157.112

SP - Serviço Público / Public Service · PIE - Produção Independente de Energia / Independent Energy Producer · APE - Autoprodução de energia / Self-producer

1. Inclui metade da Usina de Itaipu. / It includes half of Itaipu Power Plant. · 2. Não inclui a potência referente à participação acionária de consumidores tradicionalmente APE. / Does not include part of traditional APE power capacity. · 3. Plantas PIE, tradicionalmente APE, estão classificadas em APE. / Plants PIE, traditionally APE, are classified as APE. · 4. Solar Fotovoltaicas. / Photovoltaic.

Gráfico I.1 – Capacidade Instalada de Geração Elétrica

Chart I.1 – Installed Capacity Of Electric Energy Generation

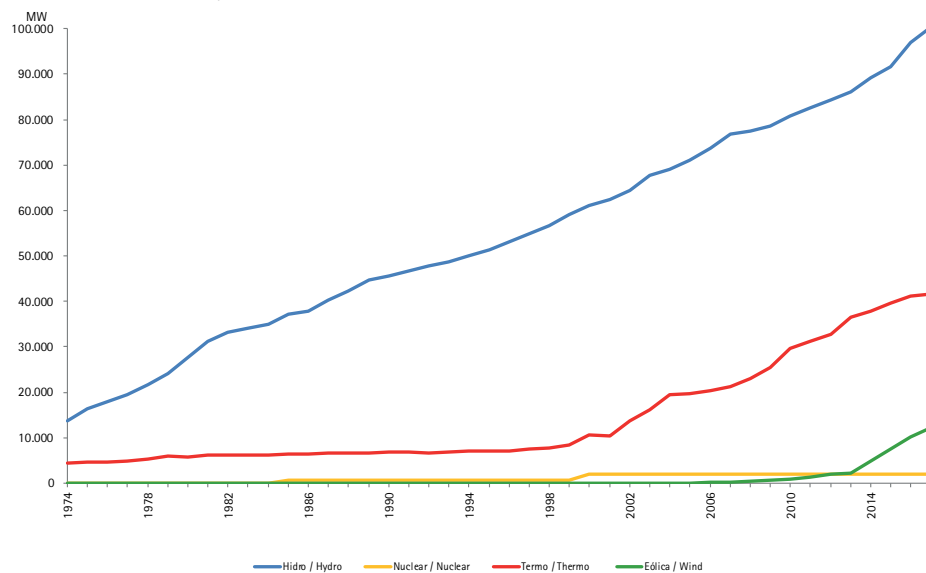


Tabela I.1.1 – Capacidade Instalada de Itaipu

Table I.1.1 – Installed Capacity of Electricity Generation of Itaipu

ANO / YEAR	MW
1984	1.400
1985	2.100
1986	4.200
1987	6.300
1988	8.400
1989	10.500
1990	11.200
1991/2006	12.600
2007/2017	14.000

Tabela I.2 - Capacidade Instalada de Geração Elétrica por Fonte

Table I.2 - Installed Capacity of Electricity Generation by Source

		MW									
Usinas em Operação / Plants in operation	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
UHE / Hydro	74.901	75.484	77.090	78.347	79.956	81.132	84.095	86.366	91.499	94.662	
PCH / Hydro	2.490	2.953	3.428	3.896	4.101	4.620	4.790	4.886	4.941	5.020	
CGH / Hydro	154	173	185	216	236	266	308	398	484	594	
EOL / Wind	398	602	927	1.426	1.894	2.202	4.888	7.633	10.124	12.283	
SOL / Solar	-	-	1	1	2	5	15	21	24	935	
Total	22.999	23.350	29.689	31.243	32.778	36.528	37.827	39.564	41.275	41.628	
Biomassa / Biomass	5.054	5.717	7.927	9.028	9.923	11.601	12.341	13.257	14.147	14.505	
Bagaço / Bagasse	3.687	4.096	6.183	7.213	8.095	9.435	9.881	10.573	10.979	11.158	
Outras / Others	1.367	1.622	1.744	1.815	1.828	2.166	2.460	2.684	3.168	3.347	
Biogás / Biogas	32	45	68	71	79	80	70	84	119	135	
Capim Elefante / Elephant Grass	-	-	-	32	32	32	32	32	66	32	
Carvão Vegetal / Charcoal	17	25	25	25	25	25	51	51	54	43	
Casca de Arroz / Rice Peels	25	31	19	33	36	36	38	45	45	45	
Gás de Alto Forno - Biomassa / Charcoal Gas	70	85	88	88	93	93	108	112	115	114	
Lixívia / Black-Liquor	970	1.146	1.241	1.245	1.236	1.530	1.785	1.923	2.333	2.543	
Óleos Vegetais / Vegetable Oil	-	-	-	4	4	4	19	27	4	4	
Resíduos de madeira / Wood Waste	253	289	303	317	322	366	358	409	432	431	
Fóssil / Fossil	17.098	16.754	20.373	20.818	21.444	23.590	24.149	24.961	25.550	25.453	
UTE/ Termo											
Carvão Mineral / Steam Coal	1.473	1.530	1.944	1.944	2.304	3.389	3.389	3.389	3.389	3.324	
Gás de Refinaria / Refinery Gas	282	282	305	305	342	254	321	316	316	316	
Gás Natural / Natural Gas	10.353	9.755	11.255	11.525	11.439	12.300	12.550	12.428	12.965	12.980	
Óleo Combustível / Fuel Oil	1.514	1.564	2.732	3.028	3.801	3.965	4.065	3.197	4.020	4.056	
Óleo Diesel / Diesel Oil	3.345	3.491	4.007	3.885	3.427	3.551	3.823	5.632	4.825	4.737	
Óleo Ultraviscoso / Viscous Oil	131	131	131	131	131	131			-	-	
Outros ¹ / Others ¹									35	41	
Efluentes Industriais / Industrial Effluent	847	879	1.388	1.396	1.411	1.337	1.337	1.346	1.578	1.579	
Efluente Gasoso ² / Gaseous Effluent ²	213	211	211	211	211	162	162	160	176	172	
Enxofre / Sulfur	56	57	57	57	60	60	60	71	71	71	
Gás de Alto Forno / Blast Furnace Gas	168	200	207	212	212	216	216	216	422	422	
Gás de Processo / Process Gas	132	132	635	638	650	674	674	674	654	658	
Gás Siderúrgico / Steel Gas	278	278	278	278	278	225	225	225	255	255	
UTN / Nuclear										92	
Total	2.007	2.007	2.007	2.007	2.007	1.990	1.990	1.990	1.990	1.990	
	102.949	104.569	113.327	117.135	120.975	126.743	133.913	140.858	150.338	157.112	

1. Inclui Alcatrão. / Includes TAR.

2. Inclui calor de processo.

Tabela I.3 – Capacidade Instalada de Refino de Petróleo

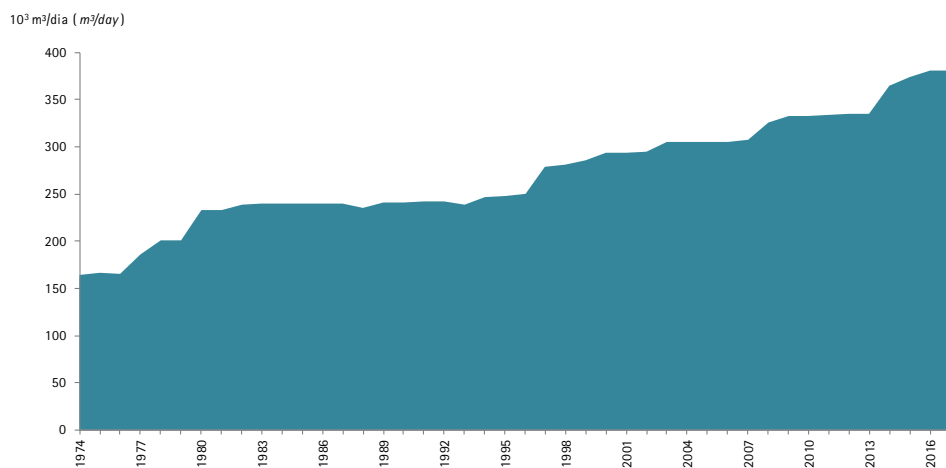
Table I.3 – Installed Capacity of Oil Refining

ANO / YEAR	m ³ / dia (day)	ANO / YEAR	m ³ / dia (day)
1974	164.200	1996	249.461
1975	166.700	1997	278.198
1976	165.700	1998	281.096
1977	185.800	1999	285.475
1978	201.100	2000	294.025
1979	201.100	2001	294.025
1980	233.100	2002	294.690
1981	233.300	2003	304.523
1982	238.200	2004	304.523
1983	240.100	2005	304.618
1984	240.100	2006	304.618
1985	240.100	2007	307.563
1986	240.100	2008	325.050
1987	240.100	2009	332.703
1988	234.890	2010	332.703
1989	241.040	2011	333.175
1990	241.040	2012	334.433
1991	241.750	2013	334.433
1992	241.680	2014 ¹	364.409
1993	239.080	2015	374.209
1994	246.580	2016	380.130
1995	247.880	2017	380.130

1. 1º trem da refinaria RNEST entrou em operação em 6 dezembro de 2014, conforme Autorização ANP (de operação) nº 506/2014. | The refinery RNEST started operation on 6 december of 2014, Authorized by ANP (operation) nº 506/2014.

Gráfico I.2 – Capacidade Instalada de Refino de Petróleo

Chart I.2 – Installed Capacity of Oil Refining



Anexo II. Autoprodução de Eletricidade

Annex II. Electricity Self-Production

Tabela II.1 – Autoprodução de eletricidade por setor e fonte [GWh]
Table II.1 – Electricity self-production by sector and source [GWh]

	HIDRÁULICA HYDRO	GÁS NATURAL NATURAL GAS	CARVÃO MINERAL COAL	BAGAÇO DE CANA SUGARCANE BAGASSE	LIXÍVIA BLACK LIQUOR	LENHA E CARVÃO VEGETAL FIREWOOD, CHARCOAL	OUTRAS PRIMÁRIAS OTHER PRIMARY SOURCES	ÓLEO DIESEL DIESEL OIL	ÓLEO COMBUSTÍVEL FUEL OIL	GÁS DE COQUE E ALCASTRÃO COKE GAS, TAR	OUTROS PRODUTOS DE PETRÓLEO OTHER OIL PRODUCTS	GWh
TOTAL	18.593	11.954	1.352	35.656	11.693	2.114	8.307	1.651	1.141	1.644	2.709	TOTAL
SETOR ENERGÉTICO	32	8.817	0	27.656	0	0	5	1.247	71	0	1.567	ENERGY SECTOR
RESIDENCIAL	0	0	0	0	0	0	71	0	0	0	0	RESIDENTIAL
COMERCIAL	173	759	0	0	0	57	138	137	34	0	0	COMMERCIAL
PÚBLICO	34	132	0	0	0	2	58	37	5	0	0	PUBLIC
AGROPECUÁRIO	1.806	0	0	33	0	293	163	20	0	0	0	AGRICULTURE AND LIVESTOCK
INDUSTRIAL	16.548	2.246	1.352	7.967	11.693	1.762	7.872	210	1.031	1.644	1.142	INDUSTRY
CIMENTO	971	0	0	0	0	0	0	3	0	0	0	CEMENT
FERRO GUSA E AÇO	3.048	543	0	0	0	372	7.117	9	100	1.644	0	PIG-IRON AND STEEL
FERRO LIGAS	94	0	0	0	0	0	0	0	0	0	0	IRON-ALLOYS
MINERAÇÃO E PELOTIZAÇÃO	2.345	95	0	0	0	0	0	11	425	0	0	MINING AND PELLETIZATION
NÃO FERROSOS E OUTROS DA METALURGIA	9.273	0	941	0	0	0	0	3	189	0	0	NON-FERROUS AND OTHER METALLURGICAL
QUÍMICA	6	581	46	0	0	20	447	12	17	0	1.142	CHEMICALS
ALIMENTOS E BEBIDAS	61	454	35	7.904	0	179	131	43	0	0	0	FOODS AND BEVERAGES
TÊXTIL	107	82	0	0	0	6	0	7	0	0	0	TEXTILES
PAPEL E CELULOSE	352	300	330	63	11.693	821	47	70	299	0	0	PULP AND PAPER
CERÂMICA	8	21	0	0	0	0	0	4	0	0	0	CERAMICS
OUTRAS INDÚSTRIAS	283	168	0	0	0	364	130	49	0	0	0	OTHER INDUSTRIES

Tabela II.2 – Autoprodução de eletricidade por setor e fonte [GWh]

Table II.2 – Electricity self-production by sector and source [GWh]

SETOR	TOTAL	GWh SECTOR
TOTAL	96.815	TOTAL
SETOR ENERGÉTICO	39.395	ENERGY SECTOR
RESIDENCIAL	71	RESIDENTIAL
COMERCIAL	1.298	COMMERCIAL
PÚBLICO	269	PUBLIC
AGROPECUÁRIO	2.315	AGRICULTURE AND LIVESTOCK
INDUSTRIAL - TOTAL	53.467	INDUSTRY - TOTAL
CIMENTO	974	CEMENT
FERRO GUSA E AÇO	12.834	PIG-IRON AND STEEL
FERRO LIGAS	94	IRON-ALLOYS
MINERAÇÃO E PELOTIZAÇÃO	2.876	MINNING AND PELLETIZATION
NÃO FERROSOS E OUTROS DA METALURGIA	10.406	NON-FERROUS AND OTHER METALLURGICAL
QUÍMICA	2.271	CHEMICALS
ALIMENTOS E BEBIDAS	8.807	FOODS AND BEVERAGES
TÊXTIL	203	TEXTILES
PAPEL E CELULOSE	13.975	PULP AND PAPER
CERÂMICA	34	CERAMICS
OUTRAS INDÚSTRIAS	994	OTHER INDUSTRIES

Anexo III. Dados Mundiais de Energia

Annex III. World Energy Data

Fonte (Source): Key World Energy Statistics 2011

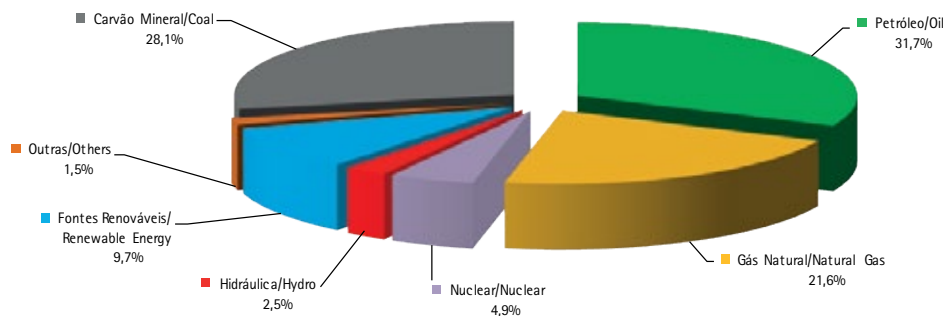
Agência Internacional de Energia (IEA)

Gráfico III.1 – Oferta de Energia por Fonte

Chart III.1 – Energy Supply by Source

2014

Total: 13.541 10⁶ tep (toe)



1973

Total: 6.100 10⁶ tep (toe)

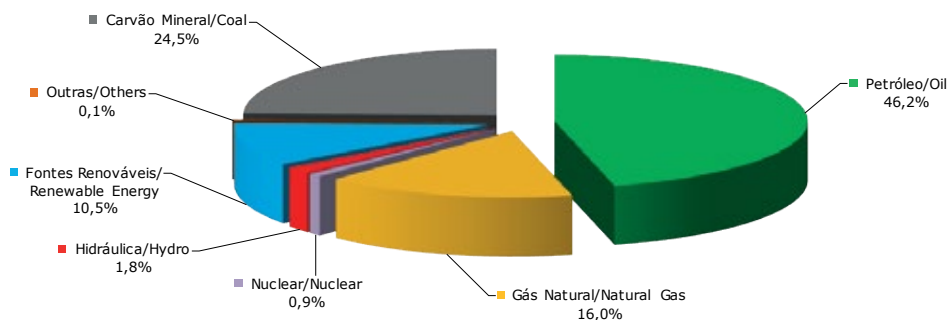
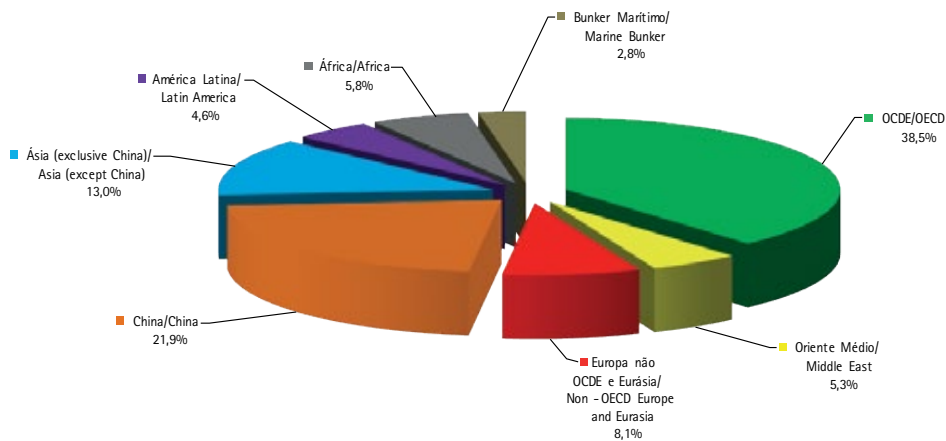


Gráfico III.2 – Oferta de Energia por Região

Chart III.2 – Energy Supply by Region

2014

Total: 13.541 10⁶ tep (toe)



1973

Total: 6.100 10⁶ tep (toe)

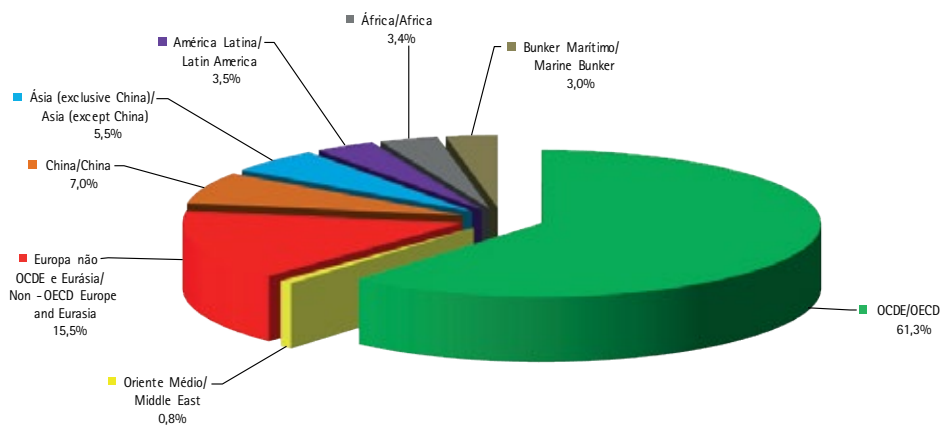
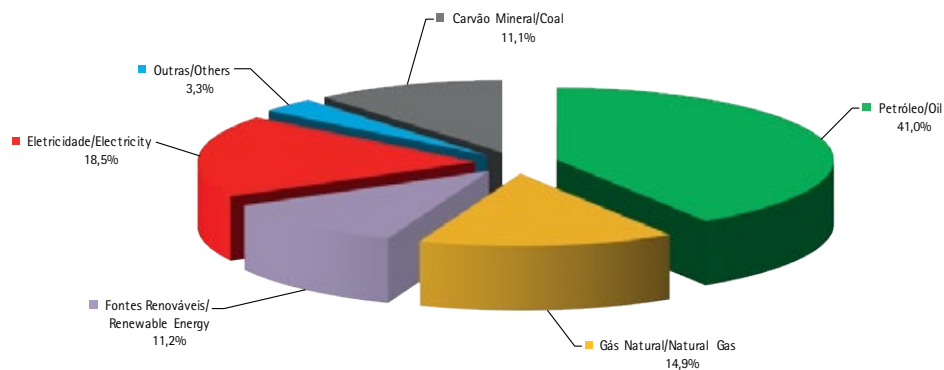


Gráfico III.3 – Consumo Final de Energia por Fonte

Chart III.3 – Final Consumption by Source

2014

Total: 9.301 10⁶ tep (toe)

1973

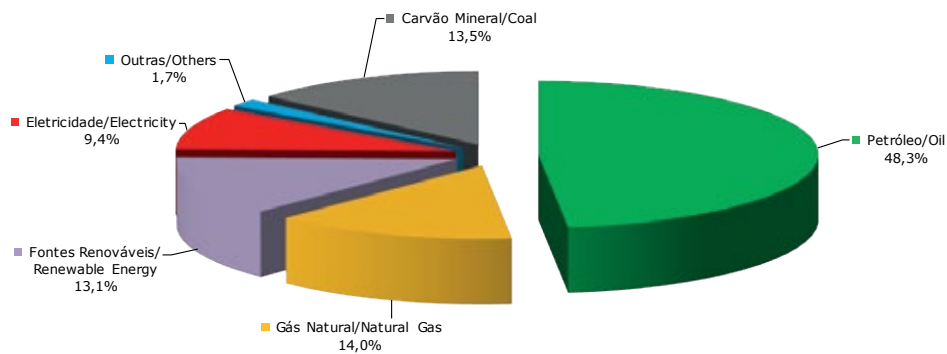
Total: 4.667 10⁶ tep (toe)

Gráfico III.4 – Consumo Setorial de Derivados de Petróleo

Chart III.4 – Sectorial Consumption of Oil Products

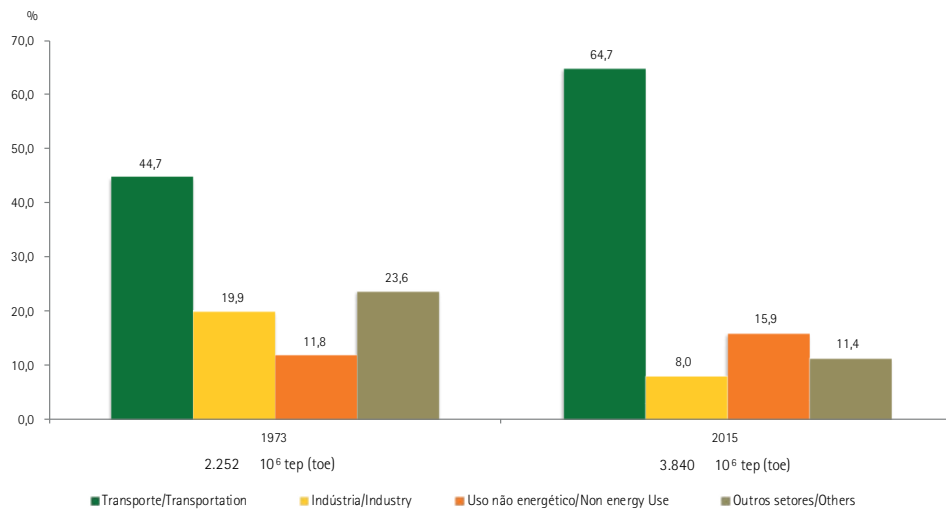


Gráfico III.5 – Consumo Setorial de Eletricidade

Chart III.5 – Sectorial Consumption of Electricity

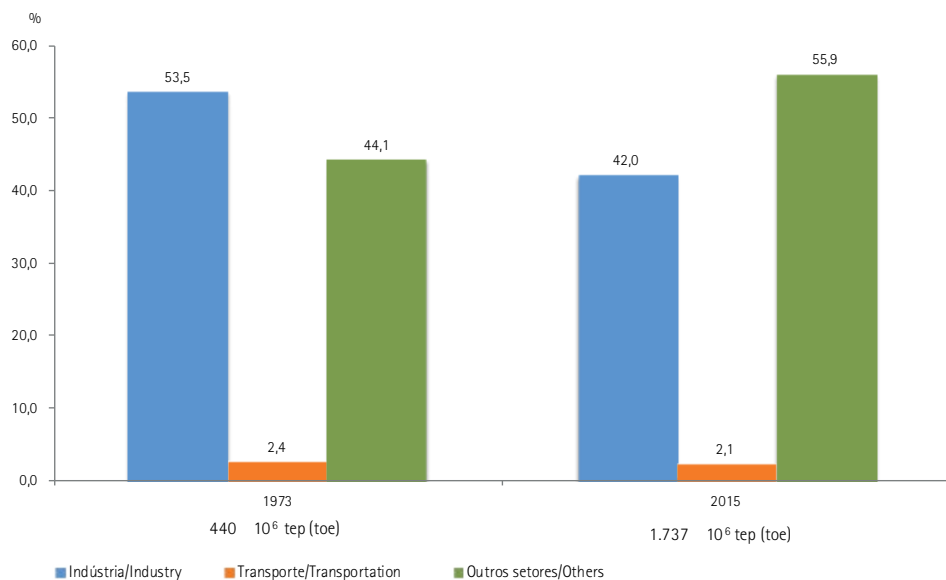


Gráfico III.6 – Consumo Setorial de Gás Natural

Chart III.6 – Sectorial Consumption of Natural Gas

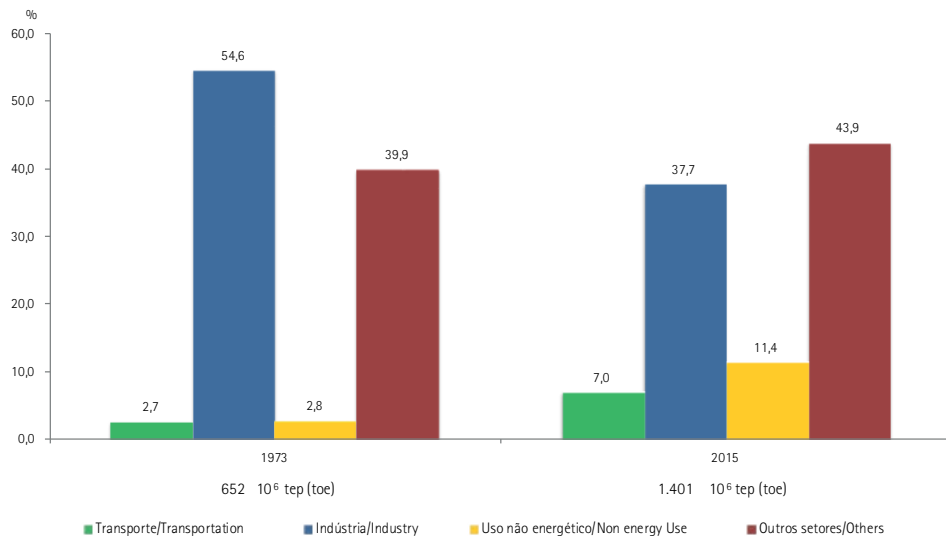


Gráfico III.7 – Consumo Setorial de Carvão Mineral

Chart III.7 – Sectorial Consumption of Coal

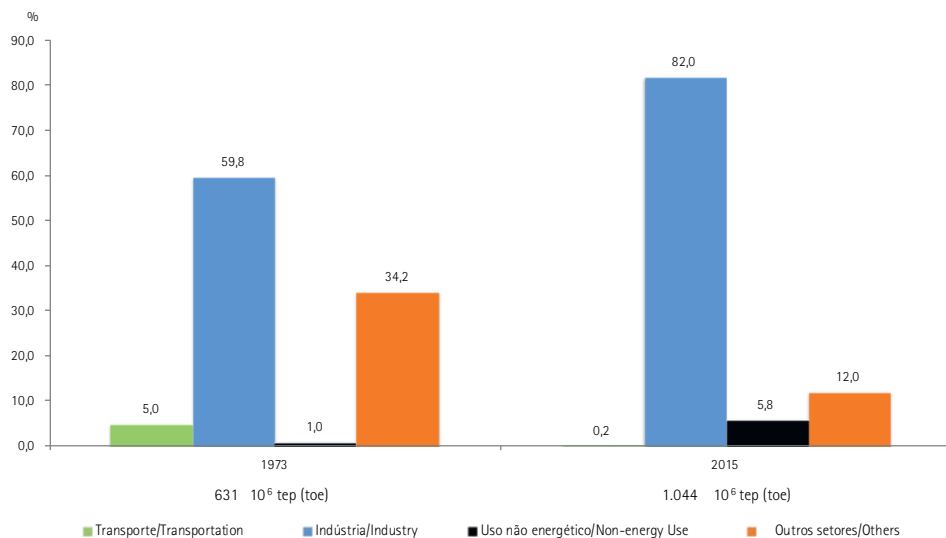


Tabela III.1 – Petróleo

Table III.1 – Petroleum

Produtores	2015			2014			2014		
	10 ⁶ t	% Mundial	Producers	Exportadores ¹	10 ⁶ t	Exporters	Importadores ²	10 ⁶ t	Importers ²
		World							
Arábia Saudita	583	13,5%	Saudi Arabia	Arábia Saudita	369	Saudi Arabia	Estados Unidos	348	United States
Estados Unidos	546	12,6%	United States	Rússia	243	Russia	China	333	China
Rússia	537	12,4%	Russia	Emirados Árabes Unidos	148	United Arab Emirates	Índia	203	India
Canadá	220	5,1%	Canada	Iraque	125	Iraq	Japão	165	Japan
China	200	4,6%	China	Nigéria	116	Nigeria	Coréia do Sul	139	South Korea
Iraque	200	4,6%	Iraq	Canadá	104	Canada	Alemanha	91	Germany
Irã	191	4,4%	Iran	Kuwait	100	Kuwait	Espanha	67	Spain
Emirados Árabes Unidos	182	4,2%	United Arab Emirates	Venezuela	98	Venezuela	Itália	65	Italy
Kuwait	159	3,7%	Kuwait	Angola	86	Angola	França	59	France
Venezuela	135	3,1%	Venezuela	Cazaquistão	64	Kazakhstan	Países Baixos	57	Netherlands
Demais Países	1.368	31,7%	Rest of the world	Demais Países	539	Rest of the world	Demais Países	514	Rest of the world
Mundo	4.321	100,0%	World	Mundo	1.992	World	Mundo	2041	World

1. Considerado somente países com exportações líquidas positivas./ Considered only countries with positive net exports

2. Considerado somente países com importações líquidas positivas./ Considered only countries with positive net imports

Tabela III.2 – Derivados de Petróleo

Table III.2 – Oil products

Produtores	2014			2014			2014		
	10 ⁶ t	% Mundial	Producers	Exportadores	10 ⁶ t	Exporters	Importadores	10 ⁶ t	Importers
		World							
Estados Unidos	820	20,3%	United States	Rússia	115	Russia	Japão	30	Japan
China	510	12,6%	China	Estados Unidos	102	United States	Indonésia	25	Indonesia
Rússia	278	6,9%	Russia	Índia	44	India	França	24	France
Índia	240	6,0%	India	Arábia Saudita	33	Saudi Arabia	China	21	China
Japão	163	4,0%	Japan	Kuwait	31	Kuwait	Cingapura	20	Singapore
Coréia	140	3,5%	South Korea	Argélia	25	Algeria	México	20	Mexico
Brasil	119	3,0%	Brazil	Venezuela	20	Venezuela	Alemanha	18	Germany
Arábia Saudita	107	2,7%	Saudi Arabia	Catar	18	Qatar	Austrália	16	Australia
Alemanha	99	2,5%	Germany	Coréia do Sul	17	South Korea	Hong Kong (China)	15	Hong Kong (China)
Canadá	88	2,2%	Canada	Bielorrússia	17	Belarus	Brasil	15	Brazil
Demais Países	1.469	36,4%	Rest of the world	Demais Países	172	Rest of the world	Demais Países	297	Rest of the world
Mundial	4.033	100,0%	World	Mundial	594	World	Mundial	501	World

Tabela III.3 – Gás Natural

Table III.3 – Natural Gas

Produtores	2016		Producers	Exportadores	2016		Importadores	2016	
	10 ⁹ m ³	% Mundial World			Exporters	10 ⁹ m ³		Exporters	10 ⁹ m ³
Estados Unidos	749	20,7%	United States	Rússia	205	Russia	Japão	116	Japan
Rússia	644	17,8%	Russia	Catar	117	Qatar	Alemanha	79	Germany
Irã	190	5,3%	Iran	Noruega	115	Norway	Itália	69	Italy
Catar	174	4,8%	Qatar	Canadá	61	Canada	China	65	China
Canadá	165	4,6%	Canada	Turcomenistão	54	Turkmenistan	Turquia	46	Turkey
China	137	3,8%	China	Argélia	53	Algeria	Coreia do Sul	44	South Korea
Noruega	121	3,3%	Norway	Indonésia	41	Indonesia	França	43	France
Arábia Saudita	92	2,5%	Saudi Arabia	Austrália	34	Australia	México	43	Mexico
Turcomenistão	90	2,5%	Turkmenistan	Malásia	24	Malaysia	Reino Unido	38	United Kingdom
Argélia	88	2,4%	Algeria	Nigéria	23	Nigeria	Espanha	28	Spain
Demais Países	1.163	32,2%	Rest of the world	Demais Países	142	Rest of the world	Demais Países	286	Rest of the world
Mundo	3.613	100,0%	World	Mundo	869	World	Mundo	857	World

Tabela III.4 – Carvão Mineral¹Table III.4 – Coal¹

Produtores	2015		Producers	Exportadores	2015		Importadores	2015	
	10 ⁶ t	% Mundial World			Exporters	10 ⁶ t		Exporters	10 ⁶ t
China	3.242	44,6%	China	Austrália	389	Australia	Índia	247	China
Estados Unidos	708	9,7%	United States	Indonésia	367	Indonesia	China	199	India
Índia	672	9,2%	India	Rússia	147	Russia	Japão	189	Japan
Austrália	503	6,9%	Australia	Colômbia	83	Colombia	Coreia do Sul	134	South Korea
Indonésia	460	6,3%	Indonesia	África do Sul	76	South Africa	Taipe Chinesa	66	Chinese Taipei
Rússia	365	5,0%	Russia	Estados Unidos	46	United States	Alemanha	53	Germany
África do Sul	257	3,5%	South Africa	Cazaquistão	26	Kazakhstan	Turquia	36	Turkey
Alemanha	176	2,4%	Germany	Canadá	26	Canada	Reino Unido	29	United Kingdom
Polônia	131	1,8%	Poland	Coreia do Norte	24	DPR of Korea	Malásia	23	Malaysia
Cazaquistão	98	1,3%	Kazakhstan	Mongólia	21	Mongolia	Tailândia	20	Thailand
Demais Países	657	9,0%	Rest of the world	Demais Países	8	Rest of the world	Demais Países	215	Rest of the world
Mundo	7.269	100,0%	World	Mundo	1.213	World	Mundo	1.211,0	World

1. Inclui carvão vapor, coque de carvão mineral, linhita e carvão recuperado. / Includes steam coal, coking coal, lignite and recovered coal.

Gráfico III.8 – Produção de Energia Elétrica por Fonte

Chart III.8 – Electricity Generation by Source

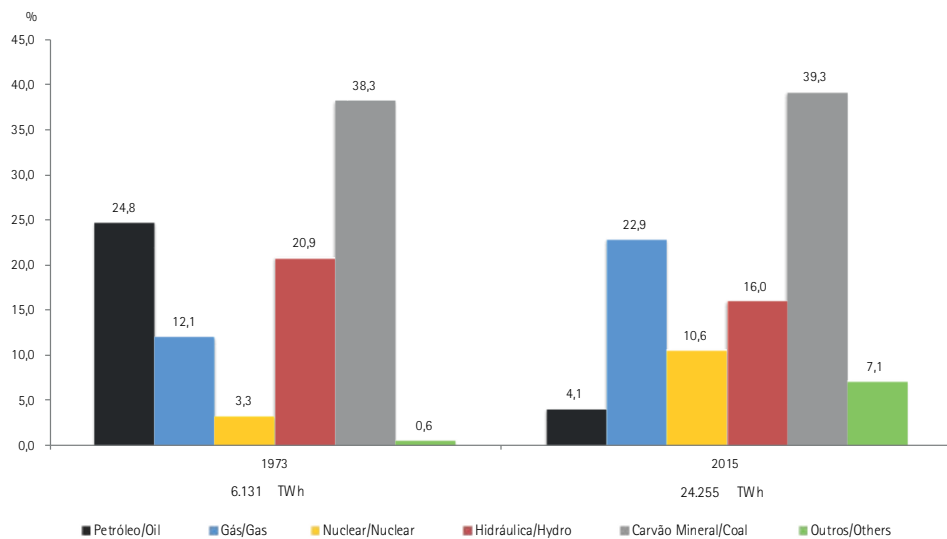


Tabela III.5 – Eletricidade

Table III.5 – Electricity

Produtores	TWh	2015	Producers	Exportadores	2015	Exporters	Importadores	2015	Importers
		% Mundial World			TWh			TWh	
China	5844	24,4%	China	França	64	France	Estados Unidos	67	United States
Estados Unidos	4297	17,9%	United States	Canadá	60	Canada	Itália	46	Italy
Índia	1383	5,8%	India	Paraguai	48	Paraguay	Brasil	34	Brazil
Rússia	1066	4,4%	Russia	Alemanha	41	Germany	Reino Unido	21	United Kingdom
Japão	1035	4,3%	Japan	República Tcheca	23	Czech Republic	Finlândia	21	Finland
Canadá	671	2,8%	Canada	Suécia	15	Sweden	Bélgica	16	Belgium
Alemanha	641	2,7%	Germany	Noruega	13	Norway	Países Baixos	14	Netherlands
Brasil	582	2,4%	Brazil	China	12	China	Hungria	12	Hungary
França	563	2,3%	France	Bulgária	12	Bulgaria	Iraque	11	Iraq
Coréia do Sul	549	2,3%	South Korea	Ucrânia	11	Ukraine	Tailândia	10	Thailand
Demais Países	7.355	30,7%	Rest of the world	Demais Países	39	Rest of the world	Demais Países	112	Rest of the world
Mundo	23.986	100,0%	World	Mundo	338	World	Mundo	364	World

Tabela III.6 – Energia Nuclear

Table III.6 – Nuclear Energy

Produtores	TWh	2015	Producers	Capacidade Instalada	2015	Installed capacity	País ¹	2015	Country ¹
		% Mundial World			GW			% Nuclear ²	
Estados Unidos	830	32,3%	United States	Estados Unidos	99	United States	França	77,6	France
França	437	17,0%	France	França	63	France	Ucrânia	54,1	Ukraine
Rússia	195	7,6%	Russia	Japão	40	Japan	Suécia	30,0	Sweden
Coréia do Sul	171	6,7%	South Korea	Rússia	27	Russia	Coréia do Sul	20,9	South Korea
China	165	6,4%	China	China	25	China	Estados Unidos	20,6	United States
Canadá	101	3,9%	Canada	Coréia do Sul	22	South Korea	Reino Unido	19,3	United Kingdom
Alemanha	92	3,6%	Germany	Alemanha	14	Germany	Rússia	18,3	Russia
Ucrânia	88	3,4%	Ukraine	Canadá	13	Canada	Canadá	15,1	Canada
Suécia	70	2,7%	Sweden	Ucrânia	11	Ukraine	Alemanha	14,3	Germany
Reino Unido	57	2,2%	United Kingdom	Suécia	10	Sweden	China	2,9	China
Demais Países	365	14,2%	Rest of the world	Demais Países	59	Rest of the world	Demais Países ³	7,2	Rest of the world ³
Mundial	2.571	100,0%	World	Mundial	383	World	Mundial	10,6	World

1. Baseado nos 10 maiores produtores mundiais. / Based on top 10 producers in the world

2. Percentual na geração interna total / Percentage of nuclear in total domestic electricity generation

3. Exclui países que não utilizam energia nuclear / Excludes countries that do not use nuclear energy

Tabela III.7 – Geração Hidrelétrica

Table III.7 – Hydro Power

Produtores	2014			2014			2014		
	TWh	% Mundial World	Producers	Capacidade Instalada ¹	GW	Installed Capacity ¹	Pais ²	Hidro ³	Country ²
China	1.130	28,4%	China	China	332	China	Noruega	95,9	Norway
Canadá	381	9,6%	Canada	Estados Unidos	102	United States	Venezuela	63,7	Venezuela
Brasil	360	9,0%	Brazil	Brasil	92	Brazil	Brasil	61,9	Brazil
Estados Unidos	271	6,8%	United States	Canadá	79	Canada	Canadá	56,8	Canada
Rússia	170	4,3%	Russia	Rússia	51	Russia	China	46,6	China
Noruega	139	3,5%	Norway	Japão	50	Japan	Rússia	19,3	Russia
Índia	138	3,5%	India	Índia	40	India	França	15,9	France
Venezuela	91	2,3%	Venezuela	Noruega	31	Norway	Índia	10,0	India
Japão	75	1,9%	Japan	França	26	France	Japão	8,8	Japan
França	75	1,9%	France	Turquia	25	Turkey	Estados Unidos	6,3	United States
Demais Países	1.148	28,9%	Rest of the world	Demais Países	359	Rest of the world	Demais Países ⁴	14,0	Rest of the world ⁴
Mundial	3.978	100,0%	World	Mundial	1.187	World	Mundial	16,3	World

1. Baseada na produção. / Based on production.

2. Baseado nos 10 maiores produtores mundiais. / Based on top 10 producers in the world.

3. Percentual na geração interna total. / Percentage of hydro in total electricity production.

4. Exclui países sem geração hidrelétrica. / Excludes countries that do not use hydraulic energy.

Gráfico III.9 – Geração Hidrelétrica por Região

Chart III.9 – Hydro Generation by Region

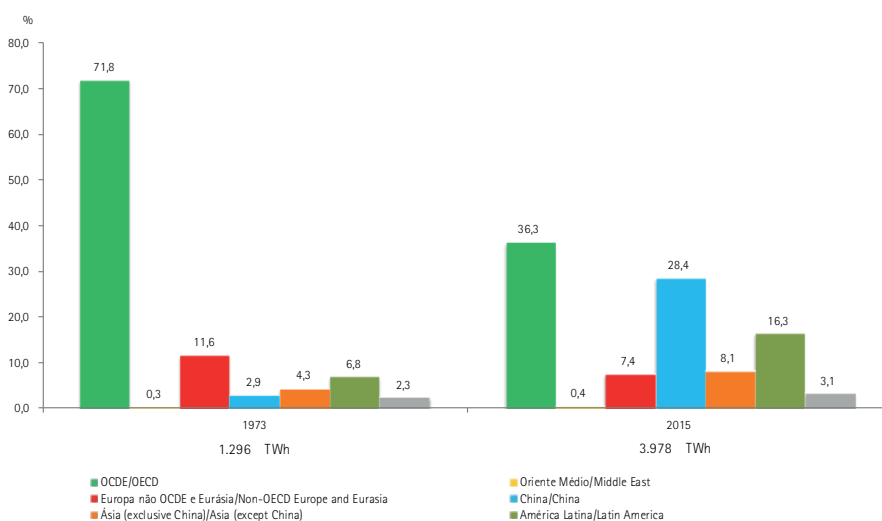


Tabela III.8 – Geração Elétrica a partir de Combustíveis Fósseis

Table III.8 – Power Generation with Fossil Fuels

	2015		2015			2015			
	Carvão	TWh	Coal	Petróleo	TWh	Oil	Gás Natural	TWh	Natural Gas
China	4.109		China	Arábia Saudita	150	Saudi Arabia	Estados Unidos	1.373	United States
Estados Unidos	1.471		United States	Japão	103	Japan	Rússia	530	Russia
Índia	1.042		India	Irã	50	Iran	Japão	410	Japan
Japão	343		Japan	Iraque	43	Iraq	Irã	222	Iran
Alemanha	284		Germany	Kuwait	41	Kuwait	México	189	Mexico
África do Sul	237		South Africa	Paquistão	40	Pakistan	Arábia Saudita	186	Saudi Arabia
Coréia do Sul	229		South Korea	Estados Unidos	39	United States	Egito	145	Egypt
Rússia	159		Russia	Brasil	38	Brazil	Coréia do Sul	129	South Korea
Austrália	159		Australia	México	32	Mexico	Turquia	127	Turkey
Polônia	133		Poland	Indonésia	29	Indonesia	Tailândia	125	Thailand
Demais Países	1.372		Rest of the world	Demais Países	425	Rest of the world	Demais Países	2.107	Rest of the world
Mundial	9.538		World	Mundial	990	World	Mundial	5.543	World

Anexo IV. Balanço de Energia Útil

O Balanço de Energia Útil (BEU) é um estudo que permite processar as informações setoriais do Balanço Energético Nacional (BEN), de consumo de energia, para obter estimativas da Energia Final destinada aos Usos Finais Força Motriz, Calor de Processo, Aquecimento Direto, Refrigeração, Iluminação, Eletroquímica e Outros Usos e, com base nos rendimentos do primeiro processo de transformação energética, estimar a Energia Útil.

A Energia Útil é apurada considerando os Usos Finais, as formas de Energia Final e os Setores de atividades contemplados no BEN. O Gráfico IV.1 resume os resultados do BEU para os anos de 1984, 1994 e 2004.

A Energia Final é composta pela soma de duas parcelas: a Energia Útil e a Energia Perdida. Esta, por sua vez é composta pela soma do Potencial de Economia de Energia (PEE) com a Energia não Recuperável (EÑR). A Energia Útil é estimada com base nas eficiências médias das instalações de cada setor de atividade, existentes no ano do estudo. O PEE é estimado com base nas eficiências das instalações mais modernas de cada setor de atividade, existentes no ano do estudo. A EÑR é calculada por diferença.

A figura mostra que a Energia Final e a Energia Útil têm aumentado ao longo dessas duas décadas. Por outro lado, o Potencial de Economia de Energia diminui, à medida que os rendimentos dos processos se aproximam de seus paradigmas.

A relação Energia Final / Energia Útil tem a dimensão de rendimento energético. O BEU permite avaliar o rendimento energético global da sociedade brasileira e os rendimentos específicos dos setores de atividade, das diferentes formas de energia e dos Usos Finais. A Tabela IV.1 apresenta as evoluções dos rendimentos energéticos globais, dos principais setores de atividades, dos principais energéticos e dos principais Usos Finais.

Annex IV. Useful Energy Balance

The Useful Energy Balance - BEU (as in Portuguese "Balanço de Energia Útil") is a study that allows sectorial information on energy consumption from the National Energy Balance to be processed to obtain final energy estimates. These estimates are destined to the Final Uses Matrix, Process Heat, Direct Heating, Refrigeration, Illumination, Electrochemical and Other Uses and based on the yields of the first transformation process, will estimate useful energy.

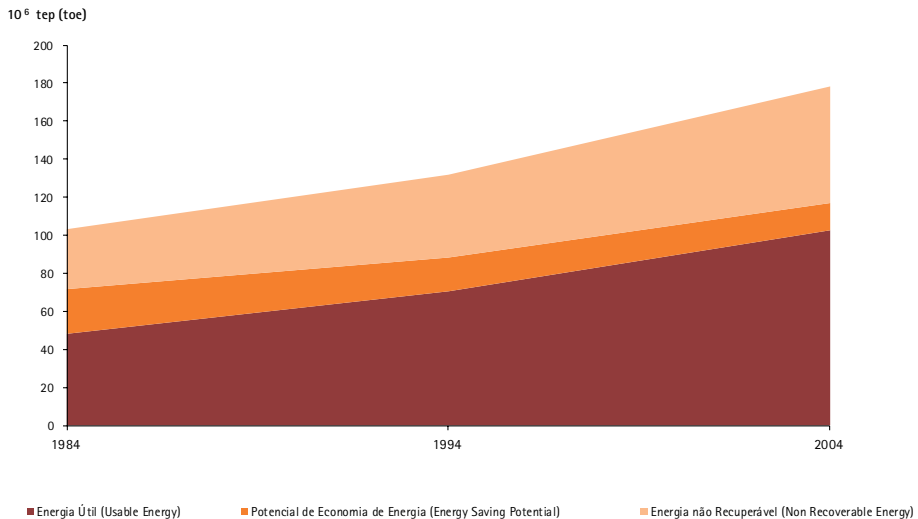
Useful Energy is calculated using Final Uses, the forms of Final Energy and the activity sectors contemplated in the National Energy Balance. Chart IV.1 summarizes the results of the BEU for the years 1984, 1994 and 2004.

Final energy is composed of the sum of two parcels: useful energy and lost energy. This in turn is composed of the sum of the Economic Energy Potential (EEP) and Non-Recoverable Energy (NRE). Useful energy is calculated based on efficiency averages of the installations of each activity sector, in the year under study. The EEP is estimated using the efficiency of the most modern installations for each activity sector, in the year under study. The NRE is calculated by the difference.

The figure shows that Final Energy and Useful Energy have increased during these two decades. On the other hand, the EEP has reduced as processes' yields have come close to their paradigms. The Final Energy Ratio/ Useful Energy ratio has the dimension of energy yield. The BEU allows an evaluation of the global energy yield of Brazilian society and the specific yields by activity sector of the different forms of energy and the Final Uses. Table IV.1 shows the evolution of global energy yields for the main activity sectors by activity sector of the different forms of energy and the final uses.

Gráfico IV.1 – Variação da Energia Final, Útil e do Potencial de Economia de Energia Evolução Brasil 1984 a 2004

Chart IV.1 – Variation of the final energy, useful and Economic Energy Potential evolution 1984 – 2004



A tabela seguinte mostra que os rendimentos energéticos aumentaram ao longo dessas décadas. Esse aumento se deveu em parte à evolução tecnológica dos equipamentos e, em parte, à mudança da matriz energética do País que migrou dos energéticos de uso menos eficiente para os de uso mais eficiente.

O BEU permite avaliar separadamente os efeitos da evolução da tecnologia e da sociedade no consumo energético nacional. Para avaliar apenas os efeitos da Sociedade foram considerados os dados de entrada (dados de Energia Final - que caracterizam o contexto da sociedade) referentes aos anos de 1984, 1994 e 2004, porém com os rendimentos (que caracterizam o contexto da tecnologia) referentes ao ano de 2004. Para avaliar apenas os efeitos da tecnologia foram considerados os dados de entrada referentes a 2004, porém com os rendimentos de 1984, 1994 e 2004. Os resultados obtidos em termos de rendimentos médios estão apresentados na Tabela IV.1.

The following table shows that the energy yields have increased over these decades. This increase is due partly to the technical evolution of equipment and partly to changes in the country's energy matrix which has migrated towards the use of more efficient energy sources.

The BEU allows a separate evaluation of the effects of the evolutions of technology and society on national energy consumption. To evaluate just the effects of the societal change the entry data were considered (Final Energy data - characterizing the social context) for the years of 1984, 1994 and 2004, however with the yields (that characterize technology) for the year 2004. To evaluate only the effects of technology the data for 2004 was used, with the yields for 1984, 1994 and 2004. The results obtained for average yields are shown in Table IV.1.

Tabela IV.1 – Evolução dos Rendimentos, Energéticos, Setores e Usos Finais Brasil

Table IV.1 – Evolution of the Energy Efficiency, Sectors and Final Use Brazil

				%
Brasil				Brazil
Segmento / Anos	1984	1994	2004	Segment / Years
Principais Energéticos				Main Energy
Óleo Diesel	35,6	40,5	43,4	Diesel Oil
Eletricidade	58,1	64,3	68,8	Electricity
Produtos da Cana	65	71,6	76,7	Sugar-cane Products
Principais Setores de Atividade				Main Sectors of Activity
Energético	65,8	73,5	75,2	Energy
Residencial	33,5	43,4	47,4	Residential
Transportes	31,4	35,4	37,5	Transports
Industrial	62,2	67,9	72,0	Industrial
Principais Usos Finais				Main Final Uses
Força Motriz	39,2	44	47,1	Motive Power
Calor de Processo	70,2	76	78,9	Process Heat
Aquecimento Direto	43	52,2	56,5	Direct Heating
Global	46,9	53,9	57,5	Global

A próxima tabela permite verificar por simples inspeção que o efeito da tecnologia é, em geral, maior do que o efeito da sociedade. Para apurar quantitativamente a participação desses efeitos na variação do rendimento é necessário ainda, fazer um processamento. A seguir se explica esse processamento através do exemplo da variação do rendimento Global no período de 1994 a 2004:

- Variação Total do Rendimento = 57,5 (Tab IV.2) - 53,9 (Tab IV.1) = 3,6
- Variação devida ao Efeito Tecnológico = 57,5 (Tab IV.2) - 54,3 (Tab IV.2) = 3,2
- Variação devida ao Efeito Sociedade = 57,5 (Tab IV.2) - 56,9 (Tab IV.2) = 0,6
- Verificação: 3,2 + 0,6 = 3,8 ~ Variação Total do Rendimento

Next table allows a simple inspection to show that the effects of technology are on the whole greater than the effects of society. To quantitatively check the participation of these effects on the variation of the yield it is necessary to process these figures. This process is explained below using the example of the variation of global yield between 1994 and 2004:

- Total Yield Variation = 57.5 (Tab IV.2) - 53.9 (Tab IV.1) = 3.6
- Variation due to Technological Effects = 57.5 (Tab IV.2) - 54.3 (Tab IV.2) = 3.2
- Variation due to Societal Effects = 57.5 (Tab IV.2) - 56.9 (Tab IV.2) = 0.6
- Verification: 3.2 + 0.6 = 3.8 ~ Total Yield Variation

Tabela IV.2 – Evolução dos Rendimentos, Energéticos, Setores e Usos Finais Brasil

Table IV.2 – Evolution of the Energy Efficiency, Sectors and Final Use Brazil - %

Segmento / Anos	Rendimento de Referência Efficiency of Reference	Efeitos da Sociedade Effect of the Society		Efeitos da Tecnologia Effect of the Technology		Segment / Years
	2004	1984	1994	1994	1984	
Principais Energéticos						Main Energy
Óleo Diesel	43,4	43,5	43,5	40,4	35,5	Diesel Oil
Elettricidade	68,8	70	69	64,3	57	Electricity
Produtos da Cana	76,7	76,7	76,7	71,6	65	Sugar-cane Products
Principais Setores de Atividade						Main Sectors of Activity
Energético	75,2	72,5	73,4	76,5	68,5	Energy
Residencial	47,4	39,8	46,7	44	41,2	Residential
Transportes	37,5	38,2	37,6	35,1	30,9	Transports
Industrial	72	70,9	71,9	67,4	62,9	Industrial
Principais Usos Finais						Main Final Uses
Força Motriz	47,1	47,3	46,8	44,4	39,8	Motive Power
Calor de Processo	78,9	78,6	79,2	76,1	70,5	Process Heat
Aquecimento Direto	56,5	49,9	55,5	53,6	49,9	Direct Heating
Global	57,5	55,2	56,9	54,3	48,8	Global

Na Tabela IV.3 são apresentadas as variações referentes a todos os segmentos considerados neste estudo.

Table IV.3 shows the variations related to all the sectors in this study.

Tabela IV.3 – Variação dos Rendimentos Energéticos, Participação dos Efeitos da Tecnologia e da Sociedade – Brasil

Table IV.3 – Evolution of Energy Efficiency: Participation of Technology and Society Effects – Brazil

Segmento	2004 - 1994				2004 - 1984				Segment
	Variação Total Total Variation	Efeito da Tecnologia Effect of the Technology	Efeito da Sociedade Effect of the Society	Verificado Verified	Variação Total Total Variation	Efeito da Tecnologia Effect of the Technology	Efeito da Sociedade Effect of the Society	Verificado Verified	
Principais Energéticos									Main Energy
Óleo Diesel	2,9	3	-0,1	2,9	7,8	7,9	-0,1	7,8	Diesel Oil
Eletricidade	4,4	4,5	-0,2	4,3	10,7	11,8	-1,2	10,6	Electricity
Produtos da Cana	5	5,1	-0,1	5	11,7	11,7	-0,1	11,6	Sugar-cane Products
Principais Setores de Atividade									Main Sectors of Activity
Energético	1,6	-1,4	1,7	0,3	9,4	6,7	2,6	9,3	Energy
Residencial	4,1	3,4	0,7	4,1	13,9	6,3	7,6	13,9	Residential
Transportes	2,1	2,3	-0,1	2,2	6,1	6,5	-0,7	5,8	Transports
Industrial	4,1	4,6	0,1	4,7	9,8	9,2	1,1	10,2	Industrial
Principais Usos Finais									Main Final Uses
Força Motriz	3,1	2,7	0,4	3,1	7,9	7,3	-0,2	7,1	Motive Power
Calor de Processo	2,9	2,8	-0,3	2,5	8,7	8,5	0,4	8,8	Process Heat
Aquecimento Direto	4,3	2,9	1	3,9	13,5	6,6	6,6	13,2	Direct Heating
Global	3,6	3,2	0,6	3,8	10,6	8,8	2,4	11,1	Global

Pode-se verificar que há algumas variações, em geral pequenas, entre os valores da coluna Variação Total e os da coluna Verificação. Essas variações refletem pequenos erros decorrentes de inconsistências entre dados de entrada e os coeficientes técnicos do modelo que apareceram em função desta simulação.

É interessante observar que, nos segmentos Residencial e Aquecimento Direto, no período de 1984 a 2004, o efeito da Sociedade é significativamente maior do que nos outros segmentos. Essa variação se deve ao processo de substituição dos fogões a lenha no setor residencial que ocorreu ao longo da década de 1984 a 1994.

O efeito da Tecnologia é particularmente significativo no caso de segmentos como o Setor Industrial em que a competitividade é um indutor do aumento de eficiência ou dos insumos energéticos usados nesse setor.

It can be verified that there are some, usually

small, variations between the values of the Total Variation column and the Verification Column. These variations reflect small errors due to inconsistencies between the entry data and the technical coefficients in the model that appear in this simulation.

It is interesting to observe that, in the Residential and Direct Heating sector, between 1984 and 2004, society's effect is significantly greater than in other periods. This variation is due to the substitution of firewood stoves in the residential sector in the decade of 1984 to 1994.

The effect of technology is particularly significant in the case of segments such as the Industrial Sector in which competitiveness propels the increase in energy efficiency or energy inputs used in this area.

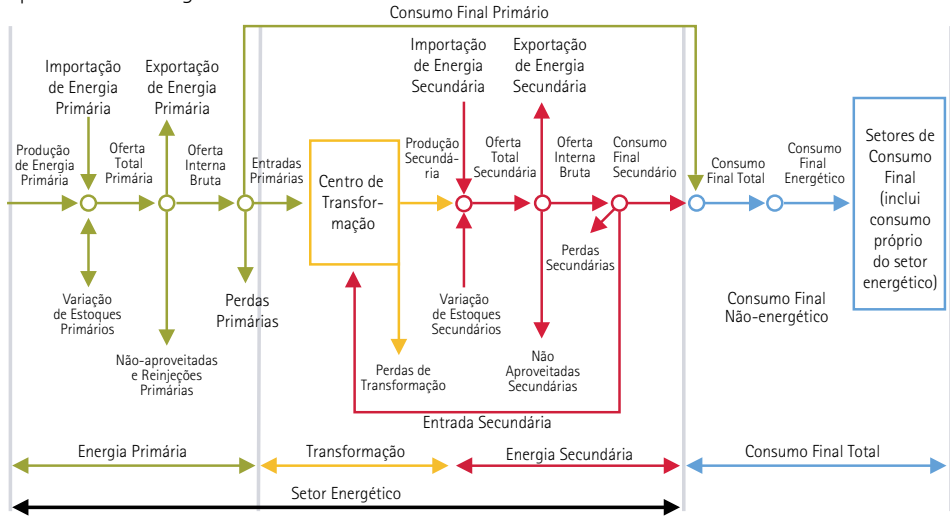
Anexo V. Estrutura Geral do Balanço Energético Nacional

Annex V. General Structure of the Brazilian Energy Balance

V.1 – Descrição Geral

O Balanço Energético Nacional – BEN foi elaborado segundo metodologia que propõe uma estrutura energética, suficientemente geral, de forma a permitir a obtenção de adequada configuração das variáveis físicas próprias do setor energético.

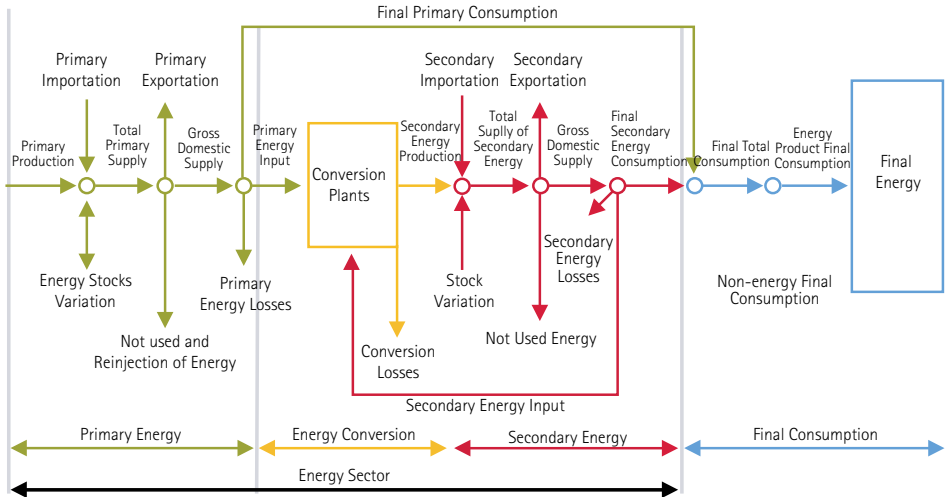
A matriz Balanço Energético, síntese da metodologia, expressa o balanço das diversas etapas do processo energético: produção, transformação e consumo, conforme figura e conceituação apresentados a seguir.



V.1 – General Description

The Brazilian Energy Balance – BEB has been prepared according to a methodology adopted to an energy structure sufficiently general in nature to give a proper configuration of the physical variables of the energy sector.

The Matrix Energy Balance summarizes the methodology and expresses the balance of every stage in the energy process: production, transformation and consumption.



V.2 – Conceituação

Conforme se observa na figura, a estrutura geral do balanço é composta por quatro partes:

- Energia Primária
- Transformação
- Energia Secundária
- Consumo Final

V.2 – Concepts

The general structure of the balance is divided into four parts:

- Primary Energy
- Transformation
- Secondary Energy
- Final Consumption

V.2.1 – Energia Primária

Produtos energéticos providos pela natureza na sua forma direta, como petróleo, gás natural, carvão mineral, resíduos vegetais e animais, energia solar, eólica etc.

V.2.1 – Primary Energy

Energy products found in nature in an immediately available form, such as natural gas, coal, animal and vegetable residues, solar and wind energy, etc.

	Colunas da Matriz Columns of the Matrix	Fontes Sources
Fontes de Energia Primária Primary Energy Sources	1 a 8	Petróleo, Gás Natural, Carvão Vapor, Carvão Metalúrgico, Urânio (U ₃ O ₈), Energia Hidráulica, Lenha e Produtos da Cana (Melaço, Caldo-de-Cana e Bagaço). Petroleum, Natural Gas, Steam Coal, Metallurgical Coal, Uranium (U ₃ O ₈), Hydraulic Energy, Firewood and Sugar-cane Products (Molasses, Juice and Bagasse).
Outras Fontes Primárias Other Primary Sources	9	Vegetable and Industrial Residues Used for Steam Generation, Heat, etc.
Total de Energia Primária Total Primary Energy	10	Sum of Columns 1 to 9.

V.2.2 – Energia Secundária

Produtos energéticos resultantes dos diferentes centros de transformação que têm como destino os diversos setores de consumo e eventualmente outro centro de transformação.

	Colunas da Matriz Columns of the Matrix	Fontes Sources
Fontes de Energia Secundária Sources of Secondary Energy	11 a 23	Óleo Diesel, Óleo Combustível, Gasolina (Automotiva e de Aviação), GLP, Nafta, Querosene (Iluminante e de Aviação), Gás (de Cidade e de Coqueria), Coque de Carvão Mineral, Urânio Contido no UO ₂ , dos Elementos Combustíveis, Eletricidade, Carvão Vegetal, Alcool Etilico, (Anidro e Hidratado) e Outras Secundárias de Petróleo (Gás de Refinaria, Coque e Outros). <i>Diesel Oil, Fuel Oil, Gasoline (Automotive and Aviation), LPG, Naphtha, Kerosene (for Illumination and Aviation use), Gas (Gasworks and Coke Oven), Coke, Uranium Contained in UO₂, Electricity, Charcoal, Ethanol (Anhydrous And Hydrated) and other Petroleum Secondary Sources.</i>
Produtos Não-Energéticos do Petróleo Non-energy Petroleum Products	24	Derivados de Petróleo que, mesmo tendo significativo conteúdo energético, são utilizados para outros fins (Graxas, Lubrificantes, Parafinas, Asfaltos, Solventes e Outros). <i>Petroleum Derivatives that, while having considerable energy content, are employed for other purposes (Greases, Lubricants, Paraffin Wax, Etc.).</i>
Alcatrão Tar	25	Alcatrão obtido na transformação do Carvão Metalúrgico em Coque. <i>Energy Source Produced from Metallurgical Coal Transformation.</i>
Total de Energia Secundária Total Secondary Energy	26	Somatória das colunas 11 a 25. <i>Sum of Columns 11 to 25.</i>

V.2.2 – Secondary Energy

Energy products obtained from the various transformation centers and channeled to the different consumption sectors or to other transformation centers.

V.2.3 – Total Geral

Consolida todas as energias produzidas, transformadas e consumidas no país.

	Colunas da Matriz Columns of the Matrix	Fontes Sources
Energia Total Total Energy	27	Somatória Algebrica das Colunas 10 e 26. <i>Algebraic Addition of Columns 10 and 26.</i>

V.2.3 – Consolidated Total

All the energy produced, transformed and consumed in the country.

V.2.4 – Oferta

Quantidade de energia que se coloca à disposição para ser transformada e/ou para consumo final.

	Linhas da Matriz Lines of the Matrix	Fontes Sources
Produção Production	1	Energia Primária que se obtém de Recursos Minerais, Vegetais e Animais (Biogás), Hídricos, Reservatórios Geotérmicos, Sol, Vento, Marés. Tem sinal positivo. <i>Primary Energy Obtained from Mineral, Plant and Animal Resources (Biogas), Hydraulic, Geothermal Reservoirs, Sun, Wind, Seas, and Tides. These entries have a positive sign.</i>
Importação Imports	2	Quantidade de Energia Primária e Secundária proveniente do exterior, que entra no país e constitui parte da Oferta no Balanço. Tem sinal positivo. <i>Primary and Secondary Energy Coming into the Country from Overseas. These entries have a positive sign.</i>
Variação de Estoques Variation Inventories	3	Diferença entre o Estoque Inicial e Final de cada ano. Um aumento de estoques num determinado ano significa uma redução na Oferta Total. No Balanço tem sinal negativo as entradas e positivo as saídas. <i>Annual Difference between Initial Stock and Final Stock. A Stock Increase in any Given Year means a reduction in Total Supply. In the Balance, entries of Stock have a negative sign while Withdrawals have a positive sign.</i>
Oferta Total Total Supply	4	Produção (+) Importação (+) ou (-) Variação de Estoques. <i>Production (+) Imports (+) or (-) Variation Inventories.</i>
Exportação Exports	5	Quantidade de Energia Primária e Secundária que se envia do país ao exterior. É identificada com sinal negativo. <i>Quantity of Primary and Secondary Energy sent Overseas. These entries have a negative sign.</i>
Não-Aproveitada Non-utilized	6	Quantidade de Energia que, por condições técnicas ou econômicas, atualmente não está sendo utilizada. É caracterizada com sinal negativo. <i>Quantity of Energy that is not presently being used because of technical or economic constraints. These entries have a negative sign.</i>
Reinjeção Re-injection	7	Quantidade de Gás Natural que é reinjetado nos poços de Petróleo para uma melhor recuperação deste hidrocarboneto. Tem sinal negativo. <i>Natural Gas Reinjecting into Oil wells to obtain a better yield. This entry has a negative sign.</i>
Oferta Interna Bruta Gross Domestic Supply	8	Quantidade de Energia que se coloca à disposição do país para ser submetida aos Processos de Transformação e/ou Consumo Final. Corresponde à soma algebrica das linhas 4 a 7. <i>Quantity of Energy made available in the country for transformation and/or for Final Consumption. Equivalent to the Algebraic Sum of Lines 4 to 7.</i>

V.2.4 – Supply

The amount of energy available for transformation and/or for final consumption.

V.2.5 – Transformação

O Setor Transformação agrupa todos os centros de transformação onde a energia que entra (primária e/ou secundária) se transforma em uma ou mais formas de energia secundária com suas correspondentes perdas na transformação.

V.2.5 – Transformation

The transformation sector includes all transformation centers where primary and/or secondary energy is processed by modification of its properties or original state.

	Linhas da Matriz <i>Lines of the Matrix</i>	Fontes <i>Sources</i>
Total Transformação <i>Total Transformation</i>	9	Soma das linhas 9.1 a 9.10. As quantidades colocadas nas colunas 1 a 9 e 11 a 25 representam a soma algébrica de Energia Primária e Secundária que entra e sai do conjunto dos Centros de Transformação. <i>Addition of lines 9.1 to 9.10. The quantities assigned to columns 1 to 9, and 11 to 25, represent the algebraic sum of Primary and Secondary Energy entering and leaving all the Transformation Centers.</i>
Centros de Transformação <i>Transformation Centers</i>	9.1 a 9.9	Refinarias de Petróleo, Plantas de Gás Natural, Usinas de Gaseificação, Coquearias, Ciclo do Combustível Nuclear, Centrais Elétricas de Serviço Público e Autoprodutoras, Carvoarias e Destilarias. <i>Oil Refineries, Natural Gas Plants, Gasification Plants, Cooking Plants, Nuclear Fuel Cycle, Public utilities and self-production Power Plants, Charcoal Plants and Distilleries.</i>
Outras Transformações Other <i>Transformations</i>	9.10	Inclui os Efluentes (produtos energéticos) produzidos pela indústria química, quando do processamento da Nafta e outros produtos Não-Energéticos de Petróleo. <i>Refers to Gasoline and LPG produced when the Chemical Industry processes Naphtha and Oil Products or Raw Materials.</i>

Observações importantes sobre os sinais nos centros de Transformação:

a) toda energia primária e/ou secundária que entra (como insumo) no centro de transformação tem sinal negativo.

b) toda energia secundária produzida nos centros de transformação tem sinal positivo.

Important notes regarding signs:

a) *all primary or secondary energy put in transformation centers carries a negative sign.*

b) *all secondary energy produced by transformation centers carries a positive sign.*

V.2.6 – Perdas

V.2.6 – Losses

	Linhas da Matriz <i>Lines of the Matrix</i>	Fontes <i>Sources</i>
Perdas na Distribuição e Armazenagem <i>Losses in Distribution and Storage</i>	10	Perdas ocorridas durante as atividades de produção, transporte, distribuição e armazenamento de energia. Como exemplos, podem se destacar: perdas em Gasodutos, Oleodutos, Linhas de Transmissão de Eletricidade, Redes de Distribuição Elétrica. Não se incluem nesta linha as perdas nos Centros de Transformação. <i>Losses occurring during Production, Distribution and Storage of Energy. For example: Losses in Gas and Oil Pipelines, Electricity Transmission Lines and Electrical and Gas Distribution Networks. This line does not include Losses in Transformation Centers.</i>

V.2.7 – Consumo Final

Nesta parte se detalham os diferentes setores da atividade socioeconômica do país, para onde convergem as energias primária e secundária, configurando o Consumo Final de Energia.

V.2.7 – Final Consumption

Listed below are the different economic sectors to which primary and secondary energy flows, making up total final energy consumption.

	Linhas da Matriz Lines of the Matrix	Fontes Sources
Consumo Final <i>Final Consumption</i>	11	Energia Primária e Secundária que se encontra disponível para ser usada por todos os setores de consumo Final do país, incluindo o Consumo Final Energético e o Consumo Final Não-Energético. Corresponde à soma das linhas 11.1 e 11.2. <i>Primary and secondary energy made available for utilization by all the country's final consumption sectors. Includes both Final Energy and Final Non-energy Consumption. Add line 11.1 and 11.2.</i>
Consumo Final Não Energético <i>Final Non-Energy Consumption</i>	11.1	Quantidade de Energia contida em produtos que são utilizados em diferentes setores para fins Não-Energéticos. <i>Amount of energy contained in products utilized by different sectors for Nonenergy Purposes.</i>
Consumo Final Energético <i>Final Energy Consumption</i>	11.2	Agrega o Consumo Final dos Setores Energético, Residencial, Comercial, Público, Agropecuário, Transportes, Industrial e Consumo Não-Identificado. É a somatória das linhas 11.2.1 a 11.2.8. <i>Final Consumption in the following sectors: Energy Sector, Residential, Commercial, Public, Agricultural, Transportation, Industrial and Unidentified Consumption. Equivalent to the algebraic sum of lines 11.2.1 to 11.2.8.</i>
Consumo Final do Setor Energético <i>Final Consumption by Energy Sector</i>	11.2.1	Energia consumida nos Centros de Transformação e/ou nos processos de extração e transporte interno de Produtos Energéticos, na sua forma final. <i>Energy consumed by Transformation Centers and/or by Energy Extraction and Transportation Processes, when the energy products are in their final form.</i>
Consumo Final Residencial <i>Final Residential Consumption</i>	11.2.2	Energia consumida no Setor Residencial, em todas as classes. <i>Energy consumed by Residential Sector for all class.</i>
Consumo Final Comercial <i>Final Commercial Consumption</i>	11.2.3	Energia consumida no Setor Comercial, em todas as classes. <i>Energy consumed by Commercial Sector for all class.</i>
Consumo Final Público <i>Final Public Consumption</i>	11.2.4	Energia consumida no Setor Público, em todas as classes. <i>Energy consumed by Public Sector for all class.</i>
Consumo Final Agropecuário <i>Final Agricultural Consumption</i>	11.2.5	Energia total consumida nas classes Agricultura e Pecuária. <i>Total energy consumed in Agriculture and Cattle-raising segments.</i>
Consumo Transportes - Total <i>Total Transportation Consumption</i>	11.2.6	Energia consumida no Setor Transportes, englobando os segmentos rodoviário, ferroviário, aéreo e hidroviário. É a somatória das linhas 11.2.6.1 a 11.2.6.4. <i>Energy consumed by the Transportation Sector, including Highways, Railroads, Airways, and Waterways segments. Equivalent to the sum of lines 11.2.6.1 to 11.2.6.4.</i>
Consumo Final Industrial Total <i>Total Industrial Final Consumption</i>	11.2.7	Energia consumida no setor industrial, englobando os segmentos cimento, ferro-gusa e aço, Ferroligas, mineração e pelotização, não-ferrosos e outros da metalurgia, química, alimentos e bebidas, têxtil, papel e celulose, cerâmica e outros. É a somatória das linhas 11.2.7.1 a 11.2.7.11. <i>Energy consumed by Industrial Sector, including Cement, Pig Iron and Steel, Ironalloys, Mining and Pelletization, Non-ferrous and Other Metals, Chemical, Foods and Beverages, Textile, Paper and Pulp, Ceramics and other segments. Equivalent to the sum of lines 11.2.7.1 to 11.2.7.11.</i>
Consumo Não-identificado <i>Unidentified Consumption</i>	11.2.8	Corresponde ao consumo que, pela natureza da informação compilada, não pode ser classificado num dos setores anteriormente descritos. <i>Consumption that cannot be classified in any of the previously listed sectors.</i>

V.2.8 – Ajustes Estatísticos

Ferramenta utilizada para compatibilizar os dados correspondentes à oferta e consumo de energia provenientes de fontes estatísticas diferentes.

V.2.8 – Statistical Adjustments

Device used to facilitate comparability of energy supply and consumption data from different statistical sources.

	Linhas da Matriz Lines of the Matrix	Fontes Sources
Ajustes Adjustments	12	Quantifica os déficits e superávits aparentes de cada energia, produtos de erros estatísticos, informações ou medidas. Quantifies the apparent deficits and surpluses, which result from statistical error, errors in information and measurement errors.

Os ajustes para cada coluna (1 a 25) são calculados da seguinte forma:

AJUSTES = OFERTA INTERNA BRUTA (-) TOTAL TRANSFORMAÇÃO (-) PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM (-) CONSUMO FINAL.

O ajuste é negativo se a oferta interna bruta for maior que as outras parcelas e vice-versa.

The adjustments to be introduced in each column (1 to 25) are calculated as follows:

ADJUSTMENTS = GROSS DOMESTIC SUPPLY (-) TOTAL TRANSFORMATION (-) LOSSES IN DISTRIBUTION AND STORAGE (-) FINAL CONSUMPTION.

The adjustment is negative whenever gross domestic supply happens to be greater than the other items, and vice versa.

V.2.9 – Produção de Energia Secundária

Corresponde à soma dos valores positivos que aparecem nas linhas 9.1 a 9.10.

V.2.9 – Secondary Energy Production

Equivalent to the sum of positive values of lines 9.1 to 9.10.

V.3 – Convenção de Sinais

Nos blocos de oferta e centros de transformação, da matriz do Quadro C1 (produção, importação, retirada de estoque, saídas dos centros de transformação), toda quantidade de energia que tende a aumentar a energia disponível no país é POSITIVA, enquanto que toda quantidade que tende a diminuir a energia disponível no país é NEGATIVA (acréscimo de estoque, exportação, não-aproveitada, reinjeção, energia transformada, perdas na transformação e perdas na distribuição e armazenagem).

V.3 – Sign Convention

In the part referring to the energy sector (see matrix C1: production, imports, inventory withdrawals, exits from transformation centers) every quantity of energy that increases available energy in the country has a POSITIVE sign. Conversely, every amount that causes a decrease in available energy in the country has a NEGATIVE sign (increase in inventory, exports, non-utilized energy and re-injected energy, transformed energy, transformation losses and distribution and storage losses).

Finalmente, todos os dados que se encontram na parte referente ao consumo por motivo de simplificação, na apresentação, aparecem como quantidades aritméticas (sem sinal).

Finally, all data found in the section on final energy consumption are also negative. To simplify presentation, they are given as arithmetic quantities (without sign).

V.4 - Operações Básicas da Matriz Balanço Energético

V.4.1 - Energia Primária e Secundária

O fluxo energético de cada fonte primária e secundária é representado pelas seguintes equações:

OFERTA TOTAL = PRODUÇÃO (+) IMPORTAÇÃO (+) OU (-) VARIACÃO DE ESTOQUES

OFERTA INTERNA BRUTA = OFERTA TOTAL (-) EXPORTAÇÃO (-) NÃO-APROVEITADA (-) REINJEÇÃO

E ainda:

OFERTA INTERNA BRUTA = TOTAL TRANSFORMAÇÃO (+) CONSUMO FINAL (+) PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM (+) OU (-) AJUSTE.

Deve ser observado que a produção de energia secundária aparece no bloco relativo aos centros de transformação, tendo em vista ser toda ela proveniente da transformação de outras formas de energia. Assim, para evitar-se dupla contagem, a linha de "produção" da matriz fica sem informação para as fontes secundárias. Mesmo assim, para a energia secundária também valem as operações anteriormente descritas, desde que se considere a produção nos centros de transformação como parte da oferta.

V.4.2 - Transformação

Nesta parte, configurada pelos centros de transformação, é observada a seguinte operação:

PRODUÇÃO DE ENERGIA SECUNDÁRIA = TRANSFORMAÇÃO PRIMÁRIA (+) TRANSFORMAÇÃO SECUNDÁRIA (-) PERDAS NA TRANSFORMAÇÃO

V.4.3 - Consumo Final de Energia

CONSUMO FINAL = CONSUMO FINAL PRIMÁRIO (+) CONSUMO FINAL SECUNDÁRIO

E ainda:

CONSUMO FINAL = CONSUMO FINAL Não-energético (+) CONSUMO FINAL ENERGÉTICO

V.4 - Basic Operations in the Matrix

V.4.1 - Primary and Secondary Energy

The energy flow of each source is shown by the following formula:

TOTAL SUPPLY = PRODUCTION (+) IMPORTS (+) OR (-) VARIATION IN INVENTORIES

GROSS DOMESTIC SUPPLY = TOTAL SUPPLY (-) EXPORTS (-) NON-UTILIZED (-) RE-INJECTION

Or:

GROSS DOMESTIC SUPPLY = TOTAL TRANSFORMATION (+) FINAL CONSUMPTION (+) DISTRIBUTION AND STORAGE LOSSES (+) OR (-) ADJUSTMENTS.

It should be noted that production of secondary energy appears in the figure at the stage pertaining to transformation centers, as the production derives entirely from primary energy. In order to avoid double counting total production of secondary energy is not inserted in the line corresponding to production of primary energy. This way, the operations related to secondary energy are not presented in the matrix. However, these considerations will be valid when secondary products are studied separately.

V.4.2 - Transformation

This stage is characterized by the transformation centers and the following formula is applied:

SECONDARY ENERGY PRODUCTION = PRIMARY TRANSFORMATION (+)

SECONDARY TRANSFORMATION (-) TRANSFORMATION LOSSES

V.4.3 - Final Energy Consumption

FINAL CONSUMPTION = FINAL PRIMARY CONSUMPTION (+) FINAL SECONDARY CONSUMPTION

Or:

FINAL CONSUMPTION = FINAL NON-ENERGY CONSUMPTION (+) FINAL ENERGY CONSUMPTION

Anexo VI. Tratamento das informações

VI.1 – Aspectos Gerais

O processo de aperfeiçoamento contínuo a que é submetido o Balanço Energético Nacional, no sentido de melhor representar a realidade energética brasileira, desde os aspectos da precisão da informação até o seu detalhamento em diferentes níveis de desagregação, faz com que se apresentem, às vezes, algumas diferenças entre os dados de uma edição e outra, e, por esse motivo, sempre a última edição é a que apresenta a posição mais rigorosa.

Assim, neste anexo, são apresentadas as fontes de dados e os aspectos peculiares de algumas fontes de energia quanto à forma de obtenção de seus dados, bem como os esclarecimentos, julgados necessários, para dirimir dúvidas quanto a alterações em relação aos balanços energéticos anteriores.

VI.2 – Classificação Setorial

A classificação de consumo setorial do Balanço Energético Nacional segue o Código de Atividades da Receita Federal (Portarias no 907, de 28 de agosto de 1989, e no 962, de 29 de dezembro de 1987 - DOU de 31/12/87 - Seção I). Mas recentemente o processo de coleta e tratamento dos dados vem se ajustando à atual Classificação Nacional de Atividades Econômicas - CNAE.

VI.3 – Fontes de Dados

Neste item são apresentadas as entidades que atuam, de forma direta ou indireta, como fontes de dados para a elaboração do BEN:

VI.3.1 – Petróleo, Gás Natural e Xisto

- Agência Nacional de Petróleo - ANP
- Petróleo Brasileiro S.A. - Petrobras
- Companhias Distribuidoras de Derivados
- Entidades de Classe e Grandes Indústrias

VI.3.2 – Carvão Mineral

- Sindicato Nacional da Indústria de Extração do Carvão
- Grandes Indústrias

Annex VI. Treatment of Information

VI.1 – General Aspects

As a result of a continuing search for improvement, each edition of the Brazilian Energy Balance contains the most accurate and detailed figures to date.

For this reason some differences between the data shown in the latest edition and the previous ones may arise. Explanatory notes on these differences are included in the latest edition.

Therefore, this Annex presents the data source and peculiar aspects of some energy sources regarding the way they were obtained, as well as clarifications about changes compared to previous energy balances.

VI.2 – Sector Classification

The classification for the sector consumption of Brazilian Energy Balance follows the Activities Code of Federal Revenue Bureau (Decrees n. 907, 08/28/1989, and n. 962, 12/29/1998).

VI.3 – Data Sources

This item presents the entities that work, direct or indirectly, as data sources for the BEB elaboration:

VI.3.1 – Petroleum, Natural Gas and Oil Shale

- Agência Nacional de Petróleo - ANP
- Petróleo Brasileiro S.A. - Petrobras
- Oil Products Distribution Companies
- Class Entities and Large Industries

VI.3.2 – Steam Coal And Metallurgical Coal

- Sindicato Nacional da Indústria de Extração do Carvão
- Large Industries

VI.3.3 – Hydraulic Energy and Electricity

- Agência Nacional de Energia Elétrica - ANEEL
- Centrais Elétricas Brasileiras S.A. - Eletrobras
- Electric Energy Concessionaries
- Câmara de Comercialização de Energia Elétrica - CCEE
- Operador Nacional do Sistema - ONS

VI.3.3 – Energia Hidrelétrica e Eletricidade

- Agência Nacional de Energia Elétrica – ANEEL
- Centrais Elétricas Brasileiras S.A. – Eletrobras
- Concessionárias de Energia Elétrica
- Operador Nacional do Sistema – ONS
- SIMPLES – EPE
- Câmara de Comercialização de Energia Elétrica – CCEE
- Grandes Indústrias

VI.3.4 – Lenha e Carvão Vegetal

- Fundação Instituto Brasileiro de Geografia e Estatística – IBGE
- Grandes Indústrias
- Mineradoras
- Projeto Matriz Energética Brasileira – MEB – MME / IPEA

VI.3.5 – Cana-de-Açúcar, Álcool e Bagaço de Cana

- Ministério da Agricultura, Pecuária e Abastecimento – MAPA
- Entidades de Classe
- Indústrias do Setor
- Agência Nacional do Petróleo, Gás Natural e Biocombustíveis – ANP

VI.3.6 – Energia Nuclear

- Indústrias Nucleares do Brasil – INB

VI.3.7 – Outras Instituições

– Fontes de Dados:

- Associação Brasileira de Celulose e Papel – BRACELPA
- Sindicato Nacional da Indústria de Cimento – SNIC
- Associação Brasileira dos Produtores de Ferro-Ligas – ABRAFE
- Instituto Aço Brasil – IBS
- Associação Brasileira de Fundação – ABIFA
- Sindicato Nacional da Indústria e Extração de Estanho – SNIEE
- Associação Brasileira de Alumínio – ABAL

- *Large Industries*

VI.3.4 – Firewood and Charcoal

- *Fundação Instituto Brasileiro de Geografia e Estatística – IBGE*
- *Large Industries*
- *Coal Mining Companies*
- *Projeto Matriz Energética Brasileira – MEB – MME / IPEA*

VI.3.5 – Sugar Cane, Alcohol and Sugar Cane Bagasse

- *Alcohol and Sugar Department – Agriculture Ministry*
- *Class Entities*
- *Sector Industries*
- *Brazil’s National Agency of Petroleum, Natural Gas and Biofuels*

VI.3.6 – Nuclear Energy

- *Indústrias Nucleares do Brasil – INB*

VI.3.7 – Other Information Sources

- *Associação Brasileira de Celulose e Papel – BRACELPA*
- *Sindicato Nacional da Indústria de Cimento – SNIC*
- *Associação Brasileira dos Produtores de Ferro-ligas – ABRAFE*
- *Brazil Steel Institute – IBS*
- *Associação Brasileira de Fundação – ABIFA*
- *Sindicato Nacional da Indústria e Extração de Estanho – SNIEE*
- *Associação Brasileira de Alumínio – ABAL*
- *Sindicato da Indústria de Ferro no Estado de Minas Gerais – SINDIFER*
- *Fundação IBGE, for general data about Brazil.*

VI.4 – Peculiarities in Data Processing

VI.4.1 – Petroleum, Natural Gas and By-Products

The sources of data on production, imports, exports, inventories and transformation, are from Petrobras, ANP and Federal Revenue Bureau.

For sector consumption are used the

- Sindicato da Indústria de Ferro no Estado de Minas Gerais – SINDIFER
- Fundação IBGE, para dados gerais sobre o país.

VI.4 – Peculiaridades no Tratamento das Informações

VI.4.1 – Petróleo, Gás Natural e Derivados

Para os dados de produção, importação, exportação, estoques e transformação são utilizadas informações fornecidas pela Petrobras, ANP e Receita Federal. Para os dados de consumo setorial, são utilizadas as fontes Petrobras, ANP, Entidades de Classe e Grandes Indústrias.

Na Petrobras são geradas as informações relativas às entregas e vendas feitas diretamente pelas refinarias. Na ANP são geradas as informações relativas às vendas das distribuidoras aos consumidores, as quais são disciplinadas pela Portaria CNP-DIPLAN no 221, de 25/06/81 e são desagregadas pelas atividades ditadas pela Receita Federal. Nas Entidades de Classe e Grandes Indústrias são obtidas informações de consumo real.

Da conciliação dos dados dessas fontes e da análise de consistência das informações elaboram-se os fluxos energéticos do petróleo, gás natural e seus derivados.

VI.4.2 – Carvão Vapor e Carvão Metalúrgico

As condições das jazidas (pequenas espessuras de camadas) e os métodos de lavra do carvão mineral conduzem à extração de um "carvão bruto" (ROM) com elevadas parcelas de material inerte (argillitos e outros). Assim, considera-se o carvão mineral como fonte de energia primária no Balanço Energético Nacional, após o seu beneficiamento, nas formas de carvão vapor e carvão metalúrgico.

VI.4.3 – Energia Nuclear

No Balanço Energético Nacional o tratamento da energia nuclear está de acordo com o seguinte fluxo: o urânio natural na forma de U_3O_8 (energia primária) entra no ciclo do combustível nuclear (centro de transformação) e é transformado em

sources: Petrobras, ANP, Industry Associations and Large Industries. Informations referring to sales made directly by the refineries are furnished from Petrobras. The information referring to sales made by the distributors to consumers is furnished by ANP, which is regulated by Decree CNP-DIPLAN n.º 221, dated June 25, 1981 and is broken down according to Federal Revenue Bureau criteria. Real consumption data is obtained from Industry Associations and Large Industries.

Based on the reconciliation of these sources and on the analysis of the consistency of the information, the petroleum, natural gas and by-products energy flows are elaborated.

VI.4.2 – Steam Coal and Metallurgical Coal

Geological conditions of the coal pits (small thickness of layers) and the methods of mining coal lead to the extraction of run-of-mine coal with large amounts of inert matter (argillites, etc). In the balance calculations fossil coal after beneficiation, in the forms of steam and metallurgical coal is considered primary energy.

VI.4.3 – Nuclear Energy

In the Brazilian Energy Balance, the accounting of nuclear energy is according to the following flow: the natural uranium in the form of U_3O_8 (primary energy) enters in the nuclear fuel cycle (transformation center) and is transformed into uranium in UO_2 fuel elements (secondary energy), with the losses due to the manufacturing process.

Due to the large number of activities involved in the processing of natural uranium in the form of U_3O_8 into enriched uranium contained in UO_2 pellets, components of the fuel elements, the average processing time is 21 months (without taking into account the recycling time of uranium and plutonium from the fuel already irradiated).

Because of this, all the uranium that is in being processed in the nuclear fuel cycle is considered as inventory of U_3O_8 . Every year an account is made for the amount of uranium (content of the UO_2) put out of the inventory. Losses of 1.5%

urânio contido no UO_2 dos elementos combustíveis (energia secundária), com as respectivas perdas de transformação.

Devido ao grande número de atividades envolvidas na transformação do urânio natural na forma de U_3O_8 em urânio enriquecido contido em pastilhas de UO_2 , componentes dos elementos combustíveis, o tempo médio de processamento dessa transformação é de 21 meses (sem levar em consideração o tempo de reciclagem de parte do urânio e do plutônio dos combustíveis já irradiados).

Devido a esse fato, todo urânio que estiver em processamento no ciclo do combustível é registrado como estoque de U_3O_8 . A cada ano é estornado do estoque de U_3O_8 a parcela correspondente à produção do urânio contido no UO_2 dos elementos combustíveis, acrescida de cerca de 1,5% de perdas de transformação.

VI.4.4 – Energia Hidrelétrica e Eletricidade

Considera-se como geração hidráulica o valor correspondente à produção bruta de energia, medido nas centrais. Não é considerada a parcela correspondente à energia vertida.

VI.4.5 – Lenha e Carvão Vegetal

A produção de lenha e carvão vegetal é determinada a partir dos dados de consumo, não levando em conta a variação de estoques. Os dados de consumo setorial de lenha, à exceção das Indústrias de Papel e Celulose, Cimento e Pelotização e de Não-ferrosos, das quais são obtidas informações de consumo real, são calculados por interpolações e extrapolações dos dados do projeto Matriz Energética de 1970, dos censos do IBGE e mediante correlações com o consumo setorial dos outros energéticos, como é o caso do GLP no setor residencial.

Para o carvão vegetal, o consumo setorial industrial é obtido diretamente dos consumidores e o consumo dos outros setores é estimado da mesma forma que a lenha. A produção de carvão vegetal é calculada segundo seu consumo,

due to the transformation are considered in the account.

VI.4.4 – Hydraulic Energy and Electricity

In this case hydraulic generation is the gross electricity production as measured at the hydraulic plants. The portion corresponding to leaked energy is not considered.

VI.4.5 – Firewood and Charcoal

Production of firewood and charcoal is determined based on consumption data, not taking into account any inventory variation.

Firewood sector consumption data, except those from Pulp and Paper and Non-ferrous Industries, from which real consumption data are furnished, are obtained through extrapolation of the data from the Energy Matrix Project, 1970, from IBGE survey and by means of correlation with the sector consumption of the energy products, such as LPG in the residential sector.

Charcoal: the industrial sector consumption is directly obtained from the consumers. The consumption data of the other sectors is obtained in the same manner as for firewood. Charcoal production is calculated taking in account percentage losses in distribution and storage.

VI.4.6 – Sugar Cane Products

They are obtained from squeezed Sugar-cane to produce sugar and alcohol. It is considered as primary products the cane juice, molasses, bagasse, leaves and points, and as secondary products the anhydrous and hydrated alcohol. Each ton of squeezed Sugar-cane produces around 730 kg of Sugar-cane juice (it is not considered the water used in the Sugar-cane wash). Concerning the bagasse, it is considered only the energetic use. The technical note COBEN 03/88, mentioned in the item 5, provides more information about this subject.

VI.4.7 – Coke

Production and consumption data are directly obtained from industries (CSN, COSIPA, USIMINAS, AÇOMINAS, and others). Energy import and

levando-se em conta um percentual de perdas na distribuição e armazenagem.

VI.4.6 – Produtos da Cana-de-Açúcar

São obtidos a partir da cana esmagada para produção de açúcar e álcool. São considerados como produtos primários o caldo da cana, melaço, bagaço, pontas, folhas e olhaduras, e como produtos secundários o álcool anidro e hidratado. De cada tonelada de cana esmagada para produção de álcool são obtidos cerca de 730 kg de caldo de cana (não se considera a água utilizada na lavagem da cana). Quanto ao bagaço, é considerado apenas o de uso energético.

A Nota Técnica COBEN 03/88, mencionada no item 5 deste anexo, fornece mais informações sobre o assunto.

VI.4.7 – Coque de Carvão Mineral

Os dados de produção e consumo são obtidos diretamente nas Indústrias (CSN, Usiminas, Açominas, CST, Cosipa e outras). Os dados de comércio externo são obtidos na Secretaria de Comércio Exterior.

VI.5 – Notas Técnicas

Com o objetivo de melhor divulgar os critérios adotados na apropriação dos dados dos balanços energéticos foram elaboradas Notas Técnicas, que podem ser obtidas no endereço:

<http://www.mme.gov.br/publicacoes/balancoenergeticonacional>

- NT COBEN 01/1988 – Critérios de apropriação dos dados da Matriz do Balanço Energético Nacional.
- NT COBEN 02/1988 – Critérios de apropriação dos dados de vendas do DNC nos setores do Balanço Energético Nacional.
- NT COBEN 03/1988 – Tratamento da cana-de-açúcar no BEN.
- NT COBEN 04/1988 – Novo fator de conversão para a lenha.
- NT COBEN 05/1988 – Balanço Energético Nacional - BEN 1988: Alterações em relação ao Balanço anterior.
- NT COBEN 06/1988 – Análise da distribuição do consumo de óleo diesel no BEN.

export data are provided by the Federal Revenue Bureau.

VI.5 – Technical Notes

In order to better show up the adopted criteria in data appropriation of the energy balances, technical notes were elaborated, which are available in the site:

<http://www.mme.gov.br/publicacoes/balancoenergeticonacional>

- *NT COBEN 01/1988 – Appropriation criteria of the Brazilian Energy Balance Matrix data.*
- *NT COBEN 02/1988 – Appropriation criteria of the DNC sale data by sectors of the Brazilian Energy Balance.*
- *NT COBEN 03/1988 – Sugar-cane treatment in BEB.*
- *NT COBEN 04/1988 – New conversion factor for firewood.*
- *NT COBEN 05/1988 – Brazilian Energy Balance: BEB1988: Changes in relation to the previous balance.*

- NT COBEN 07/1988 – Avaliação do consumo residencial de lenha e carvão vegetal no BEN.
- NT 08/1993 – Tratamento da Cogeração nos Balanços Energéticos.
- NT 09 – Fatores de Conversão para tep da Hidráulica e Eletricidade.
- NT COBEN 06/1988 – Distribution analysis of the diesel oil consumption in BEB.
- NT COBEN 07/1988 – Evaluation of the residential consumption of firewood and charcoal in BEB.
- NT 08/1993 – Cogeneration Treatment in Energy Balances.
- NT 09 – Conversion Factors from Hydraulic and Electricity to toe.

VI.6 – Eletricidade no Balanço Energético Nacional – BEN

Nas edições do Balanço Energético Nacional anteriores a 2001, o critério adotado para o cálculo em tep dos montantes de Eletricidade e Geração Hidrelétrica considerava os parâmetros da base térmica, onde 1kWh = 3132 kcal correspondente ao óleo combustível queimado numa térmica com rendimento de 27,5%. Assim, o fator de conversão de 0,29 tep/MWh (3132/10800kcal/kg do petróleo) elevava a energia hidráulica a parâmetros comparáveis com países eminentemente de geração térmica.

Na edição de 2002 do BEN, os critérios utilizados para o cálculo dos montantes em tep da Eletricidade e Geração Hidráulica foram alterados para a base teórica, onde 1 kWh = 860 kcal. Entretanto, permaneceram o petróleo de referência de 10800 kcal/kg e a utilização dos poderes caloríficos superiores para as fontes de energia.

Nas edições a partir de 2003, estes critérios de conversões para eletricidade e geração hidráulica permaneceram na base teórica (1 kWh = 860 kcal), contudo, o petróleo de referência passou a ser 10000kcal/kg e passaram a ser adotados os poderes caloríficos inferiores para as demais fontes de energia. Estes novos critérios são aderentes com os critérios internacionais, especialmente com os da Agência Internacional de Energia, Conselho Mundial de Energia, Organização Latino-americana de Energia e o Departamento de Energia dos Estados Unidos.

VI.6 – Electricity in the Brazilian Energy Balance – BEB

The previous editions of the Brazilian Energy Balance 2002 adopted criteria to evaluation of the electricity and hydroelectricity generation segments considered the thermic base parameters, that means 1kWh = 3132 kcal, which corresponds to the fuel oil burned in a thermoelectric plant with an yield of 27.5%. This resulted in a conversion index of 0.29 toe/MWh (3132/10800 kcal/kg), which increase the hydraulic energy values in order to compare with the other counties eminently with thermic generation.

The Brazilian Energy Balance 2002 adopted, for hydraulic and electricity supply and consumption, the conversion factor 0.08 toe/MWh (1 kWh = 860 kcal). However, it maintained the petroleum reference of 10,800 kcal/kg and the use of superior calorific powers to the energy sources.

In this edition, and in the last one these conversion criteria for electricity and hydraulic generation kept in the theoretical base (1 kWh = 860 kcal), but it were adopted the petroleum reference of 10000 kcal/kg and inferior calorific powers for the other energy sources. These new criteria are in agreement with the international criteria, specially the ones of International Energy Agency, World Energy Consul, Latin-American Energy Organization and, United State energy Department.

Anexo VII. Unidades

VII.1 – Unidade Básica Adotada

Para expressar os fluxos que conformam balanços de energia deve-se adotar uma única unidade de medida na agregação das suas diversas variáveis.

A unidade básica adotada na composição do Balanço Energético Nacional - BEN é a "tonelada equivalente de petróleo - tep", uma vez que a mesma:

- a) está relacionada diretamente com um energético importante;
- b) expressa um valor físico;

Atenção: O BEN, a partir da edição de 2003, passou a adotar os critérios internacionais mais usuais para a conversão das unidades comerciais de energia em uma unidade comum de referência. Assim, (i) o petróleo de referência passou a ser o de 10000 kcal/kg, (ii) todos os fatores de conversões passam a ser determinados com base nos poderes caloríficos inferiores das fontes de energia, e (iii) para a energia hidráulica e elétrica passam a ser considerados os coeficientes de equivalência teórica, onde 1kWh = 860 kcal (1º Princípio da Termodinâmica).

VII.2 – Tratamento das Unidades por Produto

VII.2.1 – Petróleo e Derivados, Gás Natural, Álcool e Xisto

A Petrobras, por meio dos setores de controle de qualidade das suas refinarias de petróleo e do Centro de Pesquisas Leopoldo Américo Miguez de Mello - CENPES, mantém atualizadas as características físico-químicas de todos os seus produtos, estabelecendo, ao final de cada ano, coeficientes médios para cada um. Dessa forma, são apresentados no balanço as massas específicas e poderes caloríficos inferiores observados em cada ano.

VII.2.2 – Carvão Vapor

O carvão vapor nacional é produzido nas mais diversas formas quanto às suas características físico-químicas, apresentando teores de cinzas de

Annex VII. Units

VII.1 – Basic Unit Adopted

As energy flows are expressed in different units, a uniform unit of measure must be adopted.

The basic unit adopted in Brazilian Energy Balance - BEB was the "TON OIL EQUIVALENT - toe", because it:

- a) is directly related to the most important current source of energy;*
- b) expresses a physical value.*

Note: This document, like the previous edition, adopt the most used international criteria for the conversion of energy commercial units to a common reference unit. Thus, (i) the petroleum reference adopted was 10000 kcal/kg; (ii) all the conversion factors were determined using the inferior calorific powers of energy sources; and (iii) it was considered the equivalence theoretical coefficient to hydraulic energy and electricity, which means 1kwh = 860 kcal (First Thermodynamic Axiom).

VII.2 – Unit Treatment by Products

VII.2.1 – Petroleum and its Derivatives, Natural Gas, Alcohol and Oil Shale

Petrobras, by means of the quality control sectors of its petroleum refineries and of the Leopoldo Américo Miguez from Mello Research Center - CENPES, maintains updated the physical and chemical characteristics of all of its products, establishing at the end of each year, average coefficients for each one. Thus, the specific mass and the inferior heating values, observed in each year, are showed in the balance.

VII.2.2 – Steam Coal

The brazilian steam coal is produced in several ways concerning its physical and chemical characteristics, presenting ash contents from 20% to 54% and several variations of sulphur, volatiles, fixed carbon and other contents. The coal analysis is done by some processing plants, with their own laboratories, in Science and Technology Foundation - CIENTEC and in the Mineral Technology Center - CETEM.

20% até 54% e múltiplas variações de teores de enxofre, voláteis, carbono fixo e outros. A análise dos carvões é feita em algumas usinas de beneficiamento equipadas com laboratórios próprios, na Fundação de Ciência e Tecnologia - CIENTEC e no Centro de Tecnologia Mineral - CETEM.

Sua equivalência para tep é determinada a partir dos poderes caloríficos médios dos diversos tipos de carvões processados.

VII.2.3 – Carvão Metalúrgico

a) Importado: adotado o poder calorífico fornecido pela Companhia Siderúrgica Nacional – CSN, que se situa dentro da faixa dos diversos carvões metalúrgicos importados.

b) Nacional: adotado o poder calorífico fornecido pela CSN.

VII.2.4 – Urânio – U_3O_8

Adotado o coeficiente de equivalência informado pelas Indústrias Nucleares do Brasil.

VII.2.5 – Energia Hidrelétrica e Eletricidade

O coeficiente de equivalência utilizado foi de 0,086 tep/MWh, decorrente de uma equivalência calórica de 860 kcal/kWh. Este coeficiente foi determinado pela equivalência da energia potencial da água (energia mecânica) em calor.

VII.2.6 – Lenha

A unidade primária da lenha é o metro cúbico estereo (m^3 st). Para a lenha de uso residencial (vulgarmente identificada como "catada"), foi adotada densidade de $300 \text{ kg}/m^3$ st, valor médio identificado em pesquisa realizada pela Fundação Centro Tecnológico de Minas Gerais - CETEC em localidades do Estado de Minas Gerais.

Para a lenha comercial, foi utilizada a densidade de $390 \text{ kg}/m^3$ st, segundo dados fornecidos pela BRACELPA. A Nota Técnica COBEN 04/88, mencionada no item 5 do Anexo D, contém mais detalhes sobre o assunto.

VII.2.7 – Produtos da Cana-de-açúcar

O conteúdo calórico da cana-de-açúcar, considerando os seus componentes (sacarose, fibras, água e outros), é de, aproximadamente, 1060

Its equivalence to toe is determined from the average calorific powers of the several types of processed coal.

VII.2.3 – Metallurgical Coal

a) Imported: it was adopted the calorific power provided by the National Metallurgical Company – CSN, which stays in the zone of the several imported metallurgical coals.

b) Brazilian: it was adopted the calorific power provided by CSN.

VII.2.4 – Urânio – U_3O_8

It was adopted the coefficient of equivalence provided by Brazilian Nuclear Industry.

VII.2.5 – Hydraulic Energy and Electricity

It was adopted the coefficient of equivalence of 0,086 toe/MWh, or 860 kcal/kWh. This coefficient was determined by the equivalence of water potential energy (mechanic energy) in heat.

VII.2.6 – Firewood

The primary unit of firewood is the stere cubic meter (m^3 st). It was adopted a density of $300 \text{ kg}/m^3$ st for firewood of residential use (colloquially identified as "picking firewood"), average value identified in research made by the Foundation Technologic Center of Minas Gerais - CETEC in cities from Minas Gerais State.

It was adopted a density of $390 \text{ kg}/m^3$ st for commercial firewood, considering the data provided by BRACELPA.

The Technical Note COBEN 04/88, mentioned in Appendix D – item 5, contains greater details about this subject.

VII.2.7 – Sugar Cane Products

The calorific contents of Sugar-cane, considering its components ("sacarose", fibers, water and others), is of, approximately, 1060 kcal/kg. Discounting from this quantity the energy existing in the fibers (bagasse), the calorific power for the Sugar-cane juice gets 620 kcal/kg. It was used the value of 1930 kcal/kg for the molasse with 55% of sugar weight reductors and capable of producing 350 liters of alcohol/t. For the bagasse it was

kcal/kg. Retirando desta quantidade a energia contida nas fibras (bagaço), o poder calorífico para o caldo de cana alcança cerca de 620 kcal/kg. Quanto ao melaço, com cerca de 55% de açúcares redutores em peso e capaz de produzir em torno de 350 litros de álcool/t, chega-se a um valor próximo de 1.930 kcal/kg. Para o bagaço de cana foi utilizado o poder calorífico calculado experimentalmente pelo antigo Instituto do Açúcar e do Alcool - IAA.

VII.2.8 – Outras Fontes Primárias

Incluem-se neste item resíduos vegetais e industriais utilizados para geração de calor e vapor. A equivalência para tep foi estabelecida a partir de poderes caloríficos médios estimados. Para a lixívia, foi empregado o poder calorífico adotado pela BRACELPA.

VII.2.9 – Gás Canalizado e de Coqueria

Foram adotados os poderes caloríficos utilizados pela Companhia Estadual de Gás do Rio de Janeiro - CEG e pela Companhia Estadual de Gás de São Paulo - COMGAS.

VII.2.10 – Coque de Carvão Mineral

Foi utilizado o poder calorífico obtido teoricamente com o emprego da Equação de Dulong, a partir da análise química de uma amostragem média de coque.

VII.2.11 – Urânio contido no UO_2

Foi empregado o coeficiente de equivalência adotado pelas Indústrias Nucleares do Brasil.

VII.2.12 – Carvão Vegetal

O poder calorífico empregado foi de pesquisas efetuadas nas Companhias Siderúrgicas Belgo Mineira e Acesita.

used the calorific power experimentally calculated by the former Sugar and Alcohol Institute -IAA.

VII.2.8 – Other Primary Sources

This item contains vegetal and industrial residues use by heat and vapor generation. The equivalence to tep was established from the estimated average calorific power. For the Black Liquor, it was used the calorific power adopted by BRACELPA.

VII.2.9 – Gasworks Gas and Coke Gas

The calorific powers adopted by the Gas Company of Rio de Janeiro State - CEG and Gas Company of São Paulo State - COMGAS.

VII.2.10 – Coal Coke

It was used the calorific power theoretically obtained with the use of the Dulong's Equation, from the chemical analysis of an average coke sampling.

VII.2.11 – Uranium Contained in UO_2

It was used the equivalence coefficient adopted by the Brazilian Nuclear Industries.

VII.2.12 – Charcoal

The caloric power used was in function of researches done by Belgo-Mineira and Acesita Metallurgical Companies.

Anexo VIII. Fatores de Conversão

Annex VIII. Conversion Factors

Tabela VIII.1 - Relações entre Unidades

Table VIII.1 - Relations between Units

Exponenciais Exponentials	Equivalências Equivalences	Relações práticas Useful relations
(k) kilo = 10 ³	1 m ³ = 6,28981 barris (barrels)	
(M) mega = 10 ⁶	1 barril (barrel) = 0,158987 m ³	1 tep ano (toe year) = 7,2 bep ano (boe year)
(G) giga = 10 ⁹	1 joule = 0,239 cal	1 bep ano (boe year) = 0,14 tep ano (toe year)
(T) tera = 10 ¹²	1 Btu = 252 cal	1 tep ano (toe year) = 0,02 bep dia (boe year)
(P) peta = 10 ¹⁵	1 m ³ de petróleo (of oil) = 0,884 t	1 bep dia (boe day) = 50,0 tep ano (toe year)
(E) exa = 10 ¹⁸	1 tep (toe) = 10000 Mcal	

Tabela VIII.2 – Coeficientes de Equivalência Calórica

Table VIII.2 – Coefficient of Equivalence of the Measure Units

Multiplicar por de	para	(m ³) Óleo combustível Fuel Oil	(10 ³ m ³) Gás natural seco Dry Natural Gas	(t) Carvão Mineral 5200 Coal 5200	(m ³) GLP LPG	(t) Lenha Firewood	(t) Carvão vegetal Charcoal	for	Multiply by from
Unidade física									Physical Unit
Óleo combustível	(m ³)	1,00	1,09	1,94	1,56	3,06	1,48	(m ³)	Fuel Oil
Gás natural seco	(10 ³ m ³)	0,92	1,00	1,78	1,43	2,80	1,36	(10 ³ m ³)	Dry Natural Gas
Carvão Mineral 5200	(t)	0,52	0,56	1,00	0,80	1,58	0,76	(t)	Coal 5200
GLP	(m ³)	0,64	0,70	1,25	1,00	1,97	0,95	(m ³)	LPG
Lenha	(t)	0,33	0,36	0,63	0,51	1,00	0,49	(t)	Firewood
Carvão vegetal	(t)	0,67	0,73	1,31	1,05	2,06	1,00	(t)	Charcoal

Tabela VIII.3 – Fatores de Conversão para Massa

Table VIII.3 – Conversion Factors for Mass

Multiplicar por de	para	kg	t	tl	tc	lb	to	Multiply by from
Quilograma	(kg)	1	0,001	0,000984	0,001102	2,2046	(kg)	kilogram
Tonelada métrica	(t)	1000	1	0,984	1,1023	2204,6	(t)	metric ton
Tonelada longa	(tl)	1016	1,016	1	1,12	2240	(tl)	long ton
Tonelada curta	(tc)	907,2	0,9072	0,893	1	2000	(tc)	short ton
Libra	(lb)	0,454	0,000454	0,000446	0,0005	1	(lb)	pound

Tabela VIII.4 – Fatores de Conversão para Volume

Table VIII.4 – Conversion Factors for Volume

Multiplicar por de	para	m ³	l	gal (EUA)	gal (UK)	bbl	pé(ft) ³	to	Multiply by from
metros cúbicos	(m ³)	1	1000	264,2	220	6,289	35,3147	(m ³)	cubic meter
litros	(l)	0,001	1	0,2642	0,22	0,0063	0,0353	(l)	liters
galões	(EUA)	0,0038	3,785	1	0,8327	0,02381	0,1337	(EUA)	gallons
galões	(RU)	0,0045	4,546	1,201	1	0,02859	0,1605	(RU)	gallons
barris	(bbl)	0,159	159	42	34,97	1	5,615	(bbl)	barrels
pés cúbicos	(pé ³)	0,0283	28,3	7,48	6,229	0,1781	1	(pé ³)	cubic foot

Tabela VIII.5 – Fatores de Conversão para Energia

Table VIII.5 – Energy Conversion Factors

Multiplicar por de	para	J	BTU	cal	kWh	tep (toe)	bep (boe)	to	Multiply by from
Joule	(J)	1	947,8 x 10 ⁻⁶	0,2388	277,8 x 10 ⁻⁹	2,388 x 10 ⁻¹¹	1,681 x 10 ⁻¹⁰	(J)	Joule
Unidade Térmica Britânica	(BTU)	1,055 x 10 ³	1	252	293,07 x 10 ⁻⁶	2,52 x 10 ⁻⁸	1,776 x 10 ⁻⁷	(BTU)	British Thermal Unit
Caloria	(cal)	4,1868	3,968 x 10 ⁻³	1	1,163 x 10 ⁻⁶	10 ⁻¹⁰	7,042 x 10 ⁻¹⁰	(cal)	calorie
Quilowatt-hora	(kWh)	3,6 x 10 ⁶	3412	860 x 10 ³	1	8,598 x 10 ⁻⁵	6,061 x 10 ⁻⁴	(kWh)	kilowatt-hour
Tonelada equivalente de petróleo	(tep)	41,868 x 10 ⁹	39,68 x 10 ⁶	1010	11,63 x 10 ³	1	7,0369	(toe)	Tons of oil equivalent
Barril equivalente de petróleo	(bep)	5,95 x 10 ⁹	5,63 x 10 ⁶	1,42 x 10 ⁹	1,65 x 10 ³	0,1421	1	(boe)	barrels of oil equivalent

Tabela VIII.6 – Coeficientes de Equivalência Médios para os Combustíveis Gasosos

Table VIII.6 – Average Coefficients of Equivalence to the Gas Fuels

Multiplicar por de 10 ³ m ³	para	giga-caloria	tep(toe) (10 ⁴ kcal/kg)	bep	tec(tce) (7000 kcal/kg)	giga-joule	10 ⁶ BTU	megawatt-hora (860 kcal/kWh)	for	Multiply by from 10 ³ m ³
Gás natural úmido		9,93	0,993	6,99	1,419	41,58	39,4	11,55		Humid Natural Gas
Gás natural seco		8,8	0,88	6,2	1,257	36,84	34,92	10,23		Dry Natural Gas
Gás de coqueria		4,3	0,43	3,03	0,614	18	17,06	5		Coke Oven Gas
Gás canalizado Rio de Janeiro		3,8	0,38	2,68	0,543	15,91	15,08	4,42		Gasworks Gas - Rio de Janeiro
Gás canalizado São Paulo		4,5	0,45	3,17	0,643	18,84	17,86	5,23		Gasworks Gas - São Paulo

Tabela VIII.7 – Coeficientes de Equivalência Médios para os Combustíveis Líquidos
 Table VIII.7 – Average Coefficients of Equivalence to the Liquid Fuels

Multiplicar por para De m ³	giga-caloria	tep(toe) (10 ⁶ kcal/kg)	bep(boe)	tec(tce) (7000 kcal/kg)	giga-joule	10 ⁶ BTU	megawatt-hora (860 kcal/kWh)	to Multiply by from m ³
Petróleo	8,90	0,890	6,26	1,271	37,26	35,318	10,35	Petroleum
Óleo diesel	8,48	0,848	5,97	1,211	35,50	33,651	9,86	Diesel Oil
Óleo combustível	9,57	0,957	6,73	1,367	40,07	37,977	11,13	Fuel Oil
Gasolina automotiva	7,70	0,770	5,42	1,100	32,24	30,556	8,96	Motor Gasoline
Gasolina de aviação	7,63	0,763	5,37	1,090	31,95	30,278	8,87	Aviation Gasoline
GLP	6,11	0,611	4,30	0,873	25,58	24,246	7,11	LPG
Nafta	7,65	0,765	5,38	1,093	32,03	30,357	8,90	Naphtha
Querosene iluminante	8,22	0,822	5,78	1,174	34,42	32,619	9,56	Lighting Kerosene
Querosene de aviação	8,22	0,822	5,78	1,174	34,42	32,619	9,56	Jet Fuel
Álcool etílico anidro	5,34	0,534	3,76	0,763	22,36	21,191	6,21	Anhydrous Alcohol
Álcool etílico hidratado	5,10	0,510	3,59	0,729	21,35	20,238	5,93	Hydrated Alcohol
Gás de refinaria	6,52	0,652	4,59	0,931	27,30	25,873	7,58	Refinery Gas
Coque de petróleo	8,70	0,870	6,12	1,243	36,43	34,524	10,12	Petroleum Coke
Outros energéticos de petróleo	8,80	0,880	6,19	1,257	36,84	34,921	10,23	Other Energy Oil Products
Asfaltos	10,18	1,018	7,16	1,454	42,62	40,397	11,84	Asphalt
Lubrificantes	8,70	0,870	6,12	1,243	36,43	34,524	10,12	Lubricants
Solventes	7,70	0,770	5,42	1,100	32,24	30,556	8,96	Solvents
Outros não energéticos de petróleo	8,00	0,800	5,63	1,143	33,49	31,746	9,30	Other Non-Energy Oil Products

Tabela VIII.8 – Coeficientes de Equivalência Médios para os Combustíveis Sólidos
 Table VIII.8 – Average Coefficients of Equivalence to the Solid Fuels

De tonelada	Multiplicar por para							to from ton
	giga-caloria	tep(ton) (10 ⁶ kcal/kg)	bep(boe)	tec(tce) (7000 kcal/kg)	giga-joule	10 ⁶ BTU	megawatt-hora (860 kcal/kWh)	
Carvão vapor 3100 kcal/kg	2,95	0,295	2,08	0,421	12,35	11,71	3,43	Steam coal 3100 kcal/kg
Carvão vapor 3300 kcal/kg	3,10	0,310	2,18	0,443	12,98	12,30	3,61	Steam coal 3300 kcal/kg
Carvão vapor 3700 kcal/kg	3,50	0,350	2,46	0,500	14,65	13,89	4,07	Steam coal 3700 kcal/kg
Carvão vapor 4200 kcal/kg	4,00	0,400	2,81	0,571	16,75	15,87	4,65	Steam coal 4200 kcal/kg
Carvão vapor 4500 kcal/kg	4,25	0,425	2,99	0,607	17,79	16,87	4,94	Steam coal 4500 kcal/kg
Carvão vapor 4700 kcal/kg	4,45	0,445	3,13	0,636	18,63	17,66	5,18	Steam coal 4700 kcal/kg
Carvão vapor 5200 kcal/kg	4,90	0,490	3,45	0,700	20,52	19,44	5,70	Steam coal 5200 kcal/kg
Carvão vapor 5900 kcal/kg	5,60	0,560	3,94	0,800	23,45	22,22	6,51	Steam coal 5900 kcal/kg
Carvão vapor 6000 kcal/kg	5,70	0,570	4,01	0,814	23,86	22,62	6,63	Steam coal 6000 kcal/kg
Carvão vapor sem especificação	2,85	0,285	2,01	0,407	11,93	11,31	3,31	Non-specified steam coal
Carvão metalúrgico nacional	6,42	0,642	4,52	0,917	26,88	25,48	7,47	National Metallurgical Coal
Carvão metalúrgico importado	7,40	0,740	5,21	1,057	30,98	29,37	8,61	Imported Metallurgical Coal
Lenha	3,10	0,310	2,18	0,443	12,98	12,30	3,61	Firewood
Caldo de cana	0,59	0,059	0,42	0,084	2,47	2,34	0,69	Cane Juice
Melaço	1,80	0,180	1,27	0,257	7,54	7,14	2,09	Molasses
Bagaço de cana	2,13	0,213	1,50	0,304	8,92	8,45	2,48	Sugar-cane Bagasse
Lixívia	2,86	0,286	2,01	0,409	11,97	11,35	3,33	Black Liquor
Coque de carvão mineral	6,90	0,690	4,86	0,986	28,89	27,38	8,02	Coal coke
Carvão vegetal	6,46	0,646	4,55	0,923	27,05	25,64	7,51	Charcoal
Alcatrão	8,55	0,855	6,02	1,221	35,80	33,93	9,94	Tar

Tabela VIII.9 – Densidades e Poderes Caloríficos

Table VIII.9 – Specific Mass and Heating Values

	DENSIDADE¹ SPECIFIC MASS kg/m³	PODER CALORÍFICO SUPERIOR HIGHER HEATING VALUE kcal/kg	PODER CALORÍFICO INFERIOR NET HEATING VALUE kcal/kg	
Alcatrão	1.000	9.000	8.550	Tar
Álcool Etilico Anidro	791	7.090	6.750	Anhydrous Alcohol
Álcool Etilico Hidratado	809	6.650	6.300	Hydrated Alcohol
Asfáltos	1.025	10.500	9.790	Asphalt
Bagaço de Cana¹	130	2.257	2.130	Sugar-cane Bagasse¹
Biodiesel (B100)	880	9.345	9.000	Biodiesel (B100)
Caldo de Cana	-	623	620	Sugar-cane Juice
Carvão Metalúrgico Importado	-	7.700	7.400	Imported Metallurgical Coal
Carvão Metalúrgico Nacional	-	6.800	6.420	National Metallurgical Coal
Carvão Vapor 3100 Kcal/kg	-	3.100	2.950	Steam coal 3100 kcal/kg
Carvão Vapor 3300 Kcal/kg	-	3.300	3.100	Steam coal 3300 kcal/kg
Carvão Vapor 3700 Kcal/kg	-	3.700	3.500	Steam coal 3700 kcal/kg
Carvão Vapor 4200 Kcal/kg	-	4.200	4.000	Steam coal 4200 kcal/kg
Carvão Vapor 4500 Kcal/kg	-	4.500	4.250	Steam coal 4500 kcal/kg
Carvão Vapor 4700 Kcal/kg	-	4.700	4.450	Steam coal 4700 kcal/kg
Carvão Vapor 5200 Kcal/kg	-	5.200	4.900	Steam coal 5200 kcal/kg
Carvão Vapor 5900 Kcal/kg	-	5.900	5.600	Steam coal 5900 kcal/kg
Carvão Vapor 6000 Kcal/kg	-	6.000	5.700	Steam coal 6000 kcal/kg
Carvão Vapor sem Especificação	-	3.000	2.850	Non-specified Steam Coal
Carvão Vegetal	250	6.800	6.460	Charcoal
Coque de Carvão Mineral	600	7.300	6.900	Coal Coke
Coque de Petróleo	1.040	8.500	8.390	Petroleum Coke
Eletricidade²	-	860	860	Electricity²
Energia Hidráulica²	1.000	860	860	Hydraulic Energy²
Gás Canalizado Rio de Janeiro³	-	3.900	3.800	Gasworks Gas - Rio de Janeiro³
Gás Canalizado São Paulo³	-	4.700	4.500	Gasworks Gas - São Paulo³
Gás de Coqueria³	-	4.500	4.300	Coke Oven Gas³
Gás de Refinaria	0,780	8.800	8.400	Refinery Gas
Gás Liquefeito de Petróleo	552	11.750	11.100	LPG
Gás Natural Seco³,⁴	0,740	9.256	8.800	Dry Natural Gas³,⁴
Gás Natural Úmido³,⁴	0,740	10.454	9.930	Humid Natural Gas³,⁴
Gasolina Automotiva	742	11.220	10.400	Motor Gasoline
Gasolina de Aviação	726	11.290	10.600	Aviation Gasoline
Lenha Catada	300	3.300	3.100	"Picked" Firewood
Lenha Comercial	390	3.300	3.100	Commercial Firewood
Lixívia	1.090	3.030	2.860	Black Liquor
Lubrificantes	875	10.770	10.120	Lubricants
Melaço	1.420	1.930	1.850	Molasses
Nafta	702	11.320	10.630	Naphtha
Óleo Combustível	1.000	10.085	9.590	Fuel Oil
Óleo Diesel	840	10.750	10.100	Diesel Oil
Outros Energéticos de Petróleo	864	10.800	10.200	Other Energy Oil Products
Outros Não-energéticos de Petróleo	864	10.800	10.200	Other Non-Energy Oil Products
Petróleo	884	10.800	10.800	Petroleum
Querosene de Aviação	799	11.090	10.400	Jet Fuel
Querosene Iluminante	799	11.090	10.400	Lighting Kerosene
Solventes	741	11.240	10.550	Solvents

1. Bagaço com 50% de umidade | Bagasse with 50% of humidity

2. kcal/kWh | kcal/kWh

3. kcal/m³ | kcal/m³

4. À temperatura de 20°C, para derivados de petróleo e de gás natural. | At 20°C, for oil and natural gas products.

Tabela VIII.10 – Fatores de Conversão para tep médio

Table VIII.10 – Conversion Factors for Average toe Values

	Unidade (Unit)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Alcatrão	m ³	0,855	0,855	0,855	0,855	0,855	0,855	0,855	0,855	0,855	0,855	Tar
Álcool Etilico Anidro	m ³	0,534	0,534	0,534	0,534	0,534	0,534	0,534	0,534	0,534	0,534	Anhydrous Alcohol
Álcool Etilico Hidratado	m ³	0,510	0,510	0,510	0,510	0,510	0,510	0,510	0,510	0,510	0,510	Hydrated Alcohol
Asfaltos	m ³	1,018	1,018	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	Asphalt
Bagaço de Cana	t	0,213	0,213	0,213	0,213	0,213	0,213	0,213	0,213	0,213	0,213	Sugar-cane Bagasse
Biodiesel (B100)	m ³	0,792	0,792	0,792	0,792	0,792	0,792	0,792	0,792	0,792	0,792	Biodiesel (B100)
Caldo de Cana	t	0,062	0,062	0,062	0,059	0,059	0,059	0,059	0,059	0,059	0,059	Sugar-Cane Juice
Carvão Metalúrgico Importado	t	0,740	0,740	0,740	0,740	0,740	0,740	0,740	0,740	0,740	0,740	Imported Metallurgical Coal
Carvão Metalúrgico Nacional	t	0,642	0,642	0,642	0,642	0,642	0,642	0,642	0,642	0,642	0,642	National Metallurgical Coal
Carvão Vapor 3100 kcal/kg	t	0,295	0,295	0,295	0,295	0,295	0,295	0,295	0,295	0,295	0,295	Steam coal 3100 kcal/kg
Carvão Vapor 3300 kcal/kg	t	0,310	0,310	0,310	0,310	0,310	0,310	0,310	0,310	0,310	0,310	Steam coal 3300 kcal/kg
Carvão Vapor 3700 kcal/kg	t	0,350	0,350	0,350	0,350	0,350	0,350	0,350	0,350	0,350	0,350	Steam coal 3700 kcal/kg
Carvão Vapor 4200 kcal/kg	t	0,400	0,400	0,400	0,400	0,400	0,400	0,400	0,400	0,400	0,400	Steam coal 4200 kcal/kg
Carvão Vapor 4500 kcal/kg	t	0,425	0,425	0,425	0,425	0,425	0,425	0,425	0,425	0,425	0,425	Steam coal 4500 kcal/kg
Carvão Vapor 4700 kcal/kg	t	0,445	0,445	0,445	0,445	0,445	0,445	0,445	0,445	0,445	0,445	Steam coal 4700 kcal/kg
Carvão Vapor 5200 kcal/kg	t	0,490	0,490	0,490	0,490	0,490	0,490	0,490	0,490	0,490	0,490	Steam coal 5200 kcal/kg
Carvão Vapor 5900 kcal/kg	t	0,560	0,560	0,560	0,560	0,560	0,560	0,560	0,560	0,560	0,560	Steam coal 5900 kcal/kg
Carvão Vapor 6000 kcal/kg	t	0,570	0,570	0,570	0,570	0,570	0,570	0,570	0,570	0,570	0,570	Steam coal 6000 kcal/kg
Carvão Vapor sem Especificação	t	0,285	0,285	0,285	0,285	0,285	0,285	0,285	0,285	0,285	0,285	Non-specified Steam Coal
Carvão Vegetal	t	0,646	0,646	0,646	0,646	0,646	0,646	0,646	0,646	0,646	0,646	Charcoal
Coque de Carvão Mineral	t	0,690	0,690	0,690	0,690	0,690	0,690	0,690	0,690	0,690	0,690	Coal Coke
Coque de Petróleo	m ³	0,873	0,873	0,870	0,870	0,870	0,870	0,870	0,870	0,870	0,870	Petroleum Coke
Eletricidade	MWh	0,086	0,086	0,086	0,086	0,086	0,086	0,086	0,086	0,086	0,086	Electricity
Gás Canalizado Rio de Janeiro	10 ³ m ³	0,380	0,380	0,380	0,380	0,380	0,380	0,380	0,380	0,380	0,380	Gasworks Gas - Rio de Janeiro
Gás Canalizado São Paulo	10 ³ m ³	0,450	0,450	0,450	0,450	0,450	0,450	0,450	0,450	0,450	0,450	Gasworks Gas - São Paulo
Gás de Coqueria	10 ³ m ³	0,430	0,430	0,430	0,430	0,430	0,430	0,430	0,430	0,430	0,430	Coke Oven Gas
Gás de Refinaria	10 ³ m ³	0,655	0,655	0,652	0,652	0,652	0,652	0,652	0,652	0,652	0,652	Refinery Gas
Gás Liquefeito de Petróleo	m ³	0,611	0,611	0,611	0,611	0,611	0,611	0,611	0,611	0,611	0,611	LPG
Gás Natural Seco	10 ³ m ³	0,880	0,880	0,880	0,880	0,880	0,880	0,880	0,880	0,880	0,880	Dry Natural Gas
Gás Natural Úmido	10 ³ m ³	0,991	0,993	0,993	0,993	0,993	0,993	0,993	0,993	0,993	0,993	Humid Natural Gas
Gasolina Automotiva	m ³	0,770	0,770	0,770	0,770	0,770	0,770	0,770	0,770	0,770	0,770	Motor Gasoline
Gasolina de Aviação	m ³	0,763	0,763	0,763	0,763	0,763	0,763	0,763	0,763	0,763	0,763	Aviation Gasoline
Hidráulica	MWh	0,086	0,086	0,086	0,086	0,086	0,086	0,086	0,086	0,086	0,086	Hydraulic Energy
Lenha Comercial	t	0,310	0,310	0,310	0,310	0,310	0,310	0,310	0,310	0,310	0,310	Firewood
Lixívia	t	0,286	0,286	0,286	0,286	0,286	0,286	0,286	0,286	0,286	0,286	Black Liquor
Lubrificantes	m ³	0,891	0,891	0,870	0,870	0,870	0,870	0,870	0,870	0,870	0,870	Lubricants
Melaço	t	0,185	0,185	0,182	0,180	0,180	0,180	0,180	0,180	0,180	0,180	Molasses
Nafta	m ³	0,765	0,765	0,765	0,765	0,765	0,765	0,765	0,765	0,765	0,765	Naphtha
Óleo Combustível Médio	m ³	0,959	0,959	0,957	0,957	0,957	0,957	0,957	0,957	0,957	0,957	Fuel Oil (average)
Óleo Diesel	m ³	0,848	0,848	0,848	0,848	0,848	0,848	0,848	0,848	0,848	0,848	Diesel Oil
Outras Fontes Primárias Não-Renováveis	tep (toe)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	Other Non-Renewable Primary Sources
Outras Fontes Primárias Renováveis	tep (toe)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	Other Wastes
Outros Energéticos de Petróleo	m ³	0,890	0,890	0,880	0,880	0,880	0,880	0,880	0,880	0,880	0,880	Other Energy Oil Products
Outros Não-Energéticos de Petróleo	m ³	0,890	0,890	0,800	0,800	0,800	0,800	0,800	0,800	0,800	0,800	Other Non-Energy Oil Products
Petróleo	m ³	0,890	0,890	0,890	0,890	0,890	0,890	0,890	0,890	0,891	0,891	Petroleum
Querosene de Aviação	m ³	0,822	0,822	0,822	0,822	0,822	0,822	0,822	0,822	0,822	0,822	Jet Fuel
Querosene Iluminante	m ³	0,822	0,822	0,822	0,822	0,822	0,822	0,822	0,822	0,822	0,822	Lighting Kerosene
Solventes	m ³	0,781	0,781	0,770	0,770	0,770	0,770	0,770	0,770	0,770	0,770	Solvents
Urânio contido no UO ₂	kg	73,908	73,908	73,908	73,908	73,908	73,908	73,908	73,908	73,908	73,908	Uranium contained in UO ₂
Urânio U ₃ O ₈	kg	10,139	10,139	10,139	10,139	10,139	10,139	10,139	10,139	10,139	10,139	Uranium U ₃ O ₈

Anexo IX. Balanços Energéticos Consolidados – 1970, 1980, 1990, 2000 e 2007 a 2017

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO 1970 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	8.161	1.255	611	504	0	3.422	31.852	3.601	223	49.627
IMPORTAÇÃO	17.845	0	0	1.454	0	0	0	0	0	19.299
VARIÇÃO DE ESTOQUES	-277	0	-28	-151	0	0	0	0	0	-456
OFERTA TOTAL	25.728	1.255	583	1.806	0	3.422	31.852	3.601	223	68.470
EXPORTAÇÃO	-65	0	0	0	0	0	0	0	0	-65
NÃO-APROVEITADA	0	-869	0	0	0	0	0	0	0	-869
REINJEÇÃO	0	-216	0	0	0	0	0	0	0	-216
OFERTA INTERNA BRUTA	25.663	170	583	1.806	0	3.422	31.852	3.601	223	67.320
TOTAL TRANSFORMAÇÃO	-25.536	-106	-495	-1.758	0	-3.422	-3.507	-452	-81	-35.356
REFINARIAS DE PETRÓLEO	-25.536	0	0	0	0	0	0	0	0	-25.536
PLANTAS DE GÁS NATURAL	0	-106	0	0	0	0	0	0	0	-106
USINAS DE GASEIFICAÇÃO	0	0	0	-170	0	0	0	0	0	-170
COQUERIAS	0	0	0	-1.588	0	0	0	0	0	-1.588
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	0	0	0	0	0	0
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	0	-485	0	0	-3.302	0	0	0	-3.787
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	0	-10	0	0	-119	-13	-89	-81	-312
CARVOARIAS	0	0	0	0	0	0	-3.494	0	0	-3.494
DESTILARIAS	0	0	0	0	0	0	0	-363	0	-363
OUTRAS TRANSFORMAÇÕES	0	0	0	0	0	0	0	0	0	0
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	-128	0	0	-49	0	0	0	0	0	-176
CONSUMO FINAL	0	70	88	0	0	0	28.345	3.149	142	31.794
CONSUMO FINAL NÃO-ENERGÉTICO	0	3	0	0	0	0	0	0	0	3
CONSUMO FINAL ENERGÉTICO	0	68	88	0	0	0	28.345	3.149	142	31.792
SETOR ENERGÉTICO	0	65	0	0	0	0	0	89	0	154
RESIDENCIAL	0	0	0	0	0	0	19.070	0	0	19.070
COMERCIAL	0	0	0	0	0	0	191	0	0	191
PÚBLICO	0	0	0	0	0	0	15	0	0	15
AGROPECUÁRIO	0	0	0	0	0	0	4.901	0	0	4.901
TRANSPORTES - TOTAL	0	0	16	0	0	0	43	0	0	59
RODOVIÁRIO	0	0	0	0	0	0	0	0	0	0
FERROVIÁRIO	0	0	16	0	0	0	33	0	0	49
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	10	0	0	10
INDUSTRIAL - TOTAL	0	3	72	0	0	0	4.124	3.060	142	7.400
CIMENTO	0	0	0	0	0	0	0	0	0	0
FERRO-GUSA E AÇO	0	0	1	0	0	0	0	0	0	1
FERRO-LIGAS	0	0	0	0	0	0	0	0	0	0
MINERAÇÃO E PELOTIZAÇÃO	0	0	0	0	0	0	0	0	0	0
NÃO-FERROSOS E OUTROS DA METALURGIA	0	0	0	0	0	0	0	0	0	0
QUÍMICA	0	3	0	0	0	0	123	0	0	126
ALIMENTOS E BEBIDAS	0	0	0	0	0	0	1.812	3.060	0	4.872
TÊXTIL	0	0	0	0	0	0	255	0	0	255
PAPEL E CELULOSE	0	0	71	0	0	0	218	0	142	431
CERÂMICA	0	0	0	0	0	0	1.175	0	0	1.175
OUTROS	0	0	0	0	0	0	541	0	0	541
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	0	7	0	0	0	0	0	0	0	7

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUE	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49.627
0	0	78	415	0	8	0	72	0	0	0	0	0	369	0	943	20.242
-42	-69	-27	-98	15	-55	0	-25	0	0	0	-7	15	-54	0	-347	-803
-42	-69	51	318	15	-47	0	48	0	0	0	-7	15	315	0	596	69.066
-47	-748	0	0	0	-123	0	0	0	-2	0	0	0	0	0	-920	-985
0	0	0	0	0	0	-56	0	0	0	0	0	-50	0	0	-106	-975
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-216
-89	-817	51	318	15	-170	-56	48	0	-2	0	-7	-35	315	0	-430	66.890
5.482	7.417	7.395	1.049	-9	1.307	456	1.168	0	3.932	1.767	324	262	887	60	31.498	-3.858
5.675	8.399	7.360	984	69	1.307	0	0	0	0	0	0	262	887	0	24.942	-594
0	0	36	65	0	0	0	0	0	0	0	0	0	0	0	101	-6
0	0	0	0	-77	0	150	55	0	0	0	0	0	0	0	128	-42
0	0	0	0	0	0	315	1.113	0	0	0	0	0	0	60	1.489	-99
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-116	-653	0	0	0	0	0	0	0	3.613	0	0	0	0	0	2.845	-942
-77	-330	0	0	0	0	-9	0	0	319	0	0	0	0	0	-98	-410
0	0	0	0	0	0	0	0	0	0	1.767	0	0	0	0	1.767	-1.727
0	0	0	0	0	0	0	0	0	0	0	324	0	0	0	324	-39
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	-19	-34	0	-520	-177	-7	0	0	0	-757	-933
5.393	6.600	7.446	1.367	6	1.138	382	1.182	0	3.410	1.590	310	227	1.202	60	30.312	62.106
0	0	0	0	6	7	0	0	0	0	0	212	0	1.202	42	1.468	1.471
5.393	6.600	7.446	1.367	0	1.131	382	1.182	0	3.410	1.590	98	227	0	18	28.844	60.635
56	885	0	0	0	0	86	10	0	179	0	0	181	0	0	1.397	1.551
0	0	0	1.297	0	447	104	0	0	719	437	0	0	0	0	3.005	22.076
64	80	0	23	0	0	16	0	0	443	32	0	0	0	0	658	850
42	31	0	2	0	16	3	0	0	306	0	0	0	0	0	402	417
393	11	0	0	0	0	0	0	0	27	19	0	0	0	0	450	5.351
4.511	387	7.446	0	0	635	0	0	0	56	0	98	0	0	0	13.133	13.192
3.894	0	7.369	0	0	0	0	0	0	0	0	98	0	0	0	11.361	11.361
349	77	0	0	0	0	0	0	0	56	0	0	0	0	0	482	531
0	0	77	0	0	635	0	0	0	0	0	0	0	0	0	712	712
268	309	0	0	0	0	0	0	0	0	0	0	0	0	0	578	588
327	5.205	0	44	0	33	173	1.173	0	1.679	1.101	0	45	0	18	9.798	17.198
23	1.180	0	0	0	0	0	0	0	89	0	0	0	0	0	1.292	1.292
11	700	0	4	0	0	165	1.173	0	172	1.041	0	0	0	18	3.283	3.284
0	0	0	0	0	0	0	0	0	49	50	0	0	0	0	99	99
34	190	0	0	0	0	0	0	0	39	0	0	0	0	0	263	263
0	110	0	0	0	0	2	0	0	287	10	0	45	0	0	455	455
57	754	0	1	0	0	0	0	0	227	0	0	0	0	0	1.040	1.166
58	614	0	4	0	9	1	0	0	151	0	0	0	0	0	838	5.710
5	353	0	1	0	2	0	0	0	166	0	0	0	0	0	529	784
8	353	0	0	0	0	0	0	0	143	0	0	0	0	0	504	934
3	307	0	4	0	5	0	0	0	48	0	0	0	0	0	367	1.542
127	644	0	31	0	16	4	0	0	306	0	0	0	0	0	1.129	1.670
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO 1980 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPORES	CARVÃO METALÚRGICO	URÂNIO U ₂₃₅	ENERGIA HIDRÁULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	ENERGIA PRIMÁRIA TOTAL
PRODUÇÃO	9.256	2.189	1.493	991	0	11.082	31.083	9.301	1.010	66.404
IMPORTAÇÃO	44.311	0	0	3.340	0	0	0	0	0	47.651
VARIAÇÃO DE ESTOQUES	2.122	0	-291	58	0	0	0	0	0	1.888
OFERTA TOTAL	55.689	2.189	1.201	4.389	0	11.082	31.083	9.301	1.010	115.944
EXPORTAÇÃO	-61	0	0	0	0	0	0	0	0	-61
NÃO-APROVEITADA	0	-602	0	0	0	0	0	0	0	-602
REINJEÇÃO	0	-496	0	0	0	0	0	0	0	-496
OFERTA INTERNA BRUTA	55.627	1.092	1.201	4.389	0	11.082	31.083	9.301	1.010	114.785
TOTAL TRANSFORMAÇÃO	-55.351	-222	-708	-4.059	0	-11.082	-9.221	-2.489	-272	-83.404
REFINARIAS DE PETRÓLEO	-55.351	0	0	0	0	0	0	0	0	-55.351
PLANTAS DE GÁS NATURAL	0	-222	0	0	0	0	0	0	0	-222
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-4.059	0	0	0	0	0	-4.059
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	0	0	0	0	0	0
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	0	-683	0	0	-10.841	0	0	0	-11.524
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	0	-25	0	0	-241	-39	-208	-249	-762
CARVOARIAS	0	0	0	0	0	0	-9.182	0	0	-9.182
DESTILARIAS	0	0	0	0	0	0	0	-2.280	-23	-2.303
OUTRAS TRANSFORMAÇÕES	0	0	0	0	0	0	0	0	0	0
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	-276	0	0	-331	0	0	0	0	0	-607
CONSUMO FINAL	0	882	512	0	0	0	21.862	6.812	738	30.807
CONSUMO FINAL NÃO-ENERGÉTICO	0	398	0	0	0	0	0	0	0	398
CONSUMO FINAL ENERGÉTICO	0	485	512	0	0	0	21.862	6.812	738	30.410
SETOR ENERGÉTICO	0	165	0	0	0	0	0	2.013	0	2.178
RESIDENCIAL	0	0	0	0	0	0	14.974	0	0	14.974
COMERCIAL	0	0	0	0	0	0	155	0	0	155
PÚBLICO	0	0	0	0	0	0	6	0	0	6
AGROPECUÁRIO	0	0	0	0	0	0	3.232	0	0	3.232
TRANSPORTES - TOTAL	0	0	22	0	0	0	3	0	0	25
RODOVIÁRIO	0	0	0	0	0	0	0	0	0	0
FERROVIÁRIO	0	0	22	0	0	0	3	0	0	25
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	319	491	0	0	0	3.493	4.799	738	9.840
CIMENTO	0	46	252	0	0	0	0	0	0	298
FERRO-GUSA E AÇO	0	113	28	0	0	0	0	0	0	141
FERRO-LIGAS	0	0	19	0	0	0	0	0	0	19
MINERAÇÃO E PELOTIZAÇÃO	0	0	0	0	0	0	15	0	0	15
NÃO-FERROSOS E OUTROS DA METALURGIA	0	0	0	0	0	0	4	0	0	4
QUÍMICA	0	157	2	0	0	0	87	17	0	263
ALIMENTOS E BEBIDAS	0	0	63	0	0	0	1.195	4.782	0	6.041
TÊXTIL	0	0	0	0	0	0	62	0	0	62
PAPEL E CELULOSE	0	0	61	0	0	0	333	0	736	1.131
CERÂMICA	0	3	57	0	0	0	1.352	0	2	1.413
OUTROS	0	0	8	0	0	0	444	0	0	452
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	0	13	19	0	0	0	0	0	0	32

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUIROSENE	GÁS DE CIDADE E DE COQUEIRA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO A PARTIR DE HIBRIDADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66.404
581	1.133	80	144	1	0	0	363	0	0	0	0	123	237	0	2.662	50.313
-698	330	151	-230	-207	-227	0	-52	0	0	0	24	4	267	0	-638	1.251
-117	1.464	231	-85	-206	-227	0	312	0	0	0	24	126	504	0	2.024	117.968
-545	-685	-276	-35	0	-308	0	0	0	-18	0	-196	0	-40	0	-2.103	-2.164
0	0	0	0	0	0	-40	0	0	0	0	0	-34	0	0	-74	-676
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-496
-662	779	-45	-120	-206	-535	-40	312	0	-18	0	-172	92	464	0	-152	114.633
16.362	15.431	8.905	3.164	1.770	2.725	964	2.942	0	11.982	4.643	1.926	1.970	2.718	178	75.680	-7.724
16.732	16.461	8.586	2.711	3.042	2.725	0	0	0	0	0	0	1.549	2.949	0	54.753	-598
0	0	76	141	0	0	0	0	0	0	0	0	0	0	0	218	-5
0	0	0	0	-270	0	256	0	0	0	0	0	0	0	0	-15	-15
0	0	0	0	0	0	746	2.942	0	0	0	0	0	0	178	3.865	-194
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-302	-518	0	0	0	0	0	0	0	11.265	0	0	0	0	0	10.445	-1.079
-68	-512	0	0	0	0	-37	0	0	717	0	0	-3	0	0	97	-665
0	0	0	0	0	0	0	0	0	0	4.643	0	0	0	0	4.643	-4.539
0	0	0	0	0	0	0	0	0	0	0	1.926	0	0	0	1.926	-377
0	0	244	312	-1.001	0	0	0	0	0	0	0	423	-230	0	-253	-253
0	0	0	0	0	0	-28	-57	0	-1.415	-371	-77	0	0	0	-1.949	-2.555
15.701	16.210	8.860	3.043	1.563	2.190	896	3.197	0	10.548	4.272	1.673	2.062	3.182	178	73.575	104.382
0	0	0	0	1.530	89	0	0	0	0	0	252	71	3.182	120	5.243	5.641
15.701	16.210	8.860	3.043	33	2.101	896	3.197	0	10.548	4.272	1.422	1.991	0	58	68.332	98.741
247	1.785	0	0	0	0	167	0	0	359	0	0	1.138	0	0	3.695	5.873
0	0	0	2.728	0	296	128	0	0	2.000	830	0	0	0	0	5.983	20.957
24	227	0	103	0	0	34	0	0	1.187	65	0	0	0	0	1.639	1.794
144	91	0	16	0	2	4	0	0	893	4	0	0	0	0	1.153	1.158
2.218	116	0	0	0	2	0	0	0	175	10	0	0	0	0	2.521	5.752
12.687	989	8.860	0	0	1.663	0	0	0	71	0	1.422	0	0	0	25.690	25.715
11.401	0	8.788	0	0	0	0	0	0	0	0	1.422	0	0	0	21.611	21.611
583	10	0	0	0	0	0	0	0	71	0	0	0	0	0	664	689
0	0	72	0	0	1.663	0	0	0	0	0	0	0	0	0	1.735	1.735
703	978	0	0	0	0	0	0	0	0	0	0	0	0	0	1.681	1.681
381	13.003	0	197	33	138	563	3.197	0	5.865	3.362	0	853	0	58	27.651	37.491
28	2.045	0	0	0	2	0	0	0	277	106	0	0	0	0	2.459	2.757
40	1.027	0	38	0	20	504	3.142	0	767	2.955	0	0	0	58	8.552	8.694
0	0	0	0	0	0	0	54	0	249	179	0	0	0	0	483	502
58	909	0	0	0	15	0	0	0	233	23	0	0	0	0	1.239	1.254
0	411	0	0	0	0	14	0	0	954	59	0	276	0	0	1.714	1.718
39	2.330	0	6	33	2	0	0	0	686	32	0	350	0	0	3.478	3.741
67	1.446	0	14	0	15	11	0	0	540	0	0	0	0	0	2.092	8.132
6	669	0	4	0	9	3	0	0	393	1	0	0	0	0	1.085	1.147
17	1.071	0	2	0	5	1	0	0	437	0	0	0	0	0	1.533	2.664
12	883	0	30	0	2	4	0	0	166	0	0	0	0	0	1.098	2.511
114	2.211	0	103	0	68	27	0	0	1.161	8	0	227	0	0	3.919	4.371
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	-4	0	0	0	-4	28

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

1990 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	ENERGIA PRIMÁRIA TOTAL
PRODUÇÃO	32.550	6.233	1.595	320	51	17.770	28.537	18.451	2.126	107.632
IMPORTAÇÃO	29.464	0	0	7.505	0	0	0	0	0	36.969
VARIAÇÃO DE ESTOQUES	-1.555	5	359	-135	-51	0	0	0	0	-1.377
OFERTA TOTAL	60.459	6.238	1.954	7.690	0	17.770	28.537	18.451	2.126	143.224
EXPORTAÇÃO	0	0	0	0	0	0	0	0	0	0
NÃO-APROVEITADA	0	-1.036	0	0	0	0	0	0	0	-1.036
REINJEÇÃO	0	-865	0	0	0	0	0	0	0	-865
OFERTA INTERNA BRUTA	60.459	4.337	1.954	7.690	0	17.770	28.537	18.451	2.126	141.324
TOTAL TRANSFORMAÇÃO	-60.579	-1.157	-962	-7.540	0	-17.770	-12.901	-7.185	-633	-108.727
REFINARIAS DE PETRÓLEO	-60.579	0	0	0	0	0	0	0	-130	-60.709
PLANTAS DE GÁS NATURAL	0	-779	0	0	0	0	0	0	0	-779
USINAS DE GASEIFICAÇÃO	0	-170	0	0	0	0	0	0	0	-170
COQUERIAS	0	0	0	-7.540	0	0	0	0	0	-7.540
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	0	0	0	0	0	0
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-5	-941	0	0	-17.502	0	0	0	-18.448
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-70	-21	0	0	-268	-121	-395	-593	-1.467
CARVOARIAS	0	0	0	0	0	0	-12.780	0	0	-12.780
DESTILARIAS	0	0	0	0	0	0	0	-6.790	-40	-6.830
OUTRAS TRANSFORMAÇÕES	0	-133	0	0	0	0	0	0	130	-3
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	0	0	-149	0	0	0	0	0	-149
CONSUMO FINAL	0	3.033	992	0	0	0	15.636	11.266	1.494	32.421
CONSUMO FINAL NÃO-ENERGÉTICO	0	834	0	0	0	0	0	0	0	834
CONSUMO FINAL ENERGÉTICO	0	2.199	992	0	0	0	15.636	11.266	1.494	31.587
SETOR ENERGÉTICO	0	814	0	0	0	0	0	6.707	0	7.521
RESIDENCIAL	0	4	0	0	0	0	7.960	0	0	7.964
COMERCIAL	0	1	0	0	0	0	115	0	0	116
PÚBLICO	0	2	0	0	0	0	2	0	0	4
AGROPECUÁRIO	0	0	0	0	0	0	2.169	0	0	2.169
TRANSPORTES - TOTAL	0	2	5	0	0	0	2	0	0	10
RODOVIÁRIO	0	2	0	0	0	0	0	0	0	2
FERROVIÁRIO	0	0	5	0	0	0	2	0	0	8
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	1.376	986	0	0	0	5.388	4.560	1.494	13.803
CIMENTO	0	39	583	0	0	0	2	0	42	667
FERRO-GUSA E AÇO	0	333	20	0	0	0	0	0	0	353
FERRO-LIGAS	0	4	0	0	0	0	0	0	0	4
MINERAÇÃO E PELOTIZAÇÃO	0	87	0	0	0	0	0	0	0	87
NÃO-FERROSOS E OUTROS DA METALURGIA	0	27	0	0	0	0	38	0	0	65
QUÍMICA	0	324	95	0	0	0	218	40	0	678
ALIMENTOS E BEBIDAS	0	131	108	0	0	0	1.965	4.465	0	6.669
TÊXTIL	0	52	4	0	0	0	155	0	0	211
PAPEL E CELULOSE	0	55	133	0	0	0	752	50	1.396	2.385
CERÂMICA	0	61	35	0	0	0	1.560	0	56	1.712
OUTROS	0	262	9	0	0	0	697	4	0	972
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	120	-147	0	0	0	0	0	0	0	-27

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUERIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107.632
596	638	4	1.441	188	23	0	396	0	2.282	0	600	0	101	0	6.269	43.238
-38	45	-66	-34	-13	-28	0	-425	598	0	0	-63	-19	-232	-17	-292	-1.669
558	682	-62	1.407	175	-5	0	-29	598	2.282	0	536	-19	-130	-17	5.977	149.201
-223	-2.509	-1.741	-6	0	-490	0	0	0	-1	0	0	0	-51	0	-5.020	-5.020
0	0	0	0	0	0	-43	0	0	0	0	0	-297	0	0	-340	-1.376
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-865
335	-1.827	-1.803	1.402	175	-495	-43	-29	598	2.281	0	536	-316	-182	-17	616	141.940
20.569	11.507	9.416	4.325	4.783	2.739	1.573	5.266	-598	19.155	6.468	5.891	3.212	3.414	242	97.963	-10.763
21.058	12.212	8.968	3.478	6.277	2.739	0	0	0	0	0	0	2.578	3.414	0	60.725	16
0	0	169	547	4	0	0	0	0	0	0	0	0	0	0	720	-59
0	0	0	0	-163	0	301	0	0	0	0	0	0	0	0	138	-32
0	0	0	0	0	0	1.367	5.266	0	0	0	0	0	0	269	6.902	-638
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-457	-284	0	0	0	0	0	0	-598	18.131	0	0	0	0	0	16.793	-1.656
-115	-421	0	0	0	0	-95	0	0	1.024	0	0	-21	0	-27	345	-1.123
0	0	0	0	0	0	0	0	0	0	6.468	0	0	0	0	6.468	-6.312
0	0	0	0	0	0	0	0	0	0	0	5.891	0	0	0	5.891	-939
82	0	278	300	-1.334	0	0	0	0	0	0	0	656	0	0	-18	-21
0	0	-42	0	0	-26	-21	-105	0	-2.725	-331	-82	0	0	0	-3.331	-3.481
20.944	9.709	7.485	5.688	4.958	2.190	1.509	5.132	0	18.711	6.137	6.346	2.848	3.233	225	95.114	127.535
0	0	0	0	4.958	82	0	0	0	0	0	491	246	3.233	109	9.119	9.953
20.944	9.709	7.485	5.688	0	2.109	1.509	5.132	0	18.711	6.137	5.855	2.601	0	115	85.996	117.582
429	1.655	0	20	0	3	340	0	0	588	0	0	1.485	0	0	4.521	12.042
0	0	0	4.988	0	128	144	0	0	4.184	639	0	0	0	0	10.083	18.048
39	288	0	338	0	0	55	0	0	2.048	53	0	0	0	0	2.821	2.936
82	54	0	17	0	1	8	0	0	1.559	3	0	4	0	0	1.727	1.732
3.246	26	0	1	0	0	0	0	0	573	12	0	0	0	0	3.858	6.027
16.828	766	7.485	0	0	1.918	0	0	0	103	0	5.855	0	0	0	32.955	32.964
15.983	0	7.436	0	0	0	0	0	0	0	0	5.855	0	0	0	29.274	29.276
522	0	0	0	0	0	0	0	0	103	0	0	0	0	0	625	633
0	0	48	0	0	1.918	0	0	0	0	0	0	0	0	0	1.967	1.967
323	766	0	0	0	0	0	0	0	0	0	0	0	0	0	1.089	1.089
319	6.771	0	162	0	58	963	5.132	0	9.657	5.430	0	1.112	0	115	29.720	43.523
11	982	0	0	0	2	0	0	0	253	350	0	3	0	0	1.600	2.267
42	384	0	23	0	11	896	4.936	0	1.098	4.365	0	0	0	115	11.871	12.225
0	0	0	0	0	0	20	26	0	534	362	0	0	0	0	941	945
78	473	0	2	0	4	0	99	0	512	34	0	0	0	0	1.202	1.289
0	392	0	15	0	0	0	72	0	2.196	254	0	350	0	0	3.279	3.344
23	1.588	0	9	0	0	1	0	0	1.145	32	0	757	0	0	3.556	4.234
19	729	0	18	0	8	13	0	0	888	0	0	0	0	0	1.677	8.346
3	445	0	4	0	5	3	0	0	539	3	0	0	0	0	1.001	1.212
18	540	0	4	0	2	0	0	0	661	0	0	0	0	0	1.227	3.612
6	402	0	31	0	1	7	0	0	158	13	0	0	0	0	618	2.331
120	835	0	54	0	25	22	0	0	1.674	16	0	2	0	0	2.748	3.720
0	148	0	163	0	0	0	0	0	0	0	0	0	0	0	311	311
40	28	-86	-39	0	-28	0	0	0	0	0	0	-49	0	0	-134	-161

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2000 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	63.849	13.185	2.603	10	132	26.168	23.054	19.895	4.438	153.334
IMPORTAÇÃO	20.537	1.945	1.917	7.300	618	0	4	0	0	32.322
VARIAÇÃO DE ESTOQUES	-1.273	0	50	57	1.278	0	0	0	0	112
OFERTA TOTAL	83.113	15.130	4.570	7.367	2.028	26.168	23.058	19.895	4.438	185.767
EXPORTAÇÃO	-963	0	0	0	0	0	0	0	0	-963
NÃO-APROVEITADA	0	-2.351	0	0	0	0	0	0	0	-2.351
REINJEÇÃO	0	-2.523	0	0	0	0	0	0	0	-2.523
OFERTA INTERNA BRUTA	82.150	10.256	4.570	7.367	2.028	26.168	23.058	19.895	4.438	179.930
TOTAL TRANSFORMAÇÃO	-82.150	-2.908	-2.310	-7.293	-2.028	-26.168	-9.431	-6.514	-1.439	-140.240
REFINARIAS DE PETRÓLEO	-82.150	0	0	0	0	0	0	0	-690	-82.840
PLANTAS DE GÁS NATURAL	0	-1.817	0	0	0	0	0	0	606	-1.211
USINAS DE GASEIFICAÇÃO	0	-109	0	0	0	0	0	0	0	-109
COQUERIAS	0	0	0	-7.293	0	0	0	0	0	-7.293
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-2.028	0	0	0	0	-2.028
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-311	-2.267	0	0	-25.666	0	0	0	-28.244
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-585	-43	0	0	-502	-147	-735	-1.439	-3.451
CARVOARIAS	0	0	0	0	0	0	-9.284	0	0	-9.284
DESTILARIAS	0	0	0	0	0	0	0	-5.778	0	-5.778
OUTRAS TRANSFORMAÇÕES	0	-86	0	0	0	0	0	0	84	-2
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-232	0	-74	0	0	0	0	0	-306
CONSUMO FINAL	0	7.115	2.269	0	0	0	13.627	13.381	3.000	39.392
CONSUMO FINAL NÃO-ENERGÉTICO	0	731	0	0	0	0	0	0	0	731
CONSUMO FINAL ENERGÉTICO	0	6.384	2.269	0	0	0	13.627	13.381	3.000	38.661
SETOR ENERGÉTICO	0	2.066	0	0	0	0	0	5.523	0	7.588
RESIDENCIAL	0	100	0	0	0	0	6.570	0	0	6.670
COMERCIAL	0	69	0	0	0	0	75	0	0	144
PÚBLICO	0	7	0	0	0	0	0	0	0	7
AGROPECUÁRIO	0	0	0	0	0	0	1.638	0	0	1.638
TRANSPORTES - TOTAL	0	275	0	0	0	0	0	0	0	275
RODOVIÁRIO	0	275	0	0	0	0	0	0	0	275
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	3.867	2.269	0	0	0	5.344	7.858	3.000	22.338
CIMENTO	0	49	143	0	0	0	22	0	109	324
FERRO-GUSA E AÇO	0	779	1.272	0	0	0	0	0	0	2.051
FERRO-LIGAS	0	0	28	0	0	0	60	0	0	88
MINERAÇÃO E PELOTIZAÇÃO	0	142	308	0	0	0	0	0	0	450
NÃO-FERROSOS E OUTROS DA METALURGIA	0	148	122	0	0	0	0	0	0	270
QUÍMICA	0	1.252	78	0	0	0	74	0	154	1.558
ALIMENTOS E BEBIDAS	0	226	49	0	0	0	1.853	7.834	0	9.962
TÊXTIL	0	172	0	0	0	0	81	0	0	252
PAPEL E CELULOSE	0	273	83	0	0	0	1.048	24	2.697	4.124
CERÂMICA	0	260	34	0	0	0	1.629	0	40	1.963
OUTROS	0	567	152	0	0	0	576	0	0	1.296
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	0	0	9	0	0	0	0	0	0	9

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUEIRA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO - ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153.334
4.986	68	47	3.117	2.912	742	0	1.112	0	3.812	7	33	1.940	157	0	18.932	51.254
-225	-235	-175	-109	4	0	0	-50	-222	0	0	949	-35	20	0	-78	34
4.760	-167	-128	3.008	2.916	742	0	1.062	-222	3.812	7	982	1.905	177	0	18.855	204.622
-641	-5.303	-1.579	-6	0	-678	0	0	0	-1	-5	-116	-175	-238	0	-8.741	-9.705
0	0	0	0	0	0	-14	0	0	0	0	0	0	0	0	-14	-2.365
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2.523
4.119	-5.470	-1.707	3.002	2.916	64	-14	1.062	-222	3.812	2	866	1.730	-62	0	10.099	190.029
25.143	14.874	15.014	4.747	5.088	3.122	1.355	5.299	222	29.995	4.981	5.590	6.484	4.496	227	126.637	-13.603
26.188	16.947	14.471	4.252	7.853	3.245	0	0	0	0	0	0	4.716	4.496	0	82.169	-671
0	0	232	374	151	0	0	0	0	0	0	0	0	0	0	757	-453
0	0	0	0	0	0	95	0	0	0	0	0	0	0	0	95	-14
0	0	0	0	0	0	1.428	5.299	0	0	0	0	0	0	250	6.978	-315
0	0	0	0	0	0	0	0	1.996	0	0	0	0	0	0	1.996	-32
-1.151	-1.694	0	0	0	0	0	0	-1.774	27.844	0	0	0	0	0	23.225	-5.019
-353	-380	0	0	0	0	-168	0	0	2.151	0	0	-322	0	-23	905	-2.546
0	0	0	0	0	0	0	0	0	0	4.981	0	0	0	0	4.981	-4.304
0	0	0	0	0	0	0	0	0	0	0	5.590	0	0	0	5.590	-188
459	0	311	120	-2.915	-123	0	0	0	0	0	0	2.090	0	0	-58	-60
0	0	0	-38	0	0	-9	0	0	-5.297	-169	-9	-28	-5	-9	-5.563	-5.869
29.505	9.500	13.319	7.844	8.102	3.242	1.332	6.506	0	28.523	4.814	6.457	8.186	4.450	219	131.999	171.391
0	0	0	0	8.098	62	0	0	0	0	0	637	172	4.450	142	13.562	14.293
29.505	9.500	13.319	7.844	4	3.180	1.332	6.506	0	28.523	4.814	5.820	8.014	0	77	118.437	157.098
253	1.080	0	46	4	1	318	0	0	901	0	0	2.656	0	0	5.259	12.847
0	0	0	6.325	0	36	60	0	0	7.188	409	0	0	0	0	14.018	20.688
67	354	0	217	0	0	18	0	0	4.084	63	0	21	0	0	4.825	4.968
118	234	0	369	0	0	3	0	0	2.510	0	0	0	0	0	3.235	3.242
4.452	106	0	16	0	0	0	0	0	1.105	5	0	0	0	0	5.684	7.322
24.090	648	13.319	0	0	3.124	0	0	0	107	0	5.820	0	0	0	47.109	47.385
23.410	0	13.261	0	0	0	0	0	0	0	0	5.820	0	0	0	42.491	42.766
403	0	0	0	0	0	0	0	0	107	0	0	0	0	0	511	511
0	0	58	0	0	3.124	0	0	0	0	0	0	0	0	0	3.182	3.182
277	648	0	0	0	0	0	0	0	0	0	0	0	0	0	926	926
524	7.077	0	871	0	19	933	6.506	0	12.627	4.337	0	5.337	0	77	38.308	60.646
24	510	0	2	0	1	0	1	0	398	233	0	1.845	0	0	3.014	3.337
30	110	0	113	0	5	932	6.413	0	1.265	3.660	0	251	0	77	12.855	14.906
0	12	0	0	0	0	0	6	0	550	430	0	89	0	0	1.086	1.174
158	812	0	20	0	3	0	0	0	639	0	0	138	0	0	1.771	2.220
0	976	0	75	0	0	0	87	0	2.490	6	0	424	0	0	4.059	4.328
83	1.136	0	14	0	2	1	0	0	1.483	0	0	2.143	0	0	4.861	6.420
38	1.024	0	64	0	2	0	0	0	1.390	0	0	32	0	0	2.552	12.514
5	243	0	24	0	0	0	0	0	600	0	0	0	0	0	872	1.124
31	983	0	24	0	0	0	0	0	1.044	0	0	0	0	0	2.082	6.206
5	468	0	357	0	1	0	0	0	234	0	0	41	0	0	1.105	3.068
150	803	0	179	0	5	0	0	0	2.534	8	0	374	0	0	4.051	5.347
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
243	96	13	133	98	56	0	145	0	13	0	9	0	20	0	826	835

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2008 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	94.000	21.398	2.552	101	3.950	31.782	29.227	45.019	8.526	236.555
IMPORTAÇÃO	19.689	9.986	2.635	7.909	371	0	0	0	0	40.590
VARIAÇÃO DE ESTOQUES	-27	0	-246	-262	252	0	0	0	-50	-334
OFERTA TOTAL	113.661	31.384	4.941	7.749	4.573	31.782	29.227	45.019	8.526	276.862
EXPORTAÇÃO	-22.372	0	0	0	0	0	0	0	0	-22.372
NÃO-APROVEITADA	0	-1.925	0	0	0	0	0	0	0	-1.925
REINJEÇÃO	0	-3.526	0	0	0	0	0	0	0	-3.526
OFERTA INTERNA BRUTA	91.289	25.934	4.941	7.749	4.573	31.782	29.227	45.019	8.526	249.039
TOTAL TRANSFORMAÇÃO	-91.164	-9.249	-1.832	-7.735	-4.573	-31.782	-12.367	-16.324	-3.196	-178.222
REFINARIAS DE PETRÓLEO	-91.164	0	0	0	0	0	0	0	-1.805	-92.969
PLANTAS DE GÁS NATURAL	0	-3.240	0	0	0	0	0	0	1.520	-1.720
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-7.643	0	0	0	0	0	-7.643
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-4.573	0	0	0	0	-4.573
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-4.565	-1.748	0	0	-30.469	0	0	-113	-36.895
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-1.156	-83	-93	0	-1.313	-311	-2.067	-2.073	-7.096
CARVOARIAS	0	0	0	0	0	0	-12.056	0	0	-12.056
DESTILARIAS	0	0	0	0	0	0	0	-14.256	0	-14.256
OUTRAS TRANSFORMAÇÕES	0	-287	0	0	0	0	0	0	-725	-1.012
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-133	0	0	0	0	0	0	0	-133
CONSUMO FINAL	0	16.707	3.082	0	0	0	16.859	28.695	5.280	70.623
CONSUMO FINAL NÃO-ENERGÉTICO	0	710	0	0	0	0	0	0	0	710
CONSUMO FINAL ENERGÉTICO	0	15.997	3.082	0	0	0	16.859	28.695	5.280	69.913
SETOR ENERGÉTICO	0	4.926	0	0	0	0	0	13.305	0	18.231
RESIDENCIAL	0	229	0	0	0	0	7.706	0	0	7.935
COMERCIAL	0	171	0	0	0	0	78	0	0	249
PÚBLICO	0	58	0	0	0	0	0	0	0	58
AGROPECUÁRIO	0	2	0	0	0	0	2.538	0	0	2.540
TRANSPORTES - TOTAL	0	2.158	0	0	0	0	0	0	0	2.158
RODOVIÁRIO	0	2.158	0	0	0	0	0	0	0	2.158
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	8.453	3.082	0	0	0	6.538	15.390	5.280	38.742
CIMENTO	0	25	53	0	0	0	0	0	286	365
FERRO-GUSA E AÇO	0	1.158	2.052	0	0	0	0	0	0	3.210
FERRO-LIGAS	0	2	0	0	0	0	102	0	0	103
MINERAÇÃO E PELOTIZAÇÃO	0	426	508	0	0	0	0	0	0	934
NÃO-FERROSOS E OUTROS DA METALURGIA	0	675	29	0	0	0	0	0	0	704
QUÍMICA	0	2.323	92	0	0	0	51	0	95	2.560
ALIMENTOS E BEBIDAS	0	581	37	0	0	0	1.999	15.353	10	17.980
TÊXTIL	0	322	0	0	0	0	95	0	0	417
PAPEL E CELULOSE	0	509	81	0	0	0	1.374	37	4.833	6.833
CERÂMICA	0	1.007	44	0	0	0	2.122	0	53	3.225
OUTROS	0	1.425	185	0	0	0	798	0	3	2.410
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-125	156	-27	-14	0	0	0	0	-51	-61

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE COQUEARIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236.555
4.943	190	0	1.337	3.591	1.230	0	1.311	3.548	3.689	0	0	3.087	1.295	8	24.232	64.822
-69	46	-50	-3	-18	23	0	-224	-4.412	0	0	558	-184	-55	-9	-4.396	-4.730
4.874	236	-50	1.335	3.572	1.253	0	1.087	-864	3.689	0	559	2.902	1.240	0	19.835	296.697
-1.320	-8.418	-2.001	-5	-79	-1.616	0	0	0	-59	0	-2.705	-279	-526	-7	-17.014	-39.387
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.925
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.526
3.554	-8.181	-2.051	1.330	3.493	-362	0	1.086	-864	3.630	0	-2.146	2.623	715	-7	2.821	251.860
33.944	14.213	16.645	6.333	3.452	3.137	1.089	5.717	864	39.828	6.390	14.071	8.040	5.380	188	159.292	-18.930
34.833	15.698	15.618	5.079	6.223	3.137	0	0	0	0	0	0	6.700	5.380	0	92.667	-301
0	0	391	1.155	0	0	0	0	0	0	0	0	0	0	0	1.545	-175
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.616	5.717	0	0	0	0	0	0	214	7.547	-96
0	0	0	0	0	0	0	0	4.505	0	0	0	0	0	0	4.505	-69
-1.597	-1.172	0	0	0	0	0	0	-3.641	35.433	0	0	0	0	0	29.023	-7.872
-281	-312	0	0	0	0	-527	0	0	4.395	0	0	-572	0	-26	2.677	-4.419
0	0	0	0	0	0	0	0	0	0	6.390	0	0	0	0	6.390	-5.667
0	0	0	0	0	0	0	0	0	0	0	14.071	0	0	0	14.071	-185
990	0	636	99	-2.770	0	0	0	0	0	0	0	1.913	0	0	867	-145
-8	-20	0	-31	0	0	0	-23	0	-6.629	-166	-138	-84	0	0	-7.098	-7.232
37.827	6.276	14.585	7.585	6.879	2.831	1.198	6.704	0	36.829	6.209	11.809	10.623	6.048	187	155.591	226.215
0	0	0	0	6.879	8	0	0	0	0	0	791	92	6.048	149	13.966	14.676
37.827	6.276	14.585	7.585	0	2.823	1.198	6.704	0	36.829	6.209	11.019	10.531	0	39	141.625	211.538
152	980	0	19	0	0	133	0	0	1.582	0	0	3.582	0	0	6.448	24.679
0	0	0	6.043	0	9	0	0	0	8.220	531	0	0	0	0	14.803	22.738
59	122	0	309	0	0	0	0	0	5.375	78	0	0	0	0	5.942	6.190
96	87	0	409	0	0	0	0	0	2.972	0	0	0	0	0	3.564	3.622
5.685	68	0	22	0	0	0	0	0	1.582	7	6	0	0	0	7.371	9.911
31.086	1.038	14.585	0	0	2.811	0	0	0	138	0	11.013	0	0	0	60.671	62.829
29.660	0	14.538	0	0	0	0	0	0	0	0	11.013	0	0	0	55.212	57.370
1.011	0	0	0	0	0	0	0	0	138	0	0	0	0	0	1.149	1.149
0	0	47	0	0	2.811	0	0	0	0	0	0	0	0	0	2.857	2.857
414	1.038	0	0	0	0	0	0	0	0	0	0	0	0	0	1.452	1.452
750	3.981	0	784	0	3	1.065	6.704	0	16.961	5.593	0	6.949	0	39	42.827	81.570
43	29	0	14	0	0	0	63	0	497	249	0	2.561	0	0	3.455	3.820
14	142	0	97	0	0	1.065	6.289	0	1.602	4.679	0	489	0	39	14.416	17.627
0	67	0	0	0	0	0	119	0	751	628	0	143	0	0	1.708	1.811
249	502	0	22	0	1	0	84	0	970	0	0	437	0	0	2.264	3.198
0	1.062	0	85	0	0	0	149	0	3.366	9	0	590	0	0	5.262	5.966
154	476	0	66	0	0	0	0	0	1.901	17	0	2.033	0	0	4.648	7.209
82	467	0	103	0	0	0	0	0	1.985	0	0	77	0	0	2.713	20.694
3	106	0	10	0	0	0	0	0	672	0	0	0	0	0	791	1.208
68	499	0	29	0	0	0	0	0	1.528	0	0	0	0	0	2.124	8.957
8	322	0	166	0	0	0	0	0	298	0	0	173	0	0	967	4.193
129	310	0	192	0	1	0	0	0	3.390	11	0	445	0	0	4.478	6.888
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
336	264	-9	-47	-67	56	110	-77	0	0	-15	22	44	-46	7	577	516

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2009 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₂₃₅	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	100.918	20.983	1.913	167	4.117	33.625	24.609	44.775	9.350	240.458
IMPORTAÇÃO	19.346	7.362	1.999	6.627	30	0	0	0	0	35.364
VARIAÇÃO DE ESTOQUES	-1.111	0	20	74	-277	0	0	0	0	-1.293
OFERTA TOTAL	119.153	28.345	3.932	6.868	3.871	33.625	24.609	44.775	9.350	274.529
EXPORTAÇÃO	-27.117	0	0	0	0	0	0	0	0	-27.117
NÃO-APROVEITADA	0	-3.013	0	0	0	0	0	0	0	-3.013
REINJEÇÃO	0	-4.002	0	0	0	0	0	0	0	-4.002
OFERTA INTERNA BRUTA	92.036	21.329	3.932	6.868	3.871	33.625	24.609	44.775	9.350	240.396
TOTAL TRANSFORMAÇÃO	-91.906	-5.883	-1.523	-6.842	-3.871	-33.625	-8.026	-16.331	-3.783	-171.789
REFINARIAS DE PETRÓLEO	-91.906	0	0	0	0	0	0	0	-1.556	-93.462
PLANTAS DE GÁS NATURAL	0	-2.815	0	0	0	0	0	0	1.108	-1.707
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-6.842	0	0	0	0	0	-6.842
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-3.871	0	0	0	0	-3.871
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-1.574	-1.480	0	0	-31.964	0	0	-151	-35.168
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-1.046	-43	0	0	-1.661	-221	-2.687	-2.269	-7.927
CARVOARIAS	0	0	0	0	0	0	-7.805	0	0	-7.805
DESTILARIAS	0	0	0	0	0	0	0	-13.644	0	-13.644
OUTRAS TRANSFORMAÇÕES	0	-448	0	0	0	0	0	0	-915	-1.363
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-121	-6	-26	0	0	0	0	0	-153
CONSUMO FINAL	0	15.307	2.403	0	0	0	16.583	28.445	5.568	68.305
CONSUMO FINAL NÃO-ENERGÉTICO	0	717	0	0	0	0	0	0	0	717
CONSUMO FINAL ENERGÉTICO	0	14.589	2.403	0	0	0	16.583	28.445	5.568	67.588
SETOR ENERGÉTICO	0	4.994	0	0	0	0	0	12.258	0	17.252
RESIDENCIAL	0	238	0	0	0	0	7.529	0	0	7.767
COMERCIAL	0	190	0	0	0	0	80	0	0	270
PÚBLICO	0	59	0	0	0	0	0	0	0	59
AGROPECUÁRIO	0	2	0	0	0	0	2.411	0	0	2.413
TRANSPORTES - TOTAL	0	1.853	0	0	0	0	0	0	0	1.853
RODOVIÁRIO	0	1.853	0	0	0	0	0	0	0	1.853
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	7.254	2.403	0	0	0	6.563	16.187	5.568	37.974
CIMENTO	0	26	51	0	0	0	0	0	286	362
FERRO-GUSA E AÇO	0	695	1.578	0	0	0	0	0	0	2.273
FERRO-LIGAS	0	2	0	0	0	0	79	0	0	80
MINERAÇÃO E PELOTIZAÇÃO	0	170	294	0	0	0	0	0	0	464
NÃO-FERROSOS E OUTROS DA METALURGIA	0	405	27	0	0	0	0	0	0	432
QUÍMICA	0	2.276	71	0	0	0	45	0	95	2.487
ALIMENTOS E BEBIDAS	0	552	48	0	0	0	2.039	16.148	10	18.797
TÊXTIL	0	300	0	0	0	0	88	0	0	388
PAPEL E CELULOSE	0	483	84	0	0	0	1.449	39	5.121	7.176
CERÂMICA	0	977	31	0	0	0	2.081	0	53	3.142
OUTROS	0	1.368	219	0	0	0	783	0	3	2.373
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-130	-19	0	0	0	0	0	0	0	-149

FONTES DE ENERGIA SECUNDÁRIA															ENERGIA SECUNDÁRIA TOTAL	TOTAL
ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE COQUEARIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240.458
2.981	10	10	1.562	3.958	1.044	0	300	3.707	3.504	1	2	2.859	968	0	20.906	56.270
-28	-65	-62	-10	153	-42	0	10	-4.144	0	0	915	4	111	0	-3.158	-4.452
2.952	-56	-52	1.552	4.111	1.001	0	310	-437	3.504	1	917	2.864	1.079	0	17.748	292.276
-1.704	-7.166	-1.940	-12	-39	-1.673	0	0	0	-93	0	-1.715	-215	-476	0	-15.034	-42.151
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.013
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4.002
1.248	-7.222	-1.992	1.540	4.073	-672	0	310	-437	3.411	1	-798	2.648	603	0	2.714	243.110
35.655	13.380	16.697	5.910	3.318	3.564	1.200	5.009	436	40.090	4.098	13.481	8.658	5.349	188	152.031	-14.758
35.993	14.520	15.266	4.817	6.459	3.564	0	0	0	0	0	0	6.978	5.167	0	92.764	-698
0	0	586	846	0	0	0	0	0	0	0	0	0	180	0	1.611	-95
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.530	5.009	0	0	0	0	0	0	192	6.732	-111
0	0	0	0	0	0	0	0	3.812	0	0	0	0	0	0	3.812	-58
-1.361	-840	0	0	0	0	0	0	-3.377	35.187	0	0	0	0	0	29.610	-5.559
-340	-300	0	0	0	0	-331	0	0	4.903	0	0	-366	0	-5	3.561	-4.366
0	0	0	0	0	0	0	0	0	0	4.098	0	0	0	0	4.098	-3.707
0	0	0	0	0	0	0	0	0	0	0	13.481	0	0	0	13.481	-163
1.363	0	844	247	-3.141	0	0	0	0	0	0	0	2.046	2	0	1.363	0
-8	-20	0	-31	-31	-16	0	-10	0	-6.862	-119	-132	-129	-108	0	-7.466	-7.620
37.263	5.975	14.720	7.446	7.360	2.847	1.200	5.309	0	36.638	3.970	12.550	11.117	5.844	187	152.427	220.732
0	0	0	0	7.360	7	0	0	0	0	0	751	98	5.844	143	14.204	14.921
37.263	5.975	14.720	7.446	0	2.839	1.200	5.309	0	36.638	3.970	11.799	11.019	0	44	138.223	205.811
162	985	0	18	0	0	188	0	0	1.561	0	0	3.749	0	0	6.664	23.916
0	0	0	6.115	0	8	0	0	0	8.655	584	0	0	0	0	15.362	23.129
57	122	0	135	0	0	0	0	0	5.674	78	0	0	0	0	6.066	6.335
97	87	0	373	0	0	0	0	0	3.031	0	0	0	0	0	3.589	3.648
5.515	68	0	23	0	0	0	0	0	1.521	7	7	0	0	0	7.141	9.553
30.725	986	14.720	0	0	2.828	0	0	0	137	0	11.792	0	0	0	61.188	63.041
29.364	0	14.674	0	0	0	0	0	0	0	0	11.792	0	0	0	55.830	57.683
988	0	0	0	0	0	0	0	0	137	0	0	0	0	0	1.125	1.125
0	0	47	0	0	2.828	0	0	0	0	0	0	0	0	0	2.874	2.874
373	986	0	0	0	0	0	0	0	0	0	0	0	0	0	1.359	1.359
707	3.727	0	782	0	3	1.011	5.309	0	16.060	3.301	0	7.270	0	44	38.215	76.189
42	29	0	1	0	0	0	62	0	500	55	0	2.727	0	0	3.416	3.778
14	114	0	90	0	1	1.011	4.969	0	1.281	2.724	0	487	0	44	10.735	13.008
0	67	0	0	0	0	0	92	0	580	485	0	143	0	0	1.367	1.447
224	351	0	22	0	2	0	49	0	708	0	0	436	0	0	1.791	2.255
0	987	0	86	0	0	0	138	0	3.114	8	0	588	0	0	4.921	5.353
136	476	0	67	0	0	0	0	0	1.996	18	0	2.169	0	0	4.863	7.350
82	467	0	101	0	0	0	0	0	2.025	0	0	77	0	0	2.751	21.547
3	106	0	10	0	0	0	0	0	665	0	0	0	0	0	784	1.172
68	499	0	30	0	0	0	0	0	1.574	0	0	0	0	0	2.170	9.346
8	322	0	176	0	0	0	0	0	301	0	0	178	0	0	986	4.128
129	310	0	200	0	1	0	0	0	3.315	11	0	466	0	0	4.431	6.804
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
368	-163	16	27	0	-29	0	0	1	0	-9	0	-61	0	0	149	0

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2010 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₂₃₅	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	106.559	22.771	2.104	0	1.767	34.683	25.997	48.852	10.464	253.198
IMPORTAÇÃO	17.516	11.130	2.895	7.972	1.419	0	0	0	0	40.931
VARIAÇÃO DE ESTOQUES	1.185	0	141	164	1.636	0	0	0	0	3.126
OFERTA TOTAL	125.260	33.900	5.141	8.136	4.821	34.683	25.997	48.852	10.464	297.255
EXPORTAÇÃO	-32.651	0	0	0	0	0	0	0	0	-32.651
NÃO-APROVEITADA	0	-2.365	0	0	0	0	0	0	0	-2.365
REINJEÇÃO	0	-4.000	0	0	0	0	0	0	0	-4.000
OFERTA INTERNA BRUTA	92.609	27.536	5.141	8.136	4.821	34.683	25.997	48.852	10.464	258.239
TOTAL TRANSFORMAÇÃO	-92.408	-10.211	-1.905	-8.106	-4.821	-34.683	-8.945	-18.787	-4.421	-184.287
REFINARIAS DE PETRÓLEO	-92.408	0	0	0	0	0	0	0	-1.211	-93.619
PLANTAS DE GÁS NATURAL	0	-2.844	0	0	0	0	0	0	840	-2.004
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-8.106	0	0	0	0	0	-8.106
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-4.821	0	0	0	0	-4.821
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-4.818	-1.721	0	0	-32.904	-14	0	-193	-39.651
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.177	-184	0	0	-1.779	-295	-4.081	-2.195	-10.711
CARVOARIAS	0	0	0	0	0	0	-8.637	0	0	-8.637
DESTILARIAS	0	0	0	0	0	0	0	-14.706	0	-14.706
OUTRAS TRANSFORMAÇÕES	0	-371	0	0	0	0	0	0	-1.662	-2.033
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-433	0	-30	0	0	0	0	0	-463
CONSUMO FINAL	0	16.887	3.237	0	0	17.052	30.066	6.043	0	73.286
CONSUMO FINAL NÃO-ENERGÉTICO	0	1.453	0	0	0	0	0	0	0	1.453
CONSUMO FINAL ENERGÉTICO	0	15.435	3.237	0	0	17.052	30.066	6.043	0	71.833
SETOR ENERGÉTICO	0	3.875	5	0	0	0	12.777	0	0	16.657
RESIDENCIAL	0	255	0	0	0	0	7.276	0	0	7.531
COMERCIAL	0	202	0	0	0	0	89	0	0	291
PÚBLICO	0	60	0	0	0	0	0	0	0	60
AGROPECUÁRIO	0	2	0	0	0	0	2.523	0	0	2.526
TRANSPORTES - TOTAL	0	1.767	0	0	0	0	0	0	0	1.767
RODOVIÁRIO	0	1.767	0	0	0	0	0	0	0	1.767
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.274	3.232	0	0	0	7.164	17.289	6.043	43.002
CIMENTO	0	23	52	0	0	0	0	0	297	372
FERRO-GUSA E AÇO	0	897	1.772	0	0	0	0	0	0	2.669
FERRO-LIGAS	0	2	0	0	0	0	92	0	0	94
MINERAÇÃO E PELOTIZAÇÃO	0	628	368	0	0	0	0	0	0	996
NÃO-FERROSOS E OUTROS DA METALURGIA	0	727	616	0	0	0	0	0	0	1.343
QUÍMICA	0	2.289	125	0	0	0	49	0	93	2.556
ALIMENTOS E BEBIDAS	0	662	71	0	0	0	2.267	17.248	11	20.260
TÊXTIL	0	329	0	0	0	0	92	0	0	420
PAPEL E CELULOSE	0	676	112	0	0	0	1.513	41	5.581	7.923
CERÂMICA	0	1.141	30	0	0	0	2.275	0	58	3.504
OUTROS	0	1.901	87	0	0	0	874	0	3	2.866
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-201	-4	2	0	0	0	0	0	0	-203

FONTES DE ENERGIA SECUNDÁRIA														ENERGIA SECUNDÁRIA TOTAL	TOTAL	
ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE COQUERIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRADO HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO			ALCATRÃO
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	253.198
7.638	154	394	1.908	5.136	1.581	0	1.243	3.527	3.088	1	39	3.384	1.723	0	29.814	70.746
8	-11	-65	35	-87	-11	0	-57	-4.491	0	0	-806	-8	-175	0	-5.667	-2.541
7.646	144	329	1.942	5.050	1.570	0	1.186	-965	3.088	1	-767	3.376	1.548	0	24.148	321.403
-1.310	-7.966	-595	-5	0	-1.977	0	0	0	-108	0	-984	-157	-489	0	-13.591	-46.242
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2.365
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4.000
6.336	-7.823	-266	1.938	5.050	-407	0	1.186	-965	2.980	1	-1.750	3.219	1.059	0	10.556	268.796
35.001	13.119	17.831	5.847	2.591	3.854	1.434	6.340	965	44.359	4.767	14.442	7.939	6.919	224	165.630	-18.658
35.132	14.247	16.629	4.693	5.626	3.854	0	0	0	0	0	0	6.979	6.302	0	93.462	-157
0	0	0	1.094	0	0	0	0	0	0	0	0	0	881	0	1.975	-30
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.738	6.340	0	0	0	0	-612	0	235	7.701	-404
0	0	0	0	0	0	0	0	4.744	0	0	0	0	0	0	4.744	-77
-1.820	-890	0	0	0	0	0	0	-3.780	38.081	0	0	0	0	0	31.591	-8.059
-343	-238	0	0	0	0	-304	0	0	6.278	0	0	-465	0	-11	4.915	-5.796
0	0	0	0	0	0	0	0	0	0	4.767	0	0	0	0	4.767	-3.870
0	0	0	0	0	0	0	0	0	0	0	14.442	0	0	0	14.442	-264
2.033	0	1.202	61	-3.035	0	0	0	0	0	0	0	2.036	-265	0	2.032	-1
-34	-69	0	-6	-23	-16	0	-10	0	-7.374	-120	-132	0	-63	0	-7.848	-8.310
41.498	4.939	17.578	7.701	7.601	3.202	1.434	7.516	0	39.964	4.648	12.628	11.164	7.797	238	167.908	241.194
0	0	0	0	7.601	7	0	0	0	0	0	587	98	7.797	143	16.233	17.686
41.498	4.939	17.578	7.701	0	3.195	1.434	7.516	0	39.964	4.648	12.041	11.065	0	95	151.675	223.508
908	631	0	15	0	0	184	0	0	2.308	0	0	3.561	0	0	7.607	24.263
0	0	0	6.298	0	4	0	0	0	9.220	509	0	0	0	0	16.031	23.562
36	25	0	298	0	0	0	0	0	5.996	86	0	0	0	0	6.440	6.731
12	3	0	381	0	0	0	0	0	3.180	0	0	0	0	0	3.576	3.636
5.772	79	0	8	0	0	0	0	0	1.629	8	8	0	0	0	7.503	10.029
34.046	966	17.578	0	0	3.188	0	0	0	143	0	12.033	0	0	0	67.953	69.720
32.639	0	17.525	0	0	0	0	0	0	0	0	12.033	0	0	0	62.197	63.963
993	0	0	0	0	0	0	0	0	143	0	0	0	0	0	1.135	1.135
0	0	53	0	0	3.188	0	0	0	0	0	0	0	0	0	3.241	3.241
415	966	0	0	0	0	0	0	0	0	0	0	0	0	0	1.380	1.380
725	3.236	0	702	0	3	1.250	7.516	0	17.488	4.045	0	7.505	0	95	42.564	85.567
45	8	0	5	0	0	0	47	0	553	63	0	3.161	0	0	3.883	4.255
15	168	0	71	0	0	1.250	7.153	0	1.613	3.372	0	39	0	95	13.777	16.445
0	29	0	0	0	1	0	107	0	728	568	0	168	0	0	1.601	1.695
260	371	0	19	0	1	0	56	0	972	0	0	508	0	0	2.186	3.182
0	1.098	0	79	0	0	0	152	0	3.198	9	0	612	0	0	5.149	6.492
27	233	0	64	0	0	0	0	0	2.055	20	0	2.259	0	0	4.658	7.214
148	325	0	106	0	0	0	0	0	2.319	0	0	86	0	0	2.984	23.244
3	64	0	10	0	0	0	0	0	715	0	0	0	0	0	792	1.212
76	466	0	31	0	0	0	0	0	1.636	0	0	0	0	0	2.209	10.131
6	295	0	165	0	0	0	0	0	319	0	0	195	0	0	981	4.485
144	177	0	153	0	1	0	0	0	3.380	12	0	478	0	0	4.345	7.211
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
195	-287	13	-78	-17	-228	0	0	0	0	0	68	6	-117	14	-431	-634

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2011 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	ENERGIA PRIMÁRIA TOTAL
PRODUÇÃO	108.976	23.888	2.134	0	4.209	36.837	25.997	43.270	11.077	256.387
IMPORTAÇÃO	17.140	9.223	3.547	8.659	966	0	0	0	0	39.535
VARIAÇÃO DE ESTOQUES	-758	0	-148	-237	1.888	0	0	0	-107	638
OFERTA TOTAL	125.357	33.112	5.533	8.422	7.062	36.837	25.997	43.270	10.970	296.559
EXPORTAÇÃO	-31.221	0	-40	0	0	0	0	0	0	-31.262
NÃO-APROVEITADA	0	-1.666	0	0	0	0	0	0	0	-1.666
REINJEÇÃO	0	-3.725	0	0	0	0	0	0	0	-3.725
OFERTA INTERNA BRUTA	94.136	27.721	5.492	8.422	7.062	36.837	25.997	43.270	10.970	259.907
TOTAL TRANSFORMAÇÃO	-93.641	-9.635	-1.750	-8.400	-7.062	-36.837	-9.593	-15.957	-4.872	-187.748
REFINARIAS DE PETRÓLEO	-93.641	0	0	0	0	0	0	0	-2.526	-96.167
PLANTAS DE GÁS NATURAL	0	-3.044	0	0	0	0	0	0	1.162	-1.881
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-8.400	0	0	0	0	0	-8.400
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-7.062	0	0	0	0	-7.062
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-2.897	-1.591	0	0	-34.883	-19	0	-290	-39.681
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.331	-159	0	0	-1.953	-267	-3.982	-2.563	-11.256
CARVOARIAS	0	0	0	0	0	0	-9.307	0	0	-9.307
DESTILARIAS	0	0	0	0	0	0	0	-11.975	0	-11.975
OUTRAS TRANSFORMAÇÕES	0	-1.363	0	0	0	0	0	0	-655	-2.019
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-410	-29	-22	0	0	0	0	0	-460
CONSUMO FINAL	0	17.828	3.715	0	0	0	16.403	27.313	6.098	71.357
CONSUMO FINAL NÃO-ENERGÉTICO	0	897	0	0	0	0	0	0	0	897
CONSUMO FINAL ENERGÉTICO	0	16.931	3.715	0	0	0	16.403	27.313	6.098	70.460
SETOR ENERGÉTICO	0	4.671	0	0	0	0	0	10.411	0	15.083
RESIDENCIAL	0	280	0	0	0	0	6.505	0	0	6.785
COMERCIAL	0	188	0	0	0	0	95	0	0	283
PÚBLICO	0	44	0	0	0	0	0	0	0	44
AGROPECUÁRIO	0	0	0	0	0	0	2.446	0	0	2.446
TRANSPORTES - TOTAL	0	1.735	0	0	0	0	0	0	0	1.735
RODOVIÁRIO	0	1.735	0	0	0	0	0	0	0	1.735
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	10.012	3.715	0	0	0	7.358	16.901	6.098	44.084
CIMENTO	0	29	98	0	0	0	37	0	342	506
FERRO-GUSA E AÇO	0	997	1.924	0	0	0	0	0	0	2.922
FERRO-LIGAS	0	3	0	0	0	0	82	0	0	85
MINERAÇÃO E PELOTIZAÇÃO	0	695	440	0	0	0	0	0	0	1.135
NÃO-FERROSOS E OUTROS DA METALURGIA	0	776	790	0	0	0	0	0	0	1.567
QUÍMICA	0	2.437	105	0	0	0	48	0	92	2.682
ALIMENTOS E BEBIDAS	0	652	90	0	0	0	2.312	16.861	11	19.927
TÊXTIL	0	327	0	0	0	0	76	0	0	403
PAPEL E CELULOSE	0	730	126	0	0	0	1.516	41	5.592	8.004
CERÂMICA	0	1.288	52	0	0	0	2.387	0	61	3.788
OUTROS	0	2.079	90	0	0	0	898	0	0	3.066
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-495	152	1	0	0	0	0	0	0	-341

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE COQUERIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	256.387
7.914	679	1.689	2.071	5.454	1.482	0	1.478	2.321	3.305	0	601	3.870	1.062	0	31.926	71.461
-232	-26	112	-7	24	-76	0	57	-5.196	0	0	-77	-23	-7	0	-5.452	-4.814
7.683	653	1.801	2.064	5.478	1.406	0	1.535	-2.875	3.305	0	524	3.846	1.055	0	26.474	323.034
-941	-8.901	-249	-26	0	-2.168	0	0	0	-219	0	-1.017	-237	-428	0	-14.186	-45.447
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.666
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.725
6.742	-8.248	1.552	2.038	5.478	-763	0	1.535	-2.875	3.086	0	-493	3.610	627	0	12.289	272.196
36.552	12.652	19.002	5.962	1.908	4.460	1.498	6.681	2.875	45.731	4.933	11.904	8.219	6.628	224	169.228	-18.520
36.478	13.385	18.139	4.846	4.881	4.460	0	0	0	0	0	0	7.370	6.054	0	95.614	-553
0	0	140	929	0	0	0	0	0	0	0	0	0	642	0	1.711	-170
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.798	6.681	0	0	0	0	-803	0	234	7.911	-489
0	0	0	0	0	0	0	0	6.956	0	0	0	0	0	0	6.956	-106
-1.696	-469	0	0	0	0	0	0	-4.081	39.106	0	0	-51	0	0	32.810	-6.871
-390	-265	0	0	0	0	-301	0	0	6.625	0	0	-440	0	-10	5.218	-6.037
0	0	0	0	0	0	0	0	0	4.933	0	0	0	0	0	4.933	-4.374
0	0	0	0	0	0	0	0	0	0	11.904	0	0	0	0	11.904	-71
2.160	0	722	187	-2.973	0	0	0	0	0	0	0	2.129	-69	0	2.157	138
0	0	0	0	0	-8	0	-7	0	-7.454	-130	-113	-84	-25	0	-7.821	-8.282
43.551	4.428	20.892	8.000	7.386	3.594	1.491	8.209	0	41.363	4.803	11.289	11.744	7.530	224	174.503	245.860
0	0	0	0	7.386	17	0	0	0	0	0	545	342	7.530	121	15.940	16.837
43.551	4.428	20.892	8.000	0	3.577	1.491	8.209	0	41.363	4.803	10.744	11.402	0	103	158.563	229.023
945	519	0	14	0	0	202	0	0	2.083	0	0	3.325	0	0	7.088	22.171
0	0	0	6.364	0	5	0	0	0	9.629	483	0	0	0	0	16.482	23.267
9	19	0	352	0	0	0	0	0	6.369	92	0	0	0	0	6.840	7.124
4	6	0	421	0	0	0	0	0	3.283	0	0	0	0	0	3.714	3.758
5.662	17	0	12	0	0	0	0	0	1.846	7	9	0	0	0	7.553	9.999
35.929	983	20.892	0	0	3.569	0	0	0	146	0	10.735	0	0	0	72.254	73.989
34.588	0	20.838	0	0	0	0	0	0	0	0	10.735	0	0	0	66.161	67.896
1.002	0	0	0	0	0	0	0	0	146	0	0	0	0	0	1.148	1.148
0	0	54	0	0	3.569	0	0	0	0	0	0	0	0	0	3.623	3.623
339	983	0	0	0	0	0	0	0	0	0	0	0	0	0	1.323	1.323
1.001	2.885	0	837	0	3	1.288	8.209	0	18.008	4.220	0	8.078	0	103	44.632	88.716
65	20	0	12	0	0	0	72	0	598	178	0	3.582	0	0	4.527	5.033
35	29	0	26	0	0	1.288	7.750	0	1.714	3.492	0	42	0	103	14.479	17.401
8	23	0	4	0	1	0	96	0	678	509	0	150	0	0	1.470	1.555
366	200	0	22	0	1	0	60	0	1.027	0	0	525	0	0	2.201	3.335
16	1.177	0	31	0	0	0	231	0	3.308	9	0	734	0	0	5.507	7.074
12	377	0	176	0	0	0	0	0	2.014	20	0	2.158	0	0	4.758	7.440
191	318	0	126	0	0	0	0	0	2.342	0	0	88	0	0	3.065	22.992
6	55	0	29	0	0	0	0	0	707	0	0	0	0	0	799	1.201
115	390	0	45	0	0	0	0	0	1.641	0	0	0	0	0	2.191	10.195
31	125	0	169	0	0	0	0	0	342	0	0	270	0	0	936	4.724
154	170	0	196	0	1	0	0	0	3.636	13	0	529	0	0	4.700	7.767
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
257	25	338	0	-1	-96	-7	0	0	0	0	-10	0	300	0	807	466

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2012 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	107.258	25.574	2.517	0	3.881	35.719	25.683	45.117	11.220	256.969
IMPORTAÇÃO	17.855	11.602	3.313	7.841	3.854	0	0	0	0	44.465
VARIAÇÃO DE ESTOQUES	543	0	108	185	-1.047	0	0	0	31	-181
OFERTA TOTAL	125.656	37.176	5.938	8.026	6.688	35.719	25.683	45.117	11.250	301.253
EXPORTAÇÃO	-27.608	0	0	0	0	0	0	0	0	-27.608
NÃO-APROVEITADA	0	-1.430	0	0	0	0	0	0	0	-1.430
REINJEÇÃO	0	-3.147	0	0	0	0	0	0	0	-3.147
OFERTA INTERNA BRUTA	98.048	32.598	5.938	8.026	6.688	35.719	25.683	45.117	11.250	269.067
TOTAL TRANSFORMAÇÃO	-98.066	-14.022	-2.341	-8.022	-6.688	-35.719	-9.213	-16.741	-5.314	-196.127
REFINARIAS DE PETRÓLEO	-97.676	0	0	0	0	0	0	0	-3.771	-101.447
PLANTAS DE GÁS NATURAL	0	-3.187	0	0	0	0	0	0	918	-2.269
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-8.022	0	0	0	0	0	-8.022
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-6.688	0	0	0	0	-6.688
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-6.700	-2.180	0	0	-33.960	-45	0	-520	-43.405
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.353	-161	0	0	-1.760	-258	-4.427	-2.613	-11.573
CARVOARIAS	0	0	0	0	0	0	-8.909	0	0	-8.909
DESTILARIAS	0	0	0	0	0	0	0	-12.314	0	-12.314
OUTRAS TRANSFORMAÇÕES	-390	-1.781	0	0	0	0	0	0	672	-1.500
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-336	-8	-4	0	0	0	0	0	-348
CONSUMO FINAL	0	18.247	3.589	0	0	16.470	28.376	5.936	0	72.618
CONSUMO FINAL NÃO-ENERGÉTICO	0	898	0	0	0	0	0	0	0	898
CONSUMO FINAL ENERGÉTICO	0	17.349	3.589	0	0	16.470	28.376	5.936	0	71.720
SETOR ENERGÉTICO	0	5.258	0	0	0	0	10.508	0	0	15.766
RESIDENCIAL	0	296	0	0	0	0	6.472	0	0	6.768
COMERCIAL	0	193	0	0	0	0	96	0	0	289
PÚBLICO	0	45	0	0	0	0	0	0	0	45
AGROPECUÁRIO	0	0	0	0	0	0	2.421	0	0	2.421
TRANSPORTES - TOTAL	0	1.709	0	0	0	0	0	0	0	1.709
RODOVIÁRIO	0	1.709	0	0	0	0	0	0	0	1.709
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.849	3.589	0	0	7.480	17.868	5.936	0	44.723
CIMENTO	0	55	108	0	0	0	81	0	356	600
FERRO-GUSA E AÇO	0	1.067	1.854	0	0	0	0	0	0	2.922
FERRO-LIGAS	0	3	0	0	0	0	81	0	0	83
MINERAÇÃO E PELOTIZAÇÃO	0	673	393	0	0	0	0	0	0	1.066
NÃO-FERROSOS E OUTROS DA METALURGIA	0	857	751	0	0	0	0	0	0	1.607
QUÍMICA	0	2.218	164	0	0	0	47	0	90	2.519
ALIMENTOS E BEBIDAS	0	720	68	0	0	0	2.319	17.844	11	20.963
TÊXTIL	0	317	0	0	0	0	73	0	0	390
PAPEL E CELULOSE	0	769	124	0	0	0	1.532	24	5.417	7.865
CERÂMICA	0	1.314	35	0	0	0	2.458	0	62	3.869
OUTROS	0	1.856	94	0	0	0	889	0	0	2.839
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	19	7	0	0	0	0	0	0	0	27

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUEARIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCATRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	256.969
8.241	217	2.915	1.744	5.380	1.538	0	1.098	6.522	3.502	0	291	3.230	1.027	0	35.707	80.173
320	73	1.010	-60	57	22	0	226	-8.923	0	0	-250	-26	-31	0	-7.583	-7.765
8.561	290	3.925	1.684	5.437	1.560	0	1.324	-2.401	3.502	0	42	3.204	996	0	28.124	329.377
-671	-8.711	-116	-19	0	-2.256	0	0	0	-40	0	-1.602	-278	-241	0	-13.934	-41.543
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.430
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.147
7.890	-8.421	3.809	1.665	5.437	-696	0	1.324	-2.401	3.462	0	-1.560	2.926	755	0	14.190	283.257
38.301	12.483	20.685	6.346	1.856	4.477	1.471	6.681	2.401	47.515	4.722	12.203	8.523	6.731	216	174.610	-21.517
38.915	13.846	19.905	5.099	4.951	4.477	0	0	0	0	0	0	7.947	6.015	0	101.155	-291
0	0	140	1.057	0	0	0	0	0	0	0	0	0	882	0	2.079	-190
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.735	6.681	0	0	0	0	-835	0	225	7.806	-216
0	0	0	0	0	0	0	0	6.581	0	0	0	0	0	0	6.581	-107
-2.261	-1.053	0	0	0	0	0	0	-4.180	40.804	0	0	-53	0	0	33.258	-10.148
-391	-293	0	0	0	0	-265	0	0	6.710	0	0	-576	0	-9	5.176	-6.397
0	0	0	0	0	0	0	0	0	0	4.722	0	0	0	0	4.722	-4.187
0	0	0	0	0	0	0	0	0	0	0	12.203	0	0	0	12.203	-111
2.038	-17	639	190	-3.095	0	0	0	0	0	0	0	2.040	-165	0	1.630	130
0	0	0	0	0	0	0	-7	0	-8.116	-124	-105	-14	0	0	-8.366	-8.714
46.191	3.970	24.512	8.023	7.323	3.784	1.430	7.999	0	42.861	4.598	10.522	11.482	7.509	216	180.419	253.037
0	0	0	0	7.323	15	0	0	0	0	0	606	405	7.509	116	15.974	16.873
46.191	3.970	24.512	8.023	0	3.769	1.430	7.999	0	42.861	4.598	9.916	11.077	0	99	164.445	236.165
1.189	350	0	0	0	0	193	0	0	2.266	0	0	3.104	0	0	7.102	22.868
0	0	0	6.393	0	5	0	0	0	10.118	478	0	0	0	0	16.993	23.761
9	19	0	438	0	0	0	0	0	6.863	90	0	0	0	0	7.420	7.709
7	8	0	256	0	0	0	0	0	3.424	0	0	0	0	0	3.696	3.741
5.889	21	0	11	0	0	0	0	0	2.001	7	10	0	0	0	7.940	10.362
38.038	938	24.512	0	0	3.762	0	0	0	162	0	9.906	0	0	0	77.319	79.027
36.652	0	24.454	0	0	0	0	0	0	0	0	9.906	0	0	0	71.012	72.721
1.027	0	0	0	0	0	0	0	0	162	0	0	0	0	0	1.190	1.190
0	0	58	0	0	3.762	0	0	0	0	0	0	0	0	0	3.820	3.820
359	938	0	0	0	0	0	0	0	0	0	0	0	0	0	1.297	1.297
1.057	2.633	0	924	0	3	1.237	7.999	0	18.027	4.022	0	7.973	0	99	43.974	88.697
70	17	0	9	0	0	0	75	0	645	142	0	3.578	0	0	4.535	5.135
38	29	0	20	0	0	1.237	7.495	0	1.696	3.338	0	40	0	99	13.992	16.914
8	46	0	21	0	1	0	93	0	666	499	0	147	0	0	1.481	1.565
384	191	0	31	0	1	0	57	0	1.011	0	0	498	0	0	2.174	3.240
12	1.163	0	32	0	0	0	279	0	3.255	10	0	699	0	0	5.450	7.057
13	328	0	190	0	0	0	0	0	2.023	19	0	2.145	0	0	4.718	7.237
212	271	0	167	0	0	0	0	0	2.423	0	0	87	0	0	3.160	24.123
8	45	0	28	0	0	0	0	0	645	0	0	0	0	0	726	1.116
124	328	0	50	0	0	0	0	0	1.636	0	0	0	0	0	2.138	10.003
28	113	0	161	0	0	0	0	0	359	0	0	275	0	0	935	4.803
162	101	0	215	0	1	0	0	0	3.671	13	0	503	0	0	4.665	7.504
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	-92	19	12	29	3	-41	0	0	0	0	-15	47	23	0	-15	12

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2013 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₂₃₅	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	104.762	27.969	3.298	0	2.375	33.625	24.580	49.304	12.179	258.092
IMPORTAÇÃO	20.373	14.926	4.206	7.838	601	0	0	0	0	47.944
VARIAÇÃO DE ESTOQUES	-5	0	-143	-52	2.050	0	0	0	-28	1.822
OFERTA TOTAL	125.130	42.895	7.361	7.786	5.026	33.625	24.580	49.304	12.151	307.858
EXPORTAÇÃO	-20.511	0	0	0	0	0	0	0	0	-20.511
NÃO-APROVEITADA	0	-1.294	0	0	0	0	0	0	0	-1.294
REINJEÇÃO	0	-3.810	0	0	0	0	0	0	0	-3.810
OFERTA INTERNA BRUTA	104.619	37.792	7.361	7.786	5.026	33.625	24.580	49.304	12.151	282.244
TOTAL TRANSFORMAÇÃO	-105.124	-18.859	-3.724	-7.782	-5.026	-33.625	-8.398	-19.824	-5.802	-208.164
REFINARIAS DE PETRÓLEO	-105.085	0	0	0	0	0	0	0	-3.523	-108.607
PLANTAS DE GÁS NATURAL	0	-3.258	0	0	0	0	0	0	974	-2.284
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-7.782	0	0	0	0	0	-7.782
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-5.026	0	0	0	0	-5.026
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-11.575	-3.566	0	0	-31.729	-64	0	-625	-47.559
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.318	-158	0	0	-1.897	-270	-5.263	-2.892	-12.799
CARVOARIAS	0	0	0	0	0	0	-8.063	0	0	-8.063
DESTILARIAS	0	0	0	0	0	0	0	-14.561	0	-14.561
OUTRAS TRANSFORMAÇÕES	-39	-1.708	0	0	0	0	0	0	264	-1.483
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-403	-6	-4	0	0	0	0	0	-415
CONSUMO FINAL	0	18.592	3.630	0	0	0	16.182	29.479	6.349	74.233
CONSUMO FINAL NÃO-ENERGÉTICO	0	836	0	0	0	0	0	0	0	836
CONSUMO FINAL ENERGÉTICO	0	17.756	3.630	0	0	0	16.182	29.479	6.349	73.397
SETOR ENERGÉTICO	0	5.824	0	0	0	0	0	12.241	0	18.065
RESIDENCIAL	0	321	0	0	0	0	5.741	0	0	6.063
COMERCIAL	0	181	0	0	0	0	96	0	0	277
PÚBLICO	0	45	0	0	0	0	0	0	0	45
AGROPECUÁRIO	0	0	0	0	0	0	2.639	0	0	2.639
TRANSPORTES - TOTAL	0	1.647	0	0	0	0	0	0	0	1.647
RODOVIÁRIO	0	1.647	0	0	0	0	0	0	0	1.647
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.737	3.630	0	0	0	7.706	17.238	6.349	44.660
CIMENTO	0	31	133	0	0	0	83	0	368	615
FERRO-GUSA E AÇO	0	1.020	1.808	0	0	0	0	0	0	2.828
FERRO-LIGAS	0	22	0	0	0	0	75	0	0	97
MINERAÇÃO E PELOTIZAÇÃO	0	634	393	0	0	0	0	0	0	1.026
NÃO-FERROSOS E OUTROS DA METALURGIA	0	942	747	0	0	0	0	0	0	1.689
QUÍMICA	0	2.037	152	0	0	0	50	0	91	2.330
ALIMENTOS E BEBIDAS	0	688	69	0	0	0	2.273	17.213	11	20.253
TÊXTIL	0	312	0	0	0	0	71	0	0	384
PAPEL E CELULOSE	0	809	124	0	0	0	1.616	25	5.815	8.388
CERÂMICA	0	1.354	39	0	0	0	2.631	0	65	4.088
OUTROS	0	1.890	166	0	0	0	907	0	0	2.962
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	504	62	0	0	0	0	0	0	0	567

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUEARIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCAITRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	258.092
8.501	92	1.744	2.060	5.261	1.467	0	1.308	3.334	3.467	0	68	3.286	1.063	0	31.651	79.595
-130	35	1.032	4	125	34	0	24	-4.253	0	0	-228	6	64	0	-3.288	-1.465
8.371	127	2.776	2.065	5.386	1.500	0	1.332	-920	3.467	0	-160	3.292	1.127	0	28.363	336.222
-873	-8.483	-267	-55	0	-2.383	0	0	0	0	0	-1.543	-352	-350	0	-14.307	-34.817
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.294
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.810
7.498	-8.356	2.509	2.010	5.386	-882	0	1.332	-920	3.467	0	-1.703	2.939	777	0	14.057	296.301
41.519	12.436	21.955	6.325	1.176	4.578	1.429	6.481	920	49.072	4.273	14.368	9.054	7.078	210	180.874	-27.291
42.220	14.723	22.104	4.946	4.114	4.578	0	0	0	0	0	0	8.908	6.184	0	107.778	-830
0	0	0	1.193	0	0	0	0	0	0	0	0	0	906	0	2.099	-185
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.683	6.481	0	0	0	0	-818	0	218	7.564	-218
0	0	0	0	0	0	0	0	4.946	0	0	0	0	0	0	4.946	-80
-2.349	-2.016	0	0	0	0	0	0	-4.026	41.665	0	0	-75	0	0	33.198	-14.360
-301	-271	0	0	0	0	-255	0	0	7.407	0	0	-747	0	-8	5.826	-6.974
0	0	0	0	0	0	0	0	0	0	4.273	0	0	0	0	4.273	-3.790
0	0	0	0	0	0	0	0	0	0	0	14.368	0	0	0	14.368	-193
1.949	0	-148	185	-2.938	0	0	0	0	0	0	0	1.786	-11	0	822	-661
0	0	0	0	0	0	0	-6	0	-8.166	-112	-123	-14	0	0	-8.423	-8.837
48.797	4.043	24.451	8.314	6.574	3.623	1.387	7.807	0	44.373	4.161	12.566	11.886	7.794	210	185.985	260.218
0	0	0	0	6.574	8	0	0	0	0	0	666	339	7.794	121	15.502	16.338
48.797	4.043	24.451	8.314	0	3.614	1.387	7.807	0	44.373	4.161	11.900	11.547	0	89	170.483	243.880
1.307	354	0	78	0	0	187	0	0	2.555	0	0	3.596	0	0	8.078	26.143
0	0	0	6.521	0	4	0	0	0	10.737	402	0	0	0	0	17.663	23.726
6	14	0	420	0	0	0	0	0	7.255	90	0	0	0	0	7.785	8.062
5	11	0	257	0	0	0	0	0	3.553	0	0	0	0	0	3.826	3.871
5.888	29	0	12	0	0	0	0	0	2.045	8	11	0	0	0	7.993	10.632
40.437	957	24.451	0	0	3.608	0	0	0	162	0	11.889	0	0	0	81.505	83.152
39.077	0	24.393	0	0	0	0	0	0	0	0	11.889	0	0	0	75.359	77.007
1.019	0	0	0	0	0	0	0	0	162	0	0	0	0	0	1.181	1.181
0	0	58	0	0	3.608	0	0	0	0	0	0	0	0	0	3.667	3.667
341	957	0	0	0	0	0	0	0	0	0	0	0	0	0	1.298	1.298
1.154	2.677	0	1.027	0	2	1.200	7.807	0	18.066	3.661	0	7.950	0	89	43.634	88.294
68	17	0	12	0	0	0	79	0	673	128	0	3.696	0	0	4.672	5.287
37	40	0	19	0	0	1.200	7.309	0	1.691	3.021	0	40	0	89	13.447	16.274
7	62	0	23	0	1	0	84	0	626	469	0	137	0	0	1.407	1.505
396	203	0	38	0	1	0	59	0	1.018	0	0	506	0	0	2.220	3.247
9	1.148	0	44	0	0	0	276	0	3.104	11	0	654	0	0	5.246	6.935
23	424	0	192	0	0	0	0	0	1.962	19	0	2.035	0	0	4.655	6.985
260	198	0	186	0	0	0	0	0	2.355	0	0	85	0	0	3.085	23.338
6	46	0	31	0	0	0	0	0	635	0	0	0	0	0	717	1.101
137	304	0	60	0	0	0	0	0	1.684	0	0	0	0	0	2.186	10.574
24	125	0	163	0	0	0	0	0	380	0	0	289	0	0	981	5.069
188	111	0	257	0	0	0	0	0	3.939	13	0	508	0	0	5.016	7.979
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-220	-37	-13	-20	12	-73	-41	0	0	0	0	24	-93	-62	0	-523	44

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2014 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₂₃₅	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	116.705	31.661	3.059	0	681	32.116	24.936	49.273	14.191	272.622
IMPORTAÇÃO	18.082	17.001	5.306	8.110	2.883	0	0	0	0	51.383
VARIAÇÃO DE ESTOQUES	25	0	-89	-52	-1.818	0	0	0	-24	-1.958
OFERTA TOTAL	134.812	48.662	8.276	8.059	1.747	32.116	24.936	49.273	14.167	322.047
EXPORTAÇÃO	-26.800	0	0	0	0	0	0	0	0	-26.800
NÃO-APROVEITADA	0	-1.601	0	0	0	0	0	0	0	-1.601
REINJEÇÃO	0	-5.689	0	0	0	0	0	0	0	-5.689
OFERTA INTERNA BRUTA	108.012	41.373	8.276	8.059	1.747	32.116	24.936	49.273	14.167	287.957
TOTAL TRANSFORMAÇÃO	-107.697	-22.134	-4.344	-8.054	-1.747	-32.116	-8.264	-20.662	-7.549	-212.566
REFINARIAS DE PETRÓLEO	-107.285	0	0	0	0	0	0	0	-3.392	-110.676
PLANTAS DE GÁS NATURAL	0	-3.629	0	0	0	0	0	0	556	-3.073
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-8.054	0	0	0	0	0	-8.054
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-1.747	0	0	0	0	-1.747
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-14.219	-4.140	0	0	-30.216	-68	0	-1.166	-49.809
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.581	-203	0	0	-1.900	-309	-5.714	-3.697	-14.404
CARVOARIAS	0	0	0	0	0	0	-7.887	0	0	-7.887
DESTILARIAS	0	0	0	0	0	0	0	-14.948	0	-14.948
OUTRAS TRANSFORMAÇÕES	-412	-1.705	0	0	0	0	0	0	150	-1.967
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-458	-6	-4	0	0	0	0	0	-467
CONSUMO FINAL	0	18.822	3.942	0	0	0	16.672	28.612	6.618	74.666
CONSUMO FINAL NÃO-ENERGÉTICO	0	684	0	0	0	0	0	0	0	684
CONSUMO FINAL ENERGÉTICO	0	18.138	3.942	0	0	0	16.672	28.612	6.618	73.981
SETOR ENERGÉTICO	0	6.307	0	0	0	0	0	12.466	0	18.773
RESIDENCIAL	0	310	0	0	0	0	6.109	0	0	6.419
COMERCIAL	0	179	0	0	0	0	97	0	0	276
PÚBLICO	0	40	0	0	0	0	0	0	0	40
AGROPECUÁRIO	0	0	0	0	0	0	2.682	0	0	2.682
TRANSPORTES - TOTAL	0	1.594	0	0	0	0	0	0	0	1.594
RODOVIÁRIO	0	1.594	0	0	0	0	0	0	0	1.594
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.708	3.942	0	0	0	7.785	16.146	6.618	44.199
CIMENTO	0	25	123	0	0	0	79	0	364	591
FERRO-GUSA E AÇO	0	1.036	2.053	0	0	0	0	0	0	3.088
FERRO-LIGAS	0	20	0	0	0	0	70	0	0	90
MINERAÇÃO E PELOTIZAÇÃO	0	707	370	0	0	0	0	0	0	1.077
NÃO-FERROSOS E OUTROS DA METALURGIA	0	896	783	0	0	0	0	0	0	1.679
QUÍMICA	0	2.022	169	0	0	0	49	0	89	2.328
ALIMENTOS E BEBIDAS	0	736	66	0	0	0	2.250	16.120	11	19.183
TÊXTIL	0	248	0	0	0	0	69	0	0	317
PAPEL E CELULOSE	0	848	117	0	0	0	1.713	25	6.088	8.791
CERÂMICA	0	1.339	50	0	0	0	2.657	0	66	4.112
OUTROS	0	1.832	212	0	0	0	898	0	0	2.942
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-315	42	16	0	0	0	0	0	0	-256

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUERIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCAIÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	272.622
9.561	382	1.626	2.277	5.238	1.236	0	1.254	1.022	2.904	0	511	3.343	1.133	0	30.487	81.870
-180	-54	501	-10	-66	-57	0	-68	1.266	0	0	-848	-2	5	0	487	-1.471
9.382	327	2.127	2.266	5.172	1.179	0	1.187	2.289	2.904	0	-337	3.342	1.138	0	30.974	353.021
-794	-8.110	-281	-11	0	-2.506	0	0	0	0	0	-767	-385	-530	0	-13.384	-40.184
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.601
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5.689
8.588	-7.783	1.846	2.255	5.172	-1.327	0	1.187	2.289	2.904	0	-1.104	2.957	607	0	17.590	305.547
41.416	11.923	23.848	6.162	865	5.007	1.364	6.552	-2.289	50.766	4.204	14.842	9.282	7.502	238	181.683	-30.883
42.515	16.126	22.303	4.651	3.904	5.007	0	0	0	0	0	0	9.027	6.822	0	110.355	-322
0	0	616	1.347	0	0	0	0	0	0	0	0	0	912	0	2.875	-198
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.703	6.552	0	0	0	0	-841	0	248	7.662	-393
0	0	0	0	0	0	0	0	1.719	0	0	0	0	0	0	1.719	-28
-2.912	-3.396	0	0	0	0	0	0	-4.008	42.683	0	0	-79	0	0	32.288	-17.520
-379	-229	0	0	0	0	-339	0	0	8.083	0	0	-609	0	-10	6.518	-7.886
0	0	0	0	0	0	0	0	0	0	4.204	0	0	0	0	4.204	-3.683
0	0	0	0	0	0	0	0	0	0	0	14.842	0	0	0	14.842	-106
2.193	-578	929	164	-3.039	0	0	0	0	0	0	0	1.783	-232	0	1.221	-746
0	0	0	0	0	0	0	-6	0	-7.888	-62	-58	-110	0	0	-8.124	-8.594
49.935	4.115	25.740	8.363	6.203	3.661	1.387	7.733	0	45.782	4.142	13.602	12.113	8.095	238	191.108	265.774
0	0	0	0	6.203	6	0	0	0	0	0	583	301	8.095	146	15.333	16.018
49.935	4.115	25.740	8.363	0	3.655	1.387	7.733	0	45.782	4.142	13.019	11.813	0	92	175.775	249.756
1.513	311	0	5	0	0	187	0	0	2.679	0	0	3.985	0	0	8.680	27.453
0	0	0	6.535	0	3	0	0	0	11.373	478	0	0	0	0	18.390	24.808
7	22	0	442	0	0	0	0	0	7.792	91	0	0	0	0	8.354	8.630
4	11	0	257	0	0	0	0	0	3.684	0	0	0	0	0	3.956	3.996
6.184	24	0	2	0	0	0	0	0	2.285	8	11	0	0	0	8.514	11.196
41.019	1.133	25.740	0	0	3.651	0	0	0	170	0	13.008	0	0	0	84.721	86.315
39.661	0	25.682	0	0	0	0	0	0	0	0	13.008	0	0	0	78.351	79.945
1.006	0	0	0	0	0	0	0	0	170	0	0	0	0	0	1.176	1.176
0	0	58	0	0	3.651	0	0	0	0	0	0	0	0	0	3.709	3.709
352	1.133	0	0	0	0	0	0	0	0	0	0	0	0	0	1.485	1.485
1.208	2.614	0	1.121	0	2	1.200	7.733	0	17.799	3.564	0	7.828	0	92	43.160	87.358
72	14	0	18	0	0	0	77	0	681	122	0	3.763	0	0	4.747	5.338
35	35	0	26	0	0	1.200	7.237	0	1.671	2.962	0	41	0	92	13.299	16.387
7	86	0	24	0	0	0	78	0	582	436	0	127	0	0	1.341	1.431
424	166	0	28	0	1	0	61	0	1.057	0	0	544	0	0	2.281	3.358
9	1.200	0	42	0	0	0	279	0	2.798	14	0	595	0	0	4.937	6.616
20	323	0	217	0	0	0	0	0	1.922	18	0	1.880	0	0	4.380	6.708
249	177	0	220	0	0	0	0	0	2.324	0	0	84	0	0	3.055	22.238
5	34	0	40	0	0	0	0	0	622	0	0	0	0	0	700	1.017
164	365	0	73	0	0	0	0	0	1.780	0	0	0	0	0	2.382	11.173
26	102	0	171	0	0	0	0	0	376	0	0	292	0	0	967	5.079
198	111	0	262	0	0	0	0	0	3.985	13	0	503	0	0	5.072	8.014
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-69	-25	46	-55	166	-19	23	0	0	0	0	-78	-15	-15	0	-40	-297

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2015 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	126.127	34.871	2.459	0	512	30.938	24.900	50.424	16.045	286.277
IMPORTAÇÃO	15.377	16.198	5.638	7.625	2.159	0	0	0	0	46.997
VARIAÇÃO DE ESTOQUES	-1.165	0	221	56	-1.701	0	0	0	8	-2.582
OFERTA TOTAL	140.339	51.069	8.317	7.681	971	30.938	24.900	50.424	16.053	330.692
EXPORTAÇÃO	-38.050	0	0	0	0	0	0	0	0	-38.050
NÃO-APROVEITADA	0	-1.377	0	0	0	0	0	0	0	-1.377
REINJEÇÃO	0	-8.722	0	0	0	0	0	0	0	-8.722
OFERTA INTERNA BRUTA	102.288	40.971	8.317	7.681	971	30.938	24.900	50.424	16.053	282.543
TOTAL TRANSFORMAÇÃO	-101.841	-21.737	-4.455	-7.676	-971	-30.938	-8.230	-21.757	-9.040	-206.644
REFINARIAS DE PETRÓLEO	-99.972	0	0	0	0	0	0	0	-3.783	-103.755
PLANTAS DE GÁS NATURAL	0	-3.727	0	0	0	0	0	0	245	-3.482
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-7.676	0	0	0	0	0	-7.676
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-971	0	0	0	0	-971
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-13.704	-4.265	0	0	-29.126	-66	0	-2.001	-49.162
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.706	-191	0	0	-1.812	-354	-5.959	-3.913	-14.936
CARVOARIAS	0	0	0	0	0	0	-7.810	0	0	-7.810
DESTILARIAS	0	0	0	0	0	0	0	-15.798	0	-15.798
OUTRAS TRANSFORMAÇÕES	-1.869	-1.600	0	0	0	0	0	0	412	-3.056
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-464	-7	-5	0	0	0	0	0	-477
CONSUMO FINAL	0	18.765	3.855	0	0	0	16.670	28.667	7.013	74.971
CONSUMO FINAL NÃO-ENERGÉTICO	0	685	0	0	0	0	0	0	0	685
CONSUMO FINAL ENERGÉTICO	0	18.080	3.855	0	0	0	16.670	28.667	7.013	74.286
SETOR ENERGÉTICO	0	6.112	0	0	0	0	0	13.155	0	19.266
RESIDENCIAL	0	312	0	0	0	0	6.334	0	0	6.645
COMERCIAL	0	114	0	0	0	0	94	0	0	208
PÚBLICO	0	43	0	0	0	0	0	0	0	43
AGROPECUÁRIO	0	0	0	0	0	0	2.814	0	0	2.814
TRANSPORTES - TOTAL	0	1.553	0	0	0	0	0	0	0	1.553
RODOVIÁRIO	0	1.553	0	0	0	0	0	0	0	1.553
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.947	3.855	0	0	0	7.428	15.512	7.013	43.756
CIMENTO	0	12	70	0	0	0	70	0	330	482
FERRO-GUSA E AÇO	0	1.223	2.124	0	0	0	0	0	0	3.348
FERRO-LIGAS	0	6	0	0	0	0	63	0	0	69
MINERAÇÃO E PELOTIZAÇÃO	0	657	417	0	0	0	0	0	0	1.075
NÃO-FERROSOS E OUTROS DA METALURGIA	0	593	689	0	0	0	0	0	0	1.282
QUÍMICA	0	2.222	172	0	0	0	48	0	85	2.527
ALIMENTOS E BEBIDAS	0	834	65	0	0	0	2.171	15.485	10	18.565
TÊXTIL	0	215	0	0	0	0	62	0	0	277
PAPEL E CELULOSE	0	805	86	0	0	0	1.833	27	6.529	9.279
CERÂMICA	0	1.324	62	0	0	0	2.312	0	59	3.757
OUTROS	0	2.057	168	0	0	0	871	0	0	3.096
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-447	-4	0	0	0	0	0	0	0	-451

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUERIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO AMÍDRIO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCASTRÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286.277
5.885	339	2.260	1.950	6.172	1.129	0	1.584	2.729	2.978	0	432	2.586	1.160	0	29.204	76.201
313	-28	-3	-2	66	26	0	44	155	0	0	899	-24	34	0	1.481	-1.101
6.199	312	2.257	1.948	6.238	1.155	0	1.627	2.885	2.978	0	1.331	2.562	1.194	0	30.685	361.377
-651	-7.932	-474	-17	0	-2.440	0	0	0	-19	0	-1.108	-385	-627	0	-13.654	-51.704
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.377
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8.722
5.548	-7.621	1.783	1.931	6.238	-1.285	0	1.627	2.885	2.959	0	223	2.176	567	0	17.031	299.574
42.511	10.877	21.518	6.367	688	4.656	1.389	6.265	-2.885	49.966	4.163	15.705	9.448	6.181	229	177.075	-29.569
42.248	14.188	19.864	4.582	3.545	4.656	0	0	0	0	0	0	9.127	5.134	0	103.346	-409
0	0	732	1.621	0	0	0	0	0	0	0	0	0	921	0	3.273	-208
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.635	6.265	0	0	0	0	-802	0	237	7.334	-341
0	0	0	0	0	0	0	0	955	0	0	0	0	0	0	955	-15
-2.031	-3.055	0	0	0	0	0	0	-3.840	41.687	0	0	-75	0	0	32.686	-16.476
-399	-256	0	0	0	0	-245	0	0	8.279	0	0	-622	0	-8	6.748	-8.188
0	0	0	0	0	0	0	0	0	0	4.163	0	0	0	0	4.163	-3.647
0	0	0	0	0	0	0	0	0	0	0	15.705	0	0	0	15.705	-93
2.692	0	922	165	-2.857	0	0	0	0	0	0	0	1.819	125	0	2.866	-191
0	0	0	0	0	0	0	-6	0	-7.829	-62	-54	-96	0	0	-8.046	-8.523
48.033	3.256	23.306	8.258	6.929	3.615	1.336	7.886	0	45.096	4.101	15.927	11.529	6.731	229	186.232	261.203
0	0	0	0	6.929	3	0	0	0	0	0	490	267	6.731	134	14.553	15.238
48.033	3.256	23.306	8.258	0	3.613	1.336	7.886	0	45.096	4.101	15.437	11.262	0	95	171.679	245.966
1.338	244	0	29	0	0	188	0	0	2.741	0	0	3.956	0	0	8.496	27.763
0	0	0	6.541	0	3	0	0	0	11.264	474	0	0	0	0	18.282	24.927
4	27	0	396	0	0	0	0	0	7.861	88	0	0	0	0	8.376	8.585
3	9	0	257	0	0	0	0	0	3.735	0	0	0	0	0	4.003	4.047
6.327	14	0	2	0	0	0	0	0	2.303	8	13	0	0	0	8.666	11.480
39.244	724	23.306	0	0	3.609	0	0	0	177	0	15.424	0	0	0	82.484	84.037
38.033	0	23.257	0	0	0	0	0	0	0	0	15.424	0	0	0	76.714	78.267
971	0	0	0	0	0	0	0	0	177	0	0	0	0	0	1.148	1.148
0	0	49	0	0	3.609	0	0	0	0	0	0	0	0	0	3.658	3.658
240	724	0	0	0	0	0	0	0	0	0	0	0	0	0	965	965
1.117	2.239	0	1.033	0	1	1.148	7.886	0	17.015	3.531	0	7.306	0	95	41.371	85.127
60	9	0	17	0	0	0	70	0	611	109	0	3.386	0	0	4.262	4.744
29	2	0	25	0	0	1.148	7.441	0	1.609	2.988	0	40	0	95	13.377	16.725
6	8	0	22	0	0	0	70	0	524	392	0	114	0	0	1.137	1.206
395	166	0	22	0	1	0	60	0	1.095	0	0	533	0	0	2.271	3.346
10	1.238	0	35	0	0	0	245	0	2.315	11	0	510	0	0	4.364	5.646
18	207	0	215	0	0	0	0	0	1.940	18	0	1.950	0	0	4.348	6.874
239	119	0	228	0	0	0	0	0	2.242	0	0	82	0	0	2.910	21.475
2	19	0	37	0	0	0	0	0	560	0	0	0	0	0	618	895
173	341	0	72	0	0	0	0	0	1.864	0	0	0	0	0	2.450	11.729
24	59	0	173	0	0	0	0	0	339	0	0	262	0	0	856	4.614
162	71	0	188	0	0	0	0	0	3.917	12	0	427	0	0	4.778	7.874
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-25	0	5	-40	3	244	-53	0	0	0	0	53	0	-17	0	171	-280

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2016 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									ENERGIA PRIMÁRIA TOTAL
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₂₃₅	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	
PRODUÇÃO	130.373	37.610	2.636	0	0	32.758	23.095	50.658	17.589	294.720
IMPORTAÇÃO	8.009	10.320	4.992	7.917	4.173	0	0	0	0	35.411
VARIAÇÃO DE ESTOQUES	-501	0	-150	-222	648	0	0	0	-2	-227
OFERTA TOTAL	137.881	47.931	7.478	7.695	4.821	32.758	23.095	50.658	17.587	329.903
EXPORTAÇÃO	-43.812	0	0	0	0	0	0	0	0	-43.812
NÃO-APROVEITADA	0	-1.459	0	0	0	0	0	0	0	-1.459
REINJEÇÃO	0	-10.903	0	0	0	0	0	0	0	-10.903
OFERTA INTERNA BRUTA	94.069	35.569	7.478	7.695	4.821	32.758	23.095	50.658	17.587	273.729
TOTAL TRANSFORMAÇÃO	-93.971	-16.463	-4.212	-7.691	-4.821	-32.758	-7.098	-20.868	-10.169	-198.050
REFINARIAS DE PETRÓLEO	-92.112	0	0	0	0	0	0	0	-4.437	-96.548
PLANTAS DE GÁS NATURAL	0	-3.992	0	0	0	0	0	0	640	-3.352
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-7.691	0	0	0	0	0	-7.691
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-4.821	0	0	0	0	-4.821
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-8.740	-3.937	0	0	-30.917	-43	0	-3.026	-46.663
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.663	-275	0	0	-1.841	-334	-6.109	-4.134	-15.356
CARVOARIAS	0	0	0	0	0	0	-6.721	0	0	-6.721
DESTILARIAS	0	0	0	0	0	0	0	-14.758	0	-14.758
OUTRAS TRANSFORMAÇÕES	-1.859	-1.068	0	0	0	0	0	0	788	-2.139
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-387	-7	-4	0	0	0	0	0	-397
CONSUMO FINAL	0	18.868	3.258	0	0	0	15.997	29.791	7.418	75.331
CONSUMO FINAL NÃO-ENERGÉTICO	0	677	0	0	0	0	0	0	0	677
CONSUMO FINAL ENERGÉTICO	0	18.191	3.258	0	0	0	15.997	29.791	7.418	74.654
SETOR ENERGÉTICO	0	6.559	0	0	0	0	0	12.237	0	18.796
RESIDENCIAL	0	357	0	0	0	0	6.064	0	0	6.420
COMERCIAL	0	134	0	0	0	0	90	0	0	223
PÚBLICO	0	43	0	0	0	0	0	0	0	43
AGROPECUÁRIO	0	0	0	0	0	0	2.618	0	0	2.618
TRANSPORTES - TOTAL	0	1.593	0	0	0	0	0	0	0	1.593
RODOVIÁRIO	0	1.593	0	0	0	0	0	0	0	1.593
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.504	3.258	0	0	0	7.225	17.554	7.418	44.959
CIMENTO	0	5	60	0	0	0	64	0	303	432
FERRO-GUSA E AÇO	0	1.012	1.935	0	0	0	0	0	0	2.948
FERRO-LIGAS	0	0	0	0	0	0	62	0	0	62
MINERAÇÃO E PELOTIZAÇÃO	0	410	247	0	0	0	0	0	0	656
NÃO-FERROSOS E OUTROS DA METALURGIA	0	564	707	0	0	0	0	0	0	1.271
QUÍMICA	0	2.198	126	0	0	0	43	0	81	2.447
ALIMENTOS E BEBIDAS	0	833	51	0	0	0	2.150	17.524	10	20.567
TÊXTIL	0	197	0	0	0	0	59	0	0	256
PAPEL E CELULOSE	0	778	84	0	0	0	1.949	30	6.971	9.811
CERÂMICA	0	1.325	37	0	0	0	2.081	0	54	3.496
OUTROS	0	2.183	11	0	0	0	819	0	0	3.012
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-98	148	-1	0	0	0	0	0	0	50

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUEARIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCAIÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	294.720
7.182	62	2.934	2.111	6.630	786	0	764	2.180	3.551	0	434	1.790	1.042	0	29.468	64.878
-212	-2	-29	46	96	50	0	-16	-2.790	0	0	160	-8	64	0	-2.640	-2.867
6.970	61	2.904	2.157	6.727	835	0	748	-609	3.551	0	595	1.783	1.106	0	26.828	356.731
-706	-6.699	-561	0	0	-2.281	0	0	0	-45	0	-935	-406	-604	0	-12.237	-56.050
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.459
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10.903
6.264	-6.639	2.344	2.156	6.727	-1.446	0	748	-609	3.507	0	-341	1.377	503	0	14.590	288.319
40.012	9.689	21.703	6.239	-488	4.765	1.309	6.371	609	49.765	3.582	14.702	9.274	6.374	226	174.134	-23.916
38.575	11.506	20.467	4.492	2.452	4.765	0	0	0	0	0	0	8.810	5.243	0	96.311	-238
0	0	385	1.641	115	0	0	0	0	0	0	0	0	1.011	0	3.152	-200
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.569	6.371	0	0	0	0	-826	0	234	7.349	-342
0	0	0	0	0	0	0	0	4.744	0	0	0	0	0	0	4.744	-77
-834	-1.130	0	0	0	0	0	0	-4.134	41.294	0	0	-72	0	0	35.124	-11.539
-371	-229	0	0	0	0	-261	0	0	8.471	0	0	-528	0	-9	7.073	-8.283
0	0	0	0	0	0	0	0	0	0	3.582	0	0	0	0	3.582	-3.139
0	0	0	0	0	0	0	0	0	0	0	14.702	0	0	0	14.702	-56
2.642	-458	851	106	-3.054	0	0	0	0	0	0	0	1.890	121	0	2.097	-42
0	0	0	0	0	0	0	-5	0	-8.452	-53	-53	-96	0	0	-8.659	-9.056
46.247	3.100	24.225	8.267	6.258	3.310	1.320	7.114	0	44.820	3.529	14.332	10.552	6.917	226	180.216	255.547
0	0	0	0	6.258	3	0	0	0	0	0	443	311	6.917	143	14.075	14.752
46.247	3.100	24.225	8.267	0	3.307	1.320	7.114	0	44.820	3.529	13.889	10.241	0	82	166.142	240.795
975	203	0	1	0	0	206	0	0	2.559	0	0	3.567	0	0	7.511	26.307
0	0	0	6.573	0	2	0	0	0	11.424	429	0	0	0	0	18.429	24.849
8	17	0	396	0	0	0	0	0	7.643	84	0	0	0	0	8.149	8.372
3	1	0	258	0	0	0	0	0	3.726	0	0	0	0	0	3.988	4.031
5.240	11	0	18	0	0	0	0	0	2.428	8	9	0	0	0	7.714	10.332
38.957	515	24.225	0	0	3.303	0	0	0	173	0	13.880	0	0	0	81.054	82.647
37.781	0	24.181	0	0	0	0	0	0	0	0	13.880	0	0	0	75.842	77.436
952	0	0	0	0	0	0	0	0	173	0	0	0	0	0	1.125	1.125
0	0	44	0	0	3.303	0	0	0	0	0	0	0	0	0	3.347	3.347
224	515	0	0	0	0	0	0	0	0	0	0	0	0	0	740	740
1.064	2.353	0	1.020	0	1	1.114	7.114	0	16.868	3.009	0	6.673	0	82	39.298	84.257
55	5	0	14	0	0	0	49	0	548	99	0	3.048	0	0	3.819	4.250
25	2	0	59	0	0	1.114	6.728	0	1.484	2.490	0	37	0	82	12.022	14.969
6	51	0	20	0	0	0	69	0	518	381	0	112	0	0	1.156	1.218
385	152	0	41	0	1	0	40	0	1.016	0	0	423	0	0	2.058	2.714
10	1.244	0	31	0	0	0	228	0	2.331	10	0	523	0	0	4.378	5.648
16	326	0	185	0	0	0	0	0	1.900	17	0	1.851	0	0	4.295	6.743
242	87	0	241	0	0	0	0	0	2.314	0	0	80	0	0	2.964	23.531
2	15	0	31	0	0	0	0	0	537	0	0	0	0	0	586	842
183	368	0	68	0	0	0	0	0	1.952	0	0	0	0	0	2.571	12.382
19	48	0	163	0	0	0	0	0	322	0	0	223	0	0	776	4.272
120	56	0	166	0	0	0	0	0	3.946	12	0	376	0	0	4.675	7.687
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-29	50	178	-128	19	-10	11	0	0	0	0	23	-3	40	0	151	201

BALANÇO ENERGÉTICO NACIONAL - CONSOLIDADO

2017 - 10³ tep

	FONTES DE ENERGIA PRIMÁRIA									
	PETRÓLEO	GÁS NATURAL	CARVÃO VAPOR	CARVÃO METALÚRGICO	URÂNIO U ₃ O ₈	ENERGIA HIDRAULICA	LENHA	PRODUTOS DA CANA	OUTRAS FONTES PRIMÁRIAS	ENERGIA PRIMÁRIA TOTAL
PRODUÇÃO	135.907	39.810	1.930	0	0	31.898	23.424	49.725	18.952	301.646
IMPORTAÇÃO	7.491	9.434	5.335	8.559	5.206	0	0	0	0	36.025
VARIAÇÃO DE ESTOQUES	225	0	65	74	518	0	0	0	0	882
OFERTA TOTAL	143.622	49.243	7.331	8.633	5.724	31.898	23.424	49.725	18.952	338.552
EXPORTAÇÃO	-53.882	0	0	0	0	0	0	0	0	-53.882
NÃO-APROVEITADA	0	-1.346	0	0	0	0	0	0	0	-1.346
REINJEÇÃO	0	-9.959	0	0	0	0	0	0	0	-9.959
OFERTA INTERNA BRUTA	89.741	37.938	7.331	8.633	5.724	31.898	23.424	49.725	18.952	273.366
TOTAL TRANSFORMAÇÃO	-89.623	-18.494	-3.810	-8.629	-5.724	-31.898	-6.737	-20.599	-11.312	-196.827
REFINARIAS DE PETRÓLEO	-87.239	0	0	0	0	0	0	0	-5.089	-92.328
PLANTAS DE GÁS NATURAL	0	-4.147	0	0	0	0	0	0	736	-3.411
USINAS DE GASEIFICAÇÃO	0	0	0	0	0	0	0	0	0	0
COQUERIAS	0	0	0	-8.629	0	0	0	0	0	-8.629
CICLO DO COMBUSTÍVEL NUCLEAR	0	0	0	0	-5.724	0	0	0	0	-5.724
CENTRAIS ELÉTRICAS DE SERVIÇO PÚBLICO	0	-10.351	-3.553	0	0	-30.299	-63	0	-3.891	-48.158
CENTRAIS ELÉTRICAS AUTOPRODUTORAS	0	-2.764	-257	0	0	-1.599	-329	-6.145	-4.055	-15.150
CARVOARIAS	0	0	0	0	0	0	-6.344	0	0	-6.344
DESTILARIAS	0	0	0	0	0	0	0	-14.454	0	-14.454
OUTRAS TRANSFORMAÇÕES	-2.384	-1.231	0	0	0	0	0	0	986	-2.629
PERDAS NA DISTRIBUIÇÃO E ARMAZENAGEM	0	-385	-7	-4	0	0	0	0	0	-396
CONSUMO FINAL	0	19.111	3.495	0	0	0	16.687	29.126	7.640	76.058
CONSUMO FINAL NÃO-ENERGÉTICO	0	685	0	0	0	0	0	0	0	685
CONSUMO FINAL ENERGÉTICO	0	18.426	3.495	0	0	0	16.687	29.126	7.640	75.373
SETOR ENERGÉTICO	0	6.542	0	0	0	0	0	11.926	0	18.468
RESIDENCIAL	0	379	0	0	0	0	6.115	0	0	6.494
COMERCIAL	0	92	0	0	0	0	90	0	0	182
PÚBLICO	0	43	0	0	0	0	0	0	0	43
AGROPECUÁRIO	0	0	0	0	0	0	3.136	0	0	3.136
TRANSPORTES - TOTAL	0	1.734	0	0	0	0	0	0	0	1.734
RODOVIÁRIO	0	1.734	0	0	0	0	0	0	0	1.734
FERROVIÁRIO	0	0	0	0	0	0	0	0	0	0
AÉREO	0	0	0	0	0	0	0	0	0	0
HIDROVIÁRIO	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.635	3.495	0	0	0	7.346	17.200	7.640	45.316
CIMENTO	0	4	64	0	0	0	60	0	286	414
FERRO-GUSA E AÇO	0	1.161	2.124	0	0	0	0	0	0	3.284
FERRO-LIGAS	0	0	0	0	0	0	68	0	0	68
MINERAÇÃO E PELOTIZAÇÃO	0	416	247	0	0	0	0	0	0	664
NÃO-FERROSOS E OUTROS DA METALURGIA	0	586	712	0	0	0	0	0	0	1.298
QUÍMICA	0	2.163	149	0	0	0	47	0	81	2.440
ALIMENTOS E BEBIDAS	0	850	51	0	0	0	2.218	17.169	10	20.297
TÊXTIL	0	223	0	0	0	0	61	0	0	285
PAPEL E CELULOSE	0	812	96	0	0	0	1.985	31	7.208	10.132
CERÂMICA	0	1.326	41	0	0	0	2.081	0	55	3.502
OUTROS	0	2.094	13	0	0	0	825	0	0	2.932
CONSUMO NÃO-IDENTIFICADO	0	0	0	0	0	0	0	0	0	0
AJUSTES	-117	52	-19	0	0	0	0	0	0	-84

FONTES DE ENERGIA SECUNDÁRIA

ÓLEO DIESEL	ÓLEO COMBUSTÍVEL	GASOLINA	GLP	NAFTA	QUEROSENE	GÁS DE CIDADE E DE COQUEARIA	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE	CARVÃO VEGETAL	ÁLCOOL ETÍLICO ANIDRO E HIDRATADO	OUTRAS SECUNDÁRIAS DE PETRÓLEO	PRODUTOS NÃO ENERGÉTICOS DE PETRÓLEO	ALCAIÇÃO	ENERGIA SECUNDÁRIA TOTAL	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	301.646
10.986	72	3.456	2.012	8.160	473	0	504	3.063	3.139	0	975	1.939	1.136	0	35.915	71.940
-95	-64	-52	-67	41	-63	0	102	-4.593	0	0	-213	5	-11	0	-5.010	-4.128
10.891	8	3.405	1.945	8.201	411	0	606	-1.531	3.139	0	762	1.944	1.125	0	30.905	369.458
-582	-6.983	-368	-1	0	-2.234	0	0	0	-13	0	-728	-578	-682	0	-12.171	-66.053
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.346
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-9.959
10.309	-6.976	3.036	1.943	8.201	-1.823	0	606	-1.531	3.125	0	33	1.365	443	0	18.734	292.099
36.699	9.845	21.820	6.337	-1.069	5.075	1.388	7.148	1.531	50.545	3.382	14.404	9.589	5.859	255	172.806	-24.021
34.466	11.730	20.231	4.570	2.388	5.075	0	0	0	0	0	0	8.784	5.076	0	92.321	-6
0	0	474	1.649	115	0	0	0	0	0	0	0	0	934	0	3.172	-239
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.761	7.148	0	0	0	0	-927	0	263	8.245	-384
0	0	0	0	0	0	0	0	5.632	0	0	0	0	0	0	5.632	-91
-631	-1.379	0	0	0	0	0	0	-4.102	42.222	0	0	-83	0	0	36.028	-12.130
-382	-237	0	0	0	0	-373	0	0	8.323	0	0	-520	0	-8	6.804	-8.347
0	0	0	0	0	0	0	0	0	0	3.382	0	0	0	0	3.382	-2.963
0	0	0	0	0	0	0	0	0	0	0	14.404	0	0	0	14.404	-50
3.245	-270	1.114	118	-3.571	0	0	0	0	0	0	0	2.333	-152	0	2.818	189
0	0	0	0	0	0	0	-5	0	-8.432	-50	-56	-96	0	0	-8.638	-9.035
46.738	2.822	24.856	8.304	7.132	3.301	1.387	7.749	0	45.238	3.332	14.348	10.831	6.308	255	182.600	258.659
0	0	0	0	7.132	2	0	0	0	0	0	491	276	6.308	164	14.373	15.059
46.738	2.822	24.856	8.304	0	3.299	1.387	7.749	0	45.238	3.332	13.857	10.554	0	91	168.227	243.600
889	177	0	26	0	0	210	0	0	2.548	0	0	3.698	0	0	7.549	26.018
0	0	0	6.606	0	2	0	0	0	11.517	353	0	0	0	0	18.478	24.972
14	18	0	394	0	0	0	0	0	7.754	84	0	0	0	0	8.264	8.446
2	7	0	259	0	0	0	0	0	3.723	0	0	0	0	0	3.991	4.034
4.793	13	0	20	0	0	0	0	0	2.470	9	9	0	0	0	7.314	10.450
40.018	624	24.856	0	0	3.296	0	0	0	177	0	13.848	0	0	0	82.818	84.553
38.774	0	24.816	0	0	0	0	0	0	0	0	13.848	0	0	0	77.439	79.174
1.032	0	0	0	0	0	0	0	0	177	0	0	0	0	0	1.209	1.209
0	0	39	0	0	3.296	0	0	0	0	0	0	0	0	0	3.335	3.335
211	624	0	0	0	0	0	0	0	0	0	0	0	0	0	835	835
1.022	1.983	0	999	0	1	1.177	7.749	0	17.049	2.885	0	6.856	0	91	39.812	85.127
52	5	0	12	0	0	0	46	0	516	94	0	2.835	0	0	3.560	3.974
28	3	0	43	0	0	1.177	7.345	0	1.603	2.333	0	40	0	91	12.664	15.948
6	16	0	23	0	0	0	76	0	570	419	0	123	0	0	1.231	1.299
368	84	0	38	0	1	0	42	0	1.074	0	0	386	0	0	1.993	2.657
10	1.202	0	31	0	0	0	241	0	2.346	11	0	520	0	0	4.362	5.660
18	133	0	211	0	0	0	0	0	1.856	17	0	2.295	0	0	4.530	6.969
234	86	0	234	0	0	0	0	0	2.363	0	0	83	0	0	3.000	23.298
1	15	0	28	0	0	0	0	0	560	0	0	0	0	0	605	890
184	293	0	70	0	0	0	0	0	1.998	0	0	0	0	0	2.545	12.677
17	58	0	157	0	0	0	0	0	322	0	0	225	0	0	778	4.280
104	86	0	152	0	0	0	0	0	3.841	12	0	349	0	0	4.545	7.477
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-270	-47	0	24	0	48	-1	0	0	0	0	-34	-28	7	0	-301	-385

Annex IX. Consolidated Energy Balances – 1970, 1980, 1990, 2000 and 2006 to 2015

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

1970 - 10³ toe

	PRIMARY SOURCES OF ENERGY									
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	TOTAL PRIMARY ENERGY
PRODUCTION	8.161	1.255	611	504	0	3.422	31.852	3.601	223	49.627
IMPORTS	17.845	0	0	1.454	0	0	0	0	0	19.299
STOCK VARIATIONS	-277	0	-28	-151	0	0	0	0	0	-456
TOTAL SUPPLY	25.728	1.255	583	1.806	0	3.422	31.852	3.601	223	68.470
EXPORTS	-65	0	0	0	0	0	0	0	0	-65
NON-UTILIZED	0	-869	0	0	0	0	0	0	0	-869
REINJECTION	0	-216	0	0	0	0	0	0	0	-216
GROSS DOMESTIC SUPPLY	25.663	170	583	1.806	0	3.422	31.852	3.601	223	67.320
TOTAL TRANSFORMATION	-25.536	-106	-495	-1.758	0	-3.422	-3.507	-452	-81	-35.356
OIL REFINERIES	-25.536	0	0	0	0	0	0	0	0	-25.536
NATURAL GAS PLANTS	0	-106	0	0	0	0	0	0	0	-106
GASIFICATION PLANTS	0	0	0	-170	0	0	0	0	0	-170
COKE PLANTS	0	0	0	-1.588	0	0	0	0	0	-1.588
NUCLEAR CYCLE	0	0	0	0	0	0	0	0	0	0
PUBLIC SERVICE POWER PLANTS	0	0	-485	0	0	-3.302	0	0	0	-3.787
SELF-PRODUCERS POWER PLANTS	0	0	-10	0	0	-119	-13	-89	-81	-312
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-3.494	0	0	-3.494
DISTILLERIES	0	0	0	0	0	0	0	-363	0	-363
OTHER TRANSFORMATIONS	0	0	0	0	0	0	0	0	0	0
LOSSES IN DISTRIBUTION AND STORAGE	-128	0	0	-49	0	0	0	0	0	-176
FINAL CONSUMPTION	0	70	88	0	0	0	28.345	3.149	142	31.794
NON-ENERGY FINAL CONSUMPTION	0	3	0	0	0	0	0	0	0	3
ENERGY FINAL CONSUMPTION	0	68	88	0	0	0	28.345	3.149	142	31.792
ENERGY SECTOR	0	65	0	0	0	0	0	89	0	154
RESIDENTIAL	0	0	0	0	0	0	19.070	0	0	19.070
COMMERCIAL	0	0	0	0	0	0	191	0	0	191
PUBLIC	0	0	0	0	0	0	15	0	0	15
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	4.901	0	0	4.901
TRANSPORTATION - TOTAL	0	0	16	0	0	0	43	0	0	59
HIGHWAYS	0	0	0	0	0	0	0	0	0	0
RAILROADS	0	0	16	0	0	0	33	0	0	49
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	10	0	0	10
INDUSTRIAL - TOTAL	0	3	72	0	0	0	4.124	3.060	142	7.400
CEMENT	0	0	0	0	0	0	0	0	0	0
PIG-IRON AND STEEL	0	0	1	0	0	0	0	0	0	1
IRON-ALLOYS	0	0	0	0	0	0	0	0	0	0
MINING AND PELLETIZATION	0	0	0	0	0	0	0	0	0	0
NON-FERROUS AND OTHER METALS	0	0	0	0	0	0	0	0	0	0
CHEMICAL	0	3	0	0	0	0	123	0	0	126
FOOD AND BEVERAGES	0	0	0	0	0	0	1.812	3.060	0	4.872
TEXTILES	0	0	0	0	0	0	255	0	0	255
PAPER AND PULP	0	0	71	0	0	0	218	0	142	431
CERAMICS	0	0	0	0	0	0	1.175	0	0	1.175
OTHERS	0	0	0	0	0	0	541	0	0	541
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
ADJUSTMENTS	0	7	0	0	0	0	0	0	0	7

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUELOIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49.627
0	0	78	415	0	8	0	72	0	0	0	0	0	369	0	943	20.242
-42	-69	-27	-98	15	-55	0	-25	0	0	0	-7	15	-54	0	-347	-803
-42	-69	51	318	15	-47	0	48	0	0	0	-7	15	315	0	596	69.066
-47	-748	0	0	0	-123	0	0	0	-2	0	0	0	0	0	-920	-985
0	0	0	0	0	0	-56	0	0	0	0	0	-50	0	0	-106	-975
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-216
-89	-817	51	318	15	-170	-56	48	0	-2	0	-7	-35	315	0	-430	66.890
5.482	7.417	7.395	1.049	-9	1.307	456	1.168	0	3.932	1.767	324	262	887	60	31.498	-3.858
5.675	8.399	7.360	984	69	1.307	0	0	0	0	0	0	262	887	0	24.942	-594
0	0	36	65	0	0	0	0	0	0	0	0	0	0	0	101	-6
0	0	0	0	-77	0	150	55	0	0	0	0	0	0	0	128	-42
0	0	0	0	0	0	315	1.113	0	0	0	0	0	0	60	1.489	-99
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-116	-653	0	0	0	0	0	0	0	3.613	0	0	0	0	0	2.845	-942
-77	-330	0	0	0	0	-9	0	0	319	0	0	0	0	0	-98	-410
0	0	0	0	0	0	0	0	0	0	1.767	0	0	0	0	1.767	-1.727
0	0	0	0	0	0	0	0	0	0	0	324	0	0	0	324	-39
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	-19	-34	0	-520	-177	-7	0	0	0	-757	-933
5.393	6.600	7.446	1.367	6	1.138	382	1.182	0	3.410	1.590	310	227	1.202	60	30.312	62.106
0	0	0	0	6	7	0	0	0	0	0	212	0	1.202	42	1.468	1.471
5.393	6.600	7.446	1.367	0	1.131	382	1.182	0	3.410	1.590	98	227	0	18	28.844	60.635
56	885	0	0	0	0	86	10	0	179	0	0	181	0	0	1.397	1.551
0	0	0	1.297	0	447	104	0	0	719	437	0	0	0	0	3.005	22.076
64	80	0	23	0	0	16	0	0	443	32	0	0	0	0	658	850
42	31	0	2	0	16	3	0	0	306	0	0	0	0	0	402	417
393	11	0	0	0	0	0	0	0	27	19	0	0	0	0	450	5.351
4.511	387	7.446	0	0	635	0	0	0	56	0	98	0	0	0	13.133	13.192
3.894	0	7.369	0	0	0	0	0	0	0	0	98	0	0	0	11.361	11.361
349	77	0	0	0	0	0	0	0	56	0	0	0	0	0	482	531
0	0	77	0	0	635	0	0	0	0	0	0	0	0	0	712	712
268	309	0	0	0	0	0	0	0	0	0	0	0	0	0	578	588
327	5.205	0	44	0	33	173	1.173	0	1.679	1.101	0	45	0	18	9.798	17.198
23	1.180	0	0	0	0	0	0	0	89	0	0	0	0	0	1.292	1.292
11	700	0	4	0	0	165	1.173	0	172	1.041	0	0	0	18	3.283	3.284
0	0	0	0	0	0	0	0	0	49	50	0	0	0	0	99	99
34	190	0	0	0	0	0	0	0	39	0	0	0	0	0	263	263
0	110	0	0	0	0	2	0	0	287	10	0	45	0	0	455	455
57	754	0	1	0	0	0	0	0	227	0	0	0	0	0	1.040	1.166
58	614	0	4	0	9	1	0	0	151	0	0	0	0	0	838	5.710
5	353	0	1	0	2	0	0	0	166	0	0	0	0	0	529	784
8	353	0	0	0	0	0	0	0	143	0	0	0	0	0	504	934
3	307	0	4	0	5	0	0	0	48	0	0	0	0	0	367	1.542
127	644	0	31	0	16	4	0	0	306	0	0	0	0	0	1.129	1.670
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

1980 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	9.256	2.189	1.493	991	0	11.082	31.083	9.301	1.010	66.404
IMPORTS	44.311	0	0	3.340	0	0	0	0	0	47.651
STOCK VARIATIONS	2.122	0	-291	58	0	0	0	0	0	1.888
TOTAL SUPPLY	55.689	2.189	1.201	4.389	0	11.082	31.083	9.301	1.010	115.944
EXPORTS	-61	0	0	0	0	0	0	0	0	-61
NON-UTILIZED	0	-602	0	0	0	0	0	0	0	-602
REINJECTION	0	-496	0	0	0	0	0	0	0	-496
GROSS DOMESTIC SUPPLY	55.627	1.092	1.201	4.389	0	11.082	31.083	9.301	1.010	114.785
TOTAL TRANSFORMATION	-55.351	-222	-708	-4.059	0	-11.082	-9.221	-2.489	-272	-83.404
OIL REFINERIES	-55.351	0	0	0	0	0	0	0	0	-55.351
NATURAL GAS PLANTS	0	-222	0	0	0	0	0	0	0	-222
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-4.059	0	0	0	0	0	-4.059
NUCLEAR CYCLE	0	0	0	0	0	0	0	0	0	0
PUBLIC SERVICE POWER PLANTS	0	0	-683	0	0	-10.841	0	0	0	-11.524
SELF-PRODUCERS POWER PLANTS	0	0	-25	0	0	-241	-39	-208	-249	-762
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-9.182	0	0	-9.182
DISTILLERIES	0	0	0	0	0	0	0	-2.280	-23	-2.303
OTHER TRANSFORMATIONS	0	0	0	0	0	0	0	0	0	0
LOSSES IN DISTRIBUTION AND STORAGE	-276	0	0	-331	0	0	0	0	0	-607
FINAL CONSUMPTION	0	882	512	0	0	0	21.862	6.812	738	30.807
NON-ENERGY FINAL CONSUMPTION	0	398	0	0	0	0	0	0	0	398
ENERGY FINAL CONSUMPTION	0	485	512	0	0	0	21.862	6.812	738	30.410
ENERGY SECTOR	0	165	0	0	0	0	0	2.013	0	2.178
RESIDENTIAL	0	0	0	0	0	0	14.974	0	0	14.974
COMMERCIAL	0	0	0	0	0	0	155	0	0	155
PUBLIC	0	0	0	0	0	0	6	0	0	6
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	3.232	0	0	3.232
TRANSPORTATION - TOTAL	0	0	22	0	0	0	3	0	0	25
HIGHWAYS	0	0	0	0	0	0	0	0	0	0
RAILROADS	0	0	22	0	0	0	3	0	0	25
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	319	491	0	0	0	3.493	4.799	738	9.840
CEMENT	0	46	252	0	0	0	0	0	0	298
PIG-IRON AND STEEL	0	113	28	0	0	0	0	0	0	141
IRON-ALLOYS	0	0	19	0	0	0	0	0	0	19
MINING AND PELLETIZATION	0	0	0	0	0	0	15	0	0	15
NON-FERROUS AND OTHER METALS	0	0	0	0	0	0	4	0	0	4
CHEMICAL	0	157	2	0	0	0	87	17	0	263
FOOD AND BEVERAGES	0	0	63	0	0	0	1.195	4.782	0	6.041
TEXTILES	0	0	0	0	0	0	62	0	0	62
PAPER AND PULP	0	0	61	0	0	0	333	0	736	1.131
CERAMICS	0	3	57	0	0	0	1.352	0	2	1.413
OTHERS	0	0	8	0	0	0	444	0	0	452
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
ADJUSTMENTS	0	13	19	0	0	0	0	0	0	32

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66.404
581	1.133	80	144	1	0	0	363	0	0	0	123	237	0	2.662	50.313	
-698	330	151	-230	-207	-227	0	-52	0	0	24	4	267	0	-638	1.251	
-117	1.464	231	-85	-206	-227	0	312	0	0	24	126	504	0	2.024	117.968	
-545	-685	-276	-35	0	-308	0	0	0	-18	0	-196	0	-40	0	-2.103	-2.164
0	0	0	0	0	0	-40	0	0	0	0	-34	0	0	0	-74	-676
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-496
-662	779	-45	-120	-206	-535	-40	312	0	-18	0	-172	92	464	0	-152	114.633
16.362	15.431	8.905	3.164	1.770	2.725	964	2.942	0	11.982	4.643	1.926	1.970	2.718	178	75.680	-7.724
16.732	16.461	8.586	2.711	3.042	2.725	0	0	0	0	0	1.549	2.949	0	54.753	-598	
0	0	76	141	0	0	0	0	0	0	0	0	0	0	218	-5	
0	0	0	0	-270	0	256	0	0	0	0	0	0	0	-15	-15	
0	0	0	0	0	0	746	2.942	0	0	0	0	0	178	3.865	-194	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-302	-518	0	0	0	0	0	0	0	11.265	0	0	0	0	10.445	-1.079	
-68	-512	0	0	0	0	-37	0	0	717	0	0	-3	0	97	-665	
0	0	0	0	0	0	0	0	0	4.643	0	0	0	0	4.643	-4.539	
0	0	0	0	0	0	0	0	0	0	1.926	0	0	0	1.926	-377	
0	0	244	312	-1.001	0	0	0	0	0	0	423	-230	0	-253	-253	
0	0	0	0	0	0	-28	-57	0	-1.415	-371	-77	0	0	-1.949	-2.555	
15.701	16.210	8.860	3.043	1.563	2.190	896	3.197	0	10.548	4.272	1.673	2.062	3.182	178	73.575	104.382
0	0	0	0	1.530	89	0	0	0	0	252	71	3.182	120	5.243	5.641	
15.701	16.210	8.860	3.043	33	2.101	896	3.197	0	10.548	4.272	1.422	1.991	0	58	68.332	98.741
247	1.785	0	0	0	0	167	0	0	359	0	1.138	0	0	3.695	5.873	
0	0	0	2.728	0	296	128	0	0	2.000	830	0	0	0	5.983	20.957	
24	227	0	103	0	0	34	0	0	1.187	65	0	0	0	1.639	1.794	
144	91	0	16	0	2	4	0	0	893	4	0	0	0	1.153	1.158	
2.218	116	0	0	0	2	0	0	0	175	10	0	0	0	2.521	5.752	
12.687	989	8.860	0	0	1.663	0	0	0	71	0	1.422	0	0	25.690	25.715	
11.401	0	8.788	0	0	0	0	0	0	0	1.422	0	0	0	21.611	21.611	
583	10	0	0	0	0	0	0	0	71	0	0	0	0	664	689	
0	0	72	0	0	1.663	0	0	0	0	0	0	0	0	1.735	1.735	
703	978	0	0	0	0	0	0	0	0	0	0	0	0	1.681	1.681	
381	13.003	0	197	33	138	563	3.197	0	5.865	3.362	0	853	0	58	27.651	37.491
28	2.045	0	0	0	2	0	0	0	277	106	0	0	0	2.459	2.757	
40	1.027	0	38	0	20	504	3.142	0	767	2.955	0	0	0	58	8.552	8.694
0	0	0	0	0	0	0	54	0	249	179	0	0	0	483	502	
58	909	0	0	0	15	0	0	0	233	23	0	0	0	1.239	1.254	
0	411	0	0	0	0	14	0	0	954	59	0	276	0	1.714	1.718	
39	2.330	0	6	33	2	0	0	0	686	32	0	350	0	3.478	3.741	
67	1.446	0	14	0	15	11	0	0	540	0	0	0	0	2.092	8.132	
6	669	0	4	0	9	3	0	0	393	1	0	0	0	1.085	1.147	
17	1.071	0	2	0	5	1	0	0	437	0	0	0	0	1.533	2.664	
12	883	0	30	0	2	4	0	0	166	0	0	0	0	1.098	2.511	
114	2.211	0	103	0	68	27	0	0	1.161	8	0	227	0	3.919	4.371	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	-4	0	0	-4	28	28

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

1990 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	32.550	6.233	1.595	320	51	17.770	28.537	18.451	2.126	107.632
IMPORTS	29.464	0	0	7.505	0	0	0	0	0	36.969
STOCK VARIATIONS	-1.555	5	359	-135	-51	0	0	0	0	-1.377
TOTAL SUPPLY	60.459	6.238	1.954	7.690	0	17.770	28.537	18.451	2.126	143.224
EXPORTS	0	0	0	0	0	0	0	0	0	0
NON-UTILIZED	0	-1.036	0	0	0	0	0	0	0	-1.036
REINJECTION	0	-865	0	0	0	0	0	0	0	-865
GROSS DOMESTIC SUPPLY	60.459	4.337	1.954	7.690	0	17.770	28.537	18.451	2.126	141.324
TOTAL TRANSFORMATION	-60.579	-1.157	-962	-7.540	0	-17.770	-12.901	-7.185	-633	-108.727
OIL REFINERIES	-60.579	0	0	0	0	0	0	0	-130	-60.709
NATURAL GAS PLANTS	0	-779	0	0	0	0	0	0	0	-779
GASIFICATION PLANTS	0	-170	0	0	0	0	0	0	0	-170
COKE PLANTS	0	0	0	-7.540	0	0	0	0	0	-7.540
NUCLEAR CYCLE	0	0	0	0	0	0	0	0	0	0
PUBLIC SERVICE POWER PLANTS	0	-5	-941	0	0	-17.502	0	0	0	-18.448
SELF-PRODUCERS POWER PLANTS	0	-70	-21	0	0	-268	-121	-395	-593	-1.467
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-12.780	0	0	-12.780
DISTILLERIES	0	0	0	0	0	0	0	-6.790	-40	-6.830
OTHER TRANSFORMATIONS	0	-133	0	0	0	0	0	0	130	-3
LOSSES IN DISTRIBUTION AND STORAGE	0	0	0	-149	0	0	0	0	0	-149
FINAL CONSUMPTION	0	3.033	992	0	0	0	15.636	11.266	1.494	32.421
NON-ENERGY FINAL CONSUMPTION	0	834	0	0	0	0	0	0	0	834
ENERGY FINAL CONSUMPTION	0	2.199	992	0	0	0	15.636	11.266	1.494	31.587
ENERGY SECTOR	0	814	0	0	0	0	0	6.707	0	7.521
RESIDENTIAL	0	4	0	0	0	0	7.960	0	0	7.964
COMMERCIAL	0	1	0	0	0	0	115	0	0	116
PUBLIC	0	2	0	0	0	0	2	0	0	4
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	2.169	0	0	2.169
TRANSPORTATION - TOTAL	0	2	5	0	0	0	2	0	0	10
HIGHWAYS	0	2	0	0	0	0	0	0	0	2
RAILROADS	0	0	5	0	0	0	2	0	0	8
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	1.376	986	0	0	0	5.388	4.560	1.494	13.803
CEMENT	0	39	583	0	0	0	2	0	42	667
PIG-IRON AND STEEL	0	333	20	0	0	0	0	0	0	353
IRON-ALLOYS	0	4	0	0	0	0	0	0	0	4
MINING AND PELLETIZATION	0	87	0	0	0	0	0	0	0	87
NON-FERROUS AND OTHER METALS	0	27	0	0	0	0	38	0	0	65
CHEMICAL	0	324	95	0	0	0	218	40	0	678
FOOD AND BEVERAGES	0	131	108	0	0	0	1.965	4.465	0	6.669
TEXTILES	0	52	4	0	0	0	155	0	0	211
PAPER AND PULP	0	55	133	0	0	0	752	50	1.396	2.385
CERAMICS	0	61	35	0	0	0	1.560	0	56	1.712
OTHERS	0	262	9	0	0	0	697	4	0	972
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
ADJUSTMENTS	120	-147	0	0	0	0	0	0	0	-27

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUELOIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107.632
596	638	4	1.441	188	23	0	396	0	2.282	0	600	0	101	0	6.269	43.238
-38	45	-66	-34	-13	-28	0	-425	598	0	0	-63	-19	-232	-17	-292	-1.669
558	682	-62	1.407	175	-5	0	-29	598	2.282	0	536	-19	-130	-17	5.977	149.201
-223	-2.509	-1.741	-6	0	-490	0	0	0	-1	0	0	0	-51	0	-5.020	-5.020
0	0	0	0	0	0	-43	0	0	0	0	0	-297	0	0	-340	-1.376
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-865
335	-1.827	-1.803	1.402	175	-495	-43	-29	598	2.281	0	536	-316	-182	-17	616	141.940
20.569	11.507	9.416	4.325	4.783	2.739	1.573	5.266	-598	19.155	6.468	5.891	3.212	3.414	242	97.963	-10.763
21.058	12.212	8.968	3.478	6.277	2.739	0	0	0	0	0	0	2.578	3.414	0	60.725	16
0	0	169	547	4	0	0	0	0	0	0	0	0	0	0	720	-59
0	0	0	0	-163	0	301	0	0	0	0	0	0	0	0	138	-32
0	0	0	0	0	0	1.367	5.266	0	0	0	0	0	0	269	6.902	-638
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-457	-284	0	0	0	0	0	0	-598	18.131	0	0	0	0	0	16.793	-1.656
-115	-421	0	0	0	-95	0	0	1.024	0	0	-21	0	-27	345	-1.123	0
0	0	0	0	0	0	0	0	0	6.468	0	0	0	0	0	6.468	-6.312
0	0	0	0	0	0	0	0	0	0	5.891	0	0	0	0	5.891	-939
82	0	278	300	-1.334	0	0	0	0	0	0	656	0	0	0	-18	-21
0	0	-42	0	0	-26	-21	-105	0	-2.725	-331	-82	0	0	0	-3.331	-3.481
20.944	9.709	7.485	5.688	4.958	2.190	1.509	5.132	0	18.711	6.137	6.346	2.848	3.233	225	95.114	127.535
0	0	0	0	4.958	82	0	0	0	0	0	491	246	3.233	109	9.119	9.953
20.944	9.709	7.485	5.688	0	2.109	1.509	5.132	0	18.711	6.137	5.855	2.601	0	115	85.996	117.582
429	1.655	0	20	0	3	340	0	0	588	0	0	1.485	0	0	4.521	12.042
0	0	0	4.988	0	128	144	0	0	4.184	639	0	0	0	0	10.083	18.048
39	288	0	338	0	0	55	0	0	2.048	53	0	0	0	0	2.821	2.936
82	54	0	17	0	1	8	0	0	1.559	3	0	4	0	0	1.727	1.732
3.246	26	0	1	0	0	0	0	0	573	12	0	0	0	0	3.858	6.027
16.828	766	7.485	0	0	1.918	0	0	0	103	0	5.855	0	0	0	32.955	32.964
15.983	0	7.436	0	0	0	0	0	0	0	0	5.855	0	0	0	29.274	29.276
522	0	0	0	0	0	0	0	0	103	0	0	0	0	0	625	633
0	0	48	0	0	1.918	0	0	0	0	0	0	0	0	0	1.967	1.967
323	766	0	0	0	0	0	0	0	0	0	0	0	0	0	1.089	1.089
319	6.771	0	162	0	58	963	5.132	0	9.657	5.430	0	1.112	0	115	29.720	43.523
11	982	0	0	0	2	0	0	0	253	350	0	3	0	0	1.600	2.267
42	384	0	23	0	11	896	4.936	0	1.098	4.365	0	0	0	115	11.871	12.225
0	0	0	0	0	0	20	26	0	534	362	0	0	0	0	941	945
78	473	0	2	0	4	0	99	0	512	34	0	0	0	0	1.202	1.289
0	392	0	15	0	0	0	72	0	2.196	254	0	350	0	0	3.279	3.344
23	1.588	0	9	0	0	1	0	0	1.145	32	0	757	0	0	3.556	4.234
19	729	0	18	0	8	13	0	0	888	0	0	0	0	0	1.677	8.346
3	445	0	4	0	5	3	0	0	539	3	0	0	0	0	1.001	1.212
18	540	0	4	0	2	0	0	0	661	0	0	0	0	0	1.227	3.612
6	402	0	31	0	1	7	0	0	158	13	0	0	0	0	618	2.331
120	835	0	54	0	25	22	0	0	1.674	16	0	2	0	0	2.748	3.720
0	148	0	163	0	0	0	0	0	0	0	0	0	0	0	311	311
40	28	-86	-39	0	-28	0	0	0	0	0	0	-49	0	0	-134	-161

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2000 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	63.849	13.185	2.603	10	132	26.168	23.054	19.895	4.438	153.334
IMPORTS	20.537	1.945	1.917	7.300	618	0	4	0	0	32.322
STOCK VARIATIONS	-1.273	0	50	57	1.278	0	0	0	0	112
TOTAL SUPPLY	83.113	15.130	4.570	7.367	2.028	26.168	23.058	19.895	4.438	185.767
EXPORTS	-963	0	0	0	0	0	0	0	0	-963
NON-UTILIZED	0	-2.351	0	0	0	0	0	0	0	-2.351
REINJECTION	0	-2.523	0	0	0	0	0	0	0	-2.523
GROSS DOMESTIC SUPPLY	82.150	10.256	4.570	7.367	2.028	26.168	23.058	19.895	4.438	179.930
TOTAL TRANSFORMATION	-82.150	-2.908	-2.310	-7.293	-2.028	-26.168	-9.431	-6.514	-1.439	-140.240
OIL REFINERIES	-82.150	0	0	0	0	0	0	0	-690	-82.840
NATURAL GAS PLANTS	0	-1.817	0	0	0	0	0	0	606	-1.211
GASIFICATION PLANTS	0	-109	0	0	0	0	0	0	0	-109
COKE PLANTS	0	0	0	-7.293	0	0	0	0	0	-7.293
NUCLEAR CYCLE	0	0	0	0	-2.028	0	0	0	0	-2.028
PUBLIC SERVICE POWER PLANTS	0	-311	-2.267	0	0	-25.666	0	0	0	-28.244
SELF-PRODUCERS POWER PLANTS	0	-585	-43	0	0	-502	-147	-735	-1.439	-3.451
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-9.284	0	0	-9.284
DISTILLERIES	0	0	0	0	0	0	0	-5.778	0	-5.778
OTHER TRANSFORMATIONS	0	-86	0	0	0	0	0	0	84	-2
LOSSES IN DISTRIBUTION AND STORAGE	0	-232	0	-74	0	0	0	0	0	-306
FINAL CONSUMPTION	0	7.115	2.269	0	0	0	13.627	13.381	3.000	39.392
NON-ENERGY FINAL CONSUMPTION	0	731	0	0	0	0	0	0	0	731
ENERGY FINAL CONSUMPTION	0	6.384	2.269	0	0	0	13.627	13.381	3.000	38.661
ENERGY SECTOR	0	2.066	0	0	0	0	0	5.523	0	7.588
RESIDENTIAL	0	100	0	0	0	0	6.570	0	0	6.670
COMMERCIAL	0	69	0	0	0	0	75	0	0	144
PUBLIC	0	7	0	0	0	0	0	0	0	7
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	1.638	0	0	1.638
TRANSPORTATION - TOTAL	0	275	0	0	0	0	0	0	0	275
HIGHWAYS	0	275	0	0	0	0	0	0	0	275
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	3.867	2.269	0	0	0	5.344	7.858	3.000	22.338
CEMENT	0	49	143	0	0	0	22	0	109	324
PIG-IRON AND STEEL	0	779	1.272	0	0	0	0	0	0	2.051
IRON-ALLOYS	0	0	28	0	0	0	60	0	0	88
MINING AND PELLETIZATION	0	142	308	0	0	0	0	0	0	450
NON-FERROUS AND OTHER METALS	0	148	122	0	0	0	0	0	0	270
CHEMICAL	0	1.252	78	0	0	0	74	0	154	1.558
FOOD AND BEVERAGES	0	226	49	0	0	0	1.853	7.834	0	9.962
TEXTILES	0	172	0	0	0	0	81	0	0	252
PAPER AND PULP	0	273	83	0	0	0	1.048	24	2.697	4.124
CERAMICS	0	260	34	0	0	0	1.629	0	40	1.963
OTHERS	0	567	152	0	0	0	576	0	0	1.296
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
ADJUSTMENTS	0	0	9	0	0	0	0	0	0	9

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153.334
4.986	68	47	3.117	2.912	742	0	1.112	0	3.812	7	33	1.940	157	0	18.932	51.254
-225	-235	-175	-109	4	0	0	-50	-222	0	0	949	-35	20	0	-78	34
4.760	-167	-128	3.008	2.916	742	0	1.062	-222	3.812	7	982	1.905	177	0	18.855	204.622
-641	-5.303	-1.579	-6	0	-678	0	0	0	-1	-5	-116	-175	-238	0	-8.741	-9.705
0	0	0	0	0	0	-14	0	0	0	0	0	0	0	0	-14	-2.365
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2.523
4.119	-5.470	-1.707	3.002	2.916	64	-14	1.062	-222	3.812	2	866	1.730	-62	0	10.099	190.029
25.143	14.874	15.014	4.747	5.088	3.122	1.355	5.299	222	29.995	4.981	5.590	6.484	4.496	227	126.637	-13.603
26.188	16.947	14.471	4.252	7.853	3.245	0	0	0	0	0	0	4.716	4.496	0	82.169	-671
0	0	232	374	151	0	0	0	0	0	0	0	0	0	0	757	-453
0	0	0	0	0	0	95	0	0	0	0	0	0	0	0	95	-14
0	0	0	0	0	0	1.428	5.299	0	0	0	0	0	0	250	6.978	-315
0	0	0	0	0	0	0	0	1.996	0	0	0	0	0	0	1.996	-32
-1.151	-1.694	0	0	0	0	0	0	-1.774	27.844	0	0	0	0	0	23.225	-5.019
-353	-380	0	0	0	0	-168	0	0	2.151	0	0	-322	0	-23	905	-2.546
0	0	0	0	0	0	0	0	0	4.981	0	0	0	0	0	4.981	-4.304
0	0	0	0	0	0	0	0	0	0	5.590	0	0	0	0	5.590	-188
459	0	311	120	-2.915	-123	0	0	0	0	0	2.090	0	0	0	-58	-60
0	0	0	-38	0	0	-9	0	0	-5.297	-169	-9	-28	-5	-9	-5.563	-5.869
29.505	9.500	13.319	7.844	8.102	3.242	1.332	6.506	0	28.523	4.814	6.457	8.186	4.450	219	131.999	171.391
0	0	0	0	8.098	62	0	0	0	0	0	637	172	4.450	142	13.562	14.293
29.505	9.500	13.319	7.844	4	3.180	1.332	6.506	0	28.523	4.814	5.820	8.014	0	77	118.437	157.098
253	1.080	0	46	4	1	318	0	0	901	0	0	2.656	0	0	5.259	12.847
0	0	0	6.325	0	36	60	0	0	7.188	409	0	0	0	0	14.018	20.688
67	354	0	217	0	0	18	0	0	4.084	63	0	21	0	0	4.825	4.968
118	234	0	369	0	0	3	0	0	2.510	0	0	0	0	0	3.235	3.242
4.452	106	0	16	0	0	0	0	0	1.105	5	0	0	0	0	5.684	7.322
24.090	648	13.319	0	0	3.124	0	0	0	107	0	5.820	0	0	0	47.109	47.385
23.410	0	13.261	0	0	0	0	0	0	0	0	5.820	0	0	0	42.491	42.766
403	0	0	0	0	0	0	0	0	107	0	0	0	0	0	511	511
0	0	58	0	0	3.124	0	0	0	0	0	0	0	0	0	3.182	3.182
277	648	0	0	0	0	0	0	0	0	0	0	0	0	0	926	926
524	7.077	0	871	0	19	933	6.506	0	12.627	4.337	0	5.337	0	77	38.308	60.646
24	510	0	2	0	1	0	1	0	398	233	0	1.845	0	0	3.014	3.337
30	110	0	113	0	5	932	6.413	0	1.265	3.660	0	251	0	77	12.855	14.906
0	12	0	0	0	0	0	6	0	550	430	0	89	0	0	1.086	1.174
158	812	0	20	0	3	0	0	0	639	0	0	138	0	0	1.771	2.220
0	976	0	75	0	0	0	87	0	2.490	6	0	424	0	0	4.059	4.328
83	1.136	0	14	0	2	1	0	0	1.483	0	0	2.143	0	0	4.861	6.420
38	1.024	0	64	0	2	0	0	0	1.390	0	0	32	0	0	2.552	12.514
5	243	0	24	0	0	0	0	0	600	0	0	0	0	0	872	1.124
31	983	0	24	0	0	0	0	0	1.044	0	0	0	0	0	2.082	6.206
5	468	0	357	0	1	0	0	0	234	0	0	41	0	0	1.105	3.068
150	803	0	179	0	5	0	0	0	2.534	8	0	374	0	0	4.051	5.347
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
243	96	13	133	98	56	0	145	0	13	0	9	0	20	0	826	835

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2008 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	94.000	21.398	2.552	101	3.950	31.782	29.227	45.019	8.526	236.555
IMPORTS	19.689	9.986	2.635	7.909	371	0	0	0	0	40.590
STOCK VARIATIONS	-27	0	-246	-262	252	0	0	0	-50	-334
TOTAL SUPPLY	113.661	31.384	4.941	7.749	4.573	31.782	29.227	45.019	8.526	276.862
EXPORTS	-22.372	0	0	0	0	0	0	0	0	-22.372
NON-UTILIZED	0	-1.925	0	0	0	0	0	0	0	-1.925
REINJECTION	0	-3.526	0	0	0	0	0	0	0	-3.526
GROSS DOMESTIC SUPPLY	91.289	25.934	4.941	7.749	4.573	31.782	29.227	45.019	8.526	249.039
TOTAL TRANSFORMATION	-91.164	-9.249	-1.832	-7.735	-4.573	-31.782	-12.367	-16.324	-3.196	-178.222
OIL REFINERIES	-91.164	0	0	0	0	0	0	0	-1.805	-92.969
NATURAL GAS PLANTS	0	-3.240	0	0	0	0	0	0	1.520	-1.720
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-7.643	0	0	0	0	0	-7.643
NUCLEAR CYCLE	0	0	0	0	-4.573	0	0	0	0	-4.573
PUBLIC SERVICE POWER PLANTS	0	-4.565	-1.748	0	0	-30.469	0	0	-113	-36.895
SELF-PRODUCERS POWER PLANTS	0	-1.156	-83	-93	0	-1.313	-311	-2.067	-2.073	-7.096
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-12.056	0	0	-12.056
DISTILLERIES	0	0	0	0	0	0	0	-14.256	0	-14.256
OTHER TRANSFORMATIONS	0	-287	0	0	0	0	0	0	-725	-1.012
LOSSES IN DISTRIBUTION AND STORAGE	0	-133	0	0	0	0	0	0	0	-133
FINAL CONSUMPTION	0	16.707	3.082	0	0	0	16.859	28.695	5.280	70.623
NON-ENERGY FINAL CONSUMPTION	0	710	0	0	0	0	0	0	0	710
ENERGY FINAL CONSUMPTION	0	15.997	3.082	0	0	0	16.859	28.695	5.280	69.913
ENERGY SECTOR	0	4.926	0	0	0	0	0	13.305	0	18.231
RESIDENTIAL	0	229	0	0	0	0	7.706	0	0	7.935
COMMERCIAL	0	171	0	0	0	0	78	0	0	249
PUBLIC	0	58	0	0	0	0	0	0	0	58
AGRICULTURAL AND LIVESTOCK	0	2	0	0	0	0	2.538	0	0	2.540
TRANSPORTATION - TOTAL	0	2.158	0	0	0	0	0	0	0	2.158
HIGHWAYS	0	2.158	0	0	0	0	0	0	0	2.158
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	8.453	3.082	0	0	0	6.538	15.390	5.280	38.742
CEMENT	0	25	53	0	0	0	0	0	286	365
PIG-IRON AND STEEL	0	1.158	2.052	0	0	0	0	0	0	3.210
IRON-ALLOYS	0	2	0	0	0	0	102	0	0	103
MINING AND PELLETIZATION	0	426	508	0	0	0	0	0	0	934
NON-FERROUS AND OTHER METALS	0	675	29	0	0	0	0	0	0	704
CHEMICAL	0	2.323	92	0	0	0	51	0	95	2.560
FOOD AND BEVERAGES	0	581	37	0	0	0	1.999	15.353	10	17.980
TEXTILES	0	322	0	0	0	0	95	0	0	417
PAPER AND PULP	0	509	81	0	0	0	1.374	37	4.833	6.833
CERAMICS	0	1.007	44	0	0	0	2.122	0	53	3.225
OTHERS	0	1.425	185	0	0	0	798	0	3	2.410
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
ADJUSTMENTS	-125	156	-27	-14	0	0	0	0	-51	-61

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236.555
4.943	190	0	1.337	3.591	1.230	0	1.311	3.548	3.689	0	0	3.087	1.295	8	24.232	64.822
-69	46	-50	-3	-18	23	0	-224	-4.412	0	0	558	-184	-55	-9	-4.396	-4.730
4.874	236	-50	1.335	3.572	1.253	0	1.087	-864	3.689	0	559	2.902	1.240	0	19.835	296.697
-1.320	-8.418	-2.001	-5	-79	-1.616	0	0	0	-59	0	-2.705	-279	-526	-7	-17.014	-39.387
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.925
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.526
3.554	-8.181	-2.051	1.330	3.493	-362	0	1.086	-864	3.630	0	-2.146	2.623	715	-7	2.821	251.860
33.944	14.213	16.645	6.333	3.452	3.137	1.089	5.717	864	39.828	6.390	14.071	8.040	5.380	188	159.292	-18.930
34.833	15.698	15.618	5.079	6.223	3.137	0	0	0	0	0	0	6.700	5.380	0	92.667	-301
0	0	391	1.155	0	0	0	0	0	0	0	0	0	0	0	1.545	-175
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.616	5.717	0	0	0	0	0	0	214	7.547	-96
0	0	0	0	0	0	0	0	4.505	0	0	0	0	0	0	4.505	-69
-1.597	-1.172	0	0	0	0	0	0	-3.641	35.433	0	0	0	0	0	29.023	-7.872
-281	-312	0	0	0	0	-527	0	0	4.395	0	0	-572	0	-26	2.677	-4.419
0	0	0	0	0	0	0	0	0	0	6.390	0	0	0	0	6.390	-5.667
0	0	0	0	0	0	0	0	0	0	0	14.071	0	0	0	14.071	-185
990	0	636	99	-2.770	0	0	0	0	0	0	0	1.913	0	0	867	-145
-8	-20	0	-31	0	0	0	-23	0	-6.629	-166	-138	-84	0	0	-7.098	-7.232
37.827	6.276	14.585	7.585	6.879	2.831	1.198	6.704	0	36.829	6.209	11.809	10.623	6.048	187	155.591	226.215
0	0	0	0	6.879	8	0	0	0	0	0	791	92	6.048	149	13.966	14.676
37.827	6.276	14.585	7.585	0	2.823	1.198	6.704	0	36.829	6.209	11.019	10.531	0	39	141.625	211.538
152	980	0	19	0	0	133	0	0	1.582	0	0	3.582	0	0	6.448	24.679
0	0	0	6.043	0	9	0	0	0	8.220	531	0	0	0	0	14.803	22.738
59	122	0	309	0	0	0	0	0	5.375	78	0	0	0	0	5.942	6.190
96	87	0	409	0	0	0	0	0	2.972	0	0	0	0	0	3.564	3.622
5.685	68	0	22	0	0	0	0	0	1.582	7	6	0	0	0	7.371	9.911
31.086	1.038	14.585	0	0	2.811	0	0	0	138	0	11.013	0	0	0	60.671	62.829
29.660	0	14.538	0	0	0	0	0	0	0	0	11.013	0	0	0	55.212	57.370
1.011	0	0	0	0	0	0	0	0	138	0	0	0	0	0	1.149	1.149
0	0	47	0	0	2.811	0	0	0	0	0	0	0	0	0	2.857	2.857
414	1.038	0	0	0	0	0	0	0	0	0	0	0	0	0	1.452	1.452
750	3.981	0	784	0	3	1.065	6.704	0	16.961	5.593	0	6.949	0	39	42.827	81.570
43	29	0	14	0	0	0	63	0	497	249	0	2.561	0	0	3.455	3.820
14	142	0	97	0	0	1.065	6.289	0	1.602	4.679	0	489	0	39	14.416	17.627
0	67	0	0	0	0	0	119	0	751	628	0	143	0	0	1.708	1.811
249	502	0	22	0	1	0	84	0	970	0	0	437	0	0	2.264	3.198
0	1.062	0	85	0	0	0	149	0	3.366	9	0	590	0	0	5.262	5.966
154	476	0	66	0	0	0	0	0	1.901	17	0	2.033	0	0	4.648	7.209
82	467	0	103	0	0	0	0	0	1.985	0	0	77	0	0	2.713	20.694
3	106	0	10	0	0	0	0	0	672	0	0	0	0	0	791	1.208
68	499	0	29	0	0	0	0	0	1.528	0	0	0	0	0	2.124	8.957
8	322	0	166	0	0	0	0	0	298	0	0	173	0	0	967	4.193
129	310	0	192	0	1	0	0	0	3.390	11	0	445	0	0	4.478	6.888
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
336	264	-9	-47	-67	56	110	-77	0	0	-15	22	44	-46	7	577	516

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2009 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	100.918	20.983	1.913	167	4.117	33.625	24.609	44.775	9.350	240.458
IMPORTS	19.346	7.362	1.999	6.627	30	0	0	0	0	35.364
STOCK VARIATIONS	-1.111	0	20	74	-277	0	0	0	0	-1.293
TOTAL SUPPLY	119.153	28.345	3.932	6.868	3.871	33.625	24.609	44.775	9.350	274.529
EXPORTS	-27.117	0	0	0	0	0	0	0	0	-27.117
NON-UTILIZED	0	-3.013	0	0	0	0	0	0	0	-3.013
REINJECTION	0	-4.002	0	0	0	0	0	0	0	-4.002
GROSS DOMESTIC SUPPLY	92.036	21.329	3.932	6.868	3.871	33.625	24.609	44.775	9.350	240.396
TOTAL TRANSFORMATION	-91.906	-5.883	-1.523	-6.842	-3.871	-33.625	-8.026	-16.331	-3.783	-171.789
OIL REFINERIES	-91.906	0	0	0	0	0	0	0	-1.556	-93.462
NATURAL GAS PLANTS	0	-2.815	0	0	0	0	0	0	1.108	-1.707
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-6.842	0	0	0	0	0	-6.842
NUCLEAR CYCLE	0	0	0	0	-3.871	0	0	0	0	-3.871
PUBLIC SERVICE POWER PLANTS	0	-1.574	-1.480	0	0	-31.964	0	0	-151	-35.168
SELF-PRODUCERS POWER PLANTS	0	-1.046	-43	0	0	-1.661	-221	-2.687	-2.269	-7.927
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-7.805	0	0	-7.805
DISTILLERIES	0	0	0	0	0	0	0	-13.644	0	-13.644
OTHER TRANSFORMATIONS	0	-448	0	0	0	0	0	0	-915	-1.363
LOSSES IN DISTRIBUTION AND STORAGE	0	-121	-6	-26	0	0	0	0	0	-153
FINAL CONSUMPTION	0	15.307	2.403	0	0	0	16.583	28.445	5.568	68.305
NON-ENERGY FINAL CONSUMPTION	0	717	0	0	0	0	0	0	0	717
ENERGY FINAL CONSUMPTION	0	14.589	2.403	0	0	0	16.583	28.445	5.568	67.588
ENERGY SECTOR	0	4.994	0	0	0	0	0	12.258	0	17.252
RESIDENTIAL	0	238	0	0	0	0	7.529	0	0	7.767
COMMERCIAL	0	190	0	0	0	0	80	0	0	270
PUBLIC	0	59	0	0	0	0	0	0	0	59
AGRICULTURAL AND LIVESTOCK	0	2	0	0	0	0	2.411	0	0	2.413
TRANSPORTATION - TOTAL	0	1.853	0	0	0	0	0	0	0	1.853
HIGHWAYS	0	1.853	0	0	0	0	0	0	0	1.853
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	7.254	2.403	0	0	0	6.563	16.187	5.568	37.974
CEMENT	0	26	51	0	0	0	0	0	286	362
PIG-IRON AND STEEL	0	695	1.578	0	0	0	0	0	0	2.273
IRON-ALLOYS	0	2	0	0	0	0	79	0	0	80
MINING AND PELLETIZATION	0	170	294	0	0	0	0	0	0	464
NON-FERROUS AND OTHER METALS	0	405	27	0	0	0	0	0	0	432
CHEMICAL	0	2.276	71	0	0	0	45	0	95	2.487
FOOD AND BEVERAGES	0	552	48	0	0	0	2.039	16.148	10	18.797
TEXTILES	0	300	0	0	0	0	88	0	0	388
PAPER AND PULP	0	483	84	0	0	0	1.449	39	5.121	7.176
CERAMICS	0	977	31	0	0	0	2.081	0	53	3.142
OTHERS	0	1.368	219	0	0	0	783	0	3	2.373
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	-130	-19	0	0	0	0	0	0	0	-149

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240.458
2.981	10	10	1.562	3.958	1.044	0	300	3.707	3.504	1	2	2.859	968	0	20.906	56.270
-28	-65	-62	-10	153	-42	0	10	-4.144	0	0	915	4	111	0	-3.158	-4.452
2.952	-56	-52	1.552	4.111	1.001	0	310	-437	3.504	1	917	2.864	1.079	0	17.748	292.276
-1.704	-7.166	-1.940	-12	-39	-1.673	0	0	0	-93	0	-1.715	-215	-476	0	-15.034	-42.151
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.013
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4.002
1.248	-7.222	-1.992	1.540	4.073	-672	0	310	-437	3.411	1	-798	2.648	603	0	2.714	243.110
35.655	13.380	16.697	5.910	3.318	3.564	1.200	5.009	436	40.090	4.098	13.481	8.658	5.349	188	157.031	-14.758
35.993	14.520	15.266	4.817	6.459	3.564	0	0	0	0	0	0	6.978	5.167	0	92.764	-698
0	0	586	846	0	0	0	0	0	0	0	0	0	180	0	1.611	-95
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.530	5.009	0	0	0	0	0	0	192	6.732	-111
0	0	0	0	0	0	0	0	3.812	0	0	0	0	0	0	3.812	-58
-1.361	-840	0	0	0	0	0	0	-3.377	35.187	0	0	0	0	0	29.610	-5.559
-340	-300	0	0	0	0	-331	0	0	4.903	0	0	-366	0	-5	3.561	-4.366
0	0	0	0	0	0	0	0	0	0	4.098	0	0	0	0	4.098	-3.707
0	0	0	0	0	0	0	0	0	0	0	13.481	0	0	0	13.481	-163
1.363	0	844	247	-3.141	0	0	0	0	0	0	0	2.046	2	0	1.363	0
-8	-20	0	-31	-31	-16	0	-10	0	-6.862	-119	-132	-129	-108	0	-7.466	-7.620
37.263	5.975	14.720	7.446	7.360	2.847	1.200	5.309	0	36.638	3.970	12.550	11.117	5.844	187	152.427	220.732
0	0	0	0	7.360	7	0	0	0	0	0	751	98	5.844	143	14.204	14.921
37.263	5.975	14.720	7.446	0	2.839	1.200	5.309	0	36.638	3.970	11.799	11.019	0	44	138.223	205.811
162	985	0	18	0	0	188	0	0	1.561	0	0	3.749	0	0	6.664	23.916
0	0	0	6.115	0	8	0	0	0	8.655	584	0	0	0	0	15.362	23.129
57	122	0	135	0	0	0	0	0	5.674	78	0	0	0	0	6.066	6.335
97	87	0	373	0	0	0	0	0	3.031	0	0	0	0	0	3.589	3.648
5.515	68	0	23	0	0	0	0	0	1.521	7	7	0	0	0	7.141	9.553
30.725	986	14.720	0	0	2.828	0	0	0	137	0	11.792	0	0	0	61.188	63.041
29.364	0	14.674	0	0	0	0	0	0	0	0	11.792	0	0	0	55.830	57.683
988	0	0	0	0	0	0	0	0	137	0	0	0	0	0	1.125	1.125
0	0	47	0	0	2.828	0	0	0	0	0	0	0	0	0	2.874	2.874
373	986	0	0	0	0	0	0	0	0	0	0	0	0	0	1.359	1.359
707	3.727	0	782	0	3	1.011	5.309	0	16.060	3.301	0	7.270	0	44	38.215	76.189
42	29	0	1	0	0	0	62	0	500	55	0	2.727	0	0	3.416	3.778
14	114	0	90	0	1	1.011	4.969	0	1.281	2.724	0	487	0	44	10.735	13.008
0	67	0	0	0	0	0	92	0	580	485	0	143	0	0	1.367	1.447
224	351	0	22	0	2	0	49	0	708	0	0	436	0	0	1.791	2.255
0	987	0	86	0	0	0	138	0	3.114	8	0	588	0	0	4.921	5.353
136	476	0	67	0	0	0	0	0	1.996	18	0	2.169	0	0	4.863	7.350
82	467	0	101	0	0	0	0	0	2.025	0	0	77	0	0	2.751	21.547
3	106	0	10	0	0	0	0	0	665	0	0	0	0	0	784	1.172
68	499	0	30	0	0	0	0	0	1.574	0	0	0	0	0	2.170	9.346
8	322	0	176	0	0	0	0	0	301	0	0	178	0	0	986	4.128
129	310	0	200	0	1	0	0	0	3.315	11	0	466	0	0	4.431	6.804
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
368	-163	16	27	0	-29	0	0	1	0	-9	0	-61	0	0	149	0

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2010 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	106.559	22.771	2.104	0	1.767	34.683	25.997	48.852	10.464	253.198
IMPORTS	17.516	11.130	2.895	7.972	1.419	0	0	0	0	40.931
STOCK VARIATIONS	1.185	0	141	164	1.636	0	0	0	0	3.126
TOTAL SUPPLY	125.260	33.900	5.141	8.136	4.821	34.683	25.997	48.852	10.464	297.255
EXPORTS	-32.651	0	0	0	0	0	0	0	0	-32.651
NON-UTILIZED	0	-2.365	0	0	0	0	0	0	0	-2.365
REINJECTION	0	-4.000	0	0	0	0	0	0	0	-4.000
GROSS DOMESTIC SUPPLY	92.609	27.536	5.141	8.136	4.821	34.683	25.997	48.852	10.464	258.239
TOTAL TRANSFORMATION	-92.408	-10.211	-1.905	-8.106	-4.821	-34.683	-8.945	-18.787	-4.421	-184.287
OIL REFINERIES	-92.408	0	0	0	0	0	0	0	-1.211	-93.619
NATURAL GAS PLANTS	0	-2.844	0	0	0	0	0	0	840	-2.004
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-8.106	0	0	0	0	0	-8.106
NUCLEAR CYCLE	0	0	0	0	-4.821	0	0	0	0	-4.821
PUBLIC SERVICE POWER PLANTS	0	-4.818	-1.721	0	0	-32.904	-14	0	-193	-39.651
SELF-PRODUCERS POWER PLANTS	0	-2.177	-184	0	0	-1.779	-295	-4.081	-2.195	-10.711
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-8.637	0	0	-8.637
DISTILLERIES	0	0	0	0	0	0	0	-14.706	0	-14.706
OTHER TRANSFORMATIONS	0	-371	0	0	0	0	0	0	-1.662	-2.033
LOSSES IN DISTRIBUTION AND STORAGE	0	-433	0	-30	0	0	0	0	0	-463
FINAL CONSUMPTION	0	16.887	3.237	0	0	0	17.052	30.066	6.043	73.286
NON-ENERGY FINAL CONSUMPTION	0	1.453	0	0	0	0	0	0	0	1.453
ENERGY FINAL CONSUMPTION	0	15.435	3.237	0	0	0	17.052	30.066	6.043	71.833
ENERGY SECTOR	0	3.875	5	0	0	0	0	12.777	0	16.657
RESIDENTIAL	0	255	0	0	0	0	7.276	0	0	7.531
COMMERCIAL	0	202	0	0	0	0	89	0	0	291
PUBLIC	0	60	0	0	0	0	0	0	0	60
AGRICULTURAL AND LIVESTOCK	0	2	0	0	0	0	2.523	0	0	2.526
TRANSPORTATION - TOTAL	0	1.767	0	0	0	0	0	0	0	1.767
HIGHWAYS	0	1.767	0	0	0	0	0	0	0	1.767
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.274	3.232	0	0	0	7.164	17.289	6.043	43.002
CEMENT	0	23	52	0	0	0	0	0	297	372
PIG-IRON AND STEEL	0	897	1.772	0	0	0	0	0	0	2.669
IRON-ALLOYS	0	2	0	0	0	0	92	0	0	94
MINING AND PELLETIZATION	0	628	368	0	0	0	0	0	0	996
NON-FERROUS AND OTHER METALS	0	727	616	0	0	0	0	0	0	1.343
CHEMICAL	0	2.289	125	0	0	0	49	0	93	2.556
FOOD AND BEVERAGES	0	662	71	0	0	0	2.267	17.248	11	20.260
TEXTILES	0	329	0	0	0	0	92	0	0	420
PAPER AND PULP	0	676	112	0	0	0	1.513	41	5.581	7.923
CERAMICS	0	1.141	30	0	0	0	2.275	0	58	3.504
OTHERS	0	1.901	87	0	0	0	874	0	3	2.866
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	-201	-4	2	0	0	0	0	0	0	-203

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	253.198
7.638	154	394	1.908	5.136	1.581	0	1.243	3.527	3.088	1	39	3.384	1.723	0	29.814	70.746
8	-11	-65	35	-87	-11	0	-57	-4.491	0	0	-806	-8	-175	0	-5.667	-2.541
7.646	144	329	1.942	5.050	1.570	0	1.186	-965	3.088	1	-767	3.376	1.548	0	24.148	321.403
-1.310	-7.966	-595	-5	0	-1.977	0	0	0	-108	0	-984	-157	-489	0	-13.591	-46.242
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2.365
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4.000
6.336	-7.823	-266	1.938	5.050	-407	0	1.186	-965	2.980	1	-1.750	3.219	1.059	0	10.556	268.796
35.001	13.119	17.831	5.847	2.591	3.854	1.434	6.340	965	44.359	4.767	14.442	7.939	6.919	224	165.630	-18.658
35.132	14.247	16.629	4.693	5.626	3.854	0	0	0	0	0	0	6.979	6.302	0	93.462	-157
0	0	0	1.094	0	0	0	0	0	0	0	0	0	881	0	1.975	-30
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.738	6.340	0	0	0	0	-612	0	235	7.701	-404
0	0	0	0	0	0	0	0	4.744	0	0	0	0	0	0	4.744	-77
-1.820	-890	0	0	0	0	0	0	-3.780	38.081	0	0	0	0	0	31.591	-8.059
-343	-238	0	0	0	0	-304	0	0	6.278	0	0	-465	0	-11	4.915	-5.796
0	0	0	0	0	0	0	0	0	0	4.767	0	0	0	0	4.767	-3.870
0	0	0	0	0	0	0	0	0	0	0	14.442	0	0	0	14.442	-264
2.033	0	1.202	61	-3.035	0	0	0	0	0	0	0	2.036	-265	0	2.032	-1
-34	-69	0	-6	-23	-16	0	-10	0	-7.374	-120	-132	0	-63	0	-7.848	-8.310
41.498	4.939	17.578	7.701	7.601	3.202	1.434	7.516	0	39.964	4.648	12.628	11.164	7.797	238	167.908	241.194
0	0	0	0	7.601	7	0	0	0	0	0	587	98	7.797	143	16.233	17.686
41.498	4.939	17.578	7.701	0	3.195	1.434	7.516	0	39.964	4.648	12.041	11.065	0	95	151.675	223.508
908	631	0	15	0	0	184	0	0	2.308	0	0	3.561	0	0	7.607	24.263
0	0	0	6.298	0	4	0	0	0	9.220	509	0	0	0	0	16.031	23.562
36	25	0	298	0	0	0	0	0	5.996	86	0	0	0	0	6.440	6.731
12	3	0	381	0	0	0	0	0	3.180	0	0	0	0	0	3.576	3.636
5.772	79	0	8	0	0	0	0	0	1.629	8	8	0	0	0	7.503	10.029
34.046	966	17.578	0	0	3.188	0	0	0	143	0	12.033	0	0	0	67.953	69.720
32.639	0	17.525	0	0	0	0	0	0	0	0	12.033	0	0	0	62.197	63.963
993	0	0	0	0	0	0	0	0	143	0	0	0	0	0	1.135	1.135
0	0	53	0	0	3.188	0	0	0	0	0	0	0	0	0	3.241	3.241
415	966	0	0	0	0	0	0	0	0	0	0	0	0	0	1.380	1.380
725	3.236	0	702	0	3	1.250	7.516	0	17.488	4.045	0	7.505	0	95	42.564	85.567
45	8	0	5	0	0	0	47	0	553	63	0	3.161	0	0	3.883	4.255
15	168	0	71	0	0	1.250	7.153	0	1.613	3.372	0	39	0	95	13.777	16.445
0	29	0	0	0	1	0	107	0	728	568	0	168	0	0	1.601	1.695
260	371	0	19	0	1	0	56	0	972	0	0	508	0	0	2.186	3.182
0	1.098	0	79	0	0	0	152	0	3.198	9	0	612	0	0	5.149	6.492
27	233	0	64	0	0	0	0	0	2.055	20	0	2.259	0	0	4.658	7.214
148	325	0	106	0	0	0	0	0	2.319	0	0	86	0	0	2.984	23.244
3	64	0	10	0	0	0	0	0	715	0	0	0	0	0	792	1.212
76	466	0	31	0	0	0	0	0	1.636	0	0	0	0	0	2.209	10.131
6	295	0	165	0	0	0	0	0	319	0	0	195	0	0	981	4.485
144	177	0	153	0	1	0	0	0	3.380	12	0	478	0	0	4.345	7.211
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
195	-287	13	-78	-17	-228	0	0	0	0	0	68	6	-117	14	-431	-634

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2011 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	108.976	23.888	2.134	0	4.209	36.837	25.997	43.270	11.077	256.387
IMPORTS	17.140	9.223	3.547	8.659	966	0	0	0	0	39.535
STOCK VARIATIONS	-758	0	-148	-237	1.888	0	0	0	-107	638
TOTAL SUPPLY	125.357	33.112	5.533	8.422	7.062	36.837	25.997	43.270	10.970	296.559
EXPORTS	-31.221	0	-40	0	0	0	0	0	0	-31.262
NON-UTILIZED	0	-1.666	0	0	0	0	0	0	0	-1.666
REINJECTION	0	-3.725	0	0	0	0	0	0	0	-3.725
GROSS DOMESTIC SUPPLY	94.136	27.721	5.492	8.422	7.062	36.837	25.997	43.270	10.970	259.907
TOTAL TRANSFORMATION	-93.641	-9.635	-1.750	-8.400	-7.062	-36.837	-9.593	-15.957	-4.872	-187.748
OIL REFINERIES	-93.641	0	0	0	0	0	0	0	-2.526	-96.167
NATURAL GAS PLANTS	0	-3.044	0	0	0	0	0	0	1.162	-1.881
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-8.400	0	0	0	0	0	-8.400
NUCLEAR CYCLE	0	0	0	0	-7.062	0	0	0	0	-7.062
PUBLIC SERVICE POWER PLANTS	0	-2.897	-1.591	0	0	-34.883	-19	0	-290	-39.681
SELF-PRODUCERS POWER PLANTS	0	-2.331	-159	0	0	-1.953	-267	-3.982	-2.563	-11.256
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-9.307	0	0	-9.307
DISTILLERIES	0	0	0	0	0	0	0	-11.975	0	-11.975
OTHER TRANSFORMATIONS	0	-1.363	0	0	0	0	0	0	-655	-2.019
LOSSES IN DISTRIBUTION AND STORAGE	0	-410	-29	-22	0	0	0	0	0	-460
FINAL CONSUMPTION	0	17.828	3.715	0	0	0	16.403	27.313	6.098	71.357
NON-ENERGY FINAL CONSUMPTION	0	897	0	0	0	0	0	0	0	897
ENERGY FINAL CONSUMPTION	0	16.931	3.715	0	0	0	16.403	27.313	6.098	70.460
ENERGY SECTOR	0	4.671	0	0	0	0	0	10.411	0	15.083
RESIDENTIAL	0	280	0	0	0	0	6.505	0	0	6.785
COMMERCIAL	0	188	0	0	0	0	95	0	0	283
PUBLIC	0	44	0	0	0	0	0	0	0	44
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	2.446	0	0	2.446
TRANSPORTATION - TOTAL	0	1.735	0	0	0	0	0	0	0	1.735
HIGHWAYS	0	1.735	0	0	0	0	0	0	0	1.735
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	10.012	3.715	0	0	0	7.358	16.901	6.098	44.084
CEMENT	0	29	98	0	0	0	37	0	342	506
PIG-IRON AND STEEL	0	997	1.924	0	0	0	0	0	0	2.922
IRON-ALLOYS	0	3	0	0	0	0	82	0	0	85
MINING AND PELLETIZATION	0	695	440	0	0	0	0	0	0	1.135
NON-FERROUS AND OTHER METALS	0	776	790	0	0	0	0	0	0	1.567
CHEMICAL	0	2.437	105	0	0	0	48	0	92	2.682
FOOD AND BEVERAGES	0	652	90	0	0	0	2.312	16.861	11	19.927
TEXTILES	0	327	0	0	0	0	76	0	0	403
PAPER AND PULP	0	730	126	0	0	0	1.516	41	5.592	8.004
CERAMICS	0	1.288	52	0	0	0	2.387	0	61	3.788
OTHERS	0	2.079	90	0	0	0	898	0	0	3.066
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	-495	152	1	0	0	0	0	0	0	-341

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	256.387
7.914	679	1.689	2.071	5.454	1.482	0	1.478	2.321	3.305	0	601	3.870	1.062	0	31.926	71.461
-232	-26	112	-7	24	-76	0	57	-5.196	0	0	-77	-23	-7	0	-5.452	-4.814
7.683	653	1.801	2.064	5.478	1.406	0	1.535	-2.875	3.305	0	524	3.846	1.055	0	26.474	323.034
-941	-8.901	-249	-26	0	-2.168	0	0	0	-219	0	-1.017	-237	-428	0	-14.186	-45.447
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.666
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.725
6.742	-8.248	1.552	2.038	5.478	-763	0	1.535	-2.875	3.086	0	-493	3.610	627	0	12.289	272.196
36.552	12.652	19.002	5.962	1.908	4.460	1.498	6.681	2.875	45.731	4.933	11.904	8.219	6.628	224	169.228	-18.520
36.478	13.385	18.139	4.846	4.881	4.460	0	0	0	0	0	0	7.370	6.054	0	95.614	-553
0	0	140	929	0	0	0	0	0	0	0	0	0	642	0	1.711	-170
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.798	6.681	0	0	0	0	-803	0	234	7.911	-489
0	0	0	0	0	0	0	0	6.956	0	0	0	0	0	0	6.956	-106
-1.696	-469	0	0	0	0	0	0	-4.081	39.106	0	0	-51	0	0	32.810	-6.871
-390	-265	0	0	0	0	-301	0	0	6.625	0	0	-440	0	-10	5.218	-6.037
0	0	0	0	0	0	0	0	0	0	4.933	0	0	0	0	4.933	-4.374
0	0	0	0	0	0	0	0	0	0	0	11.904	0	0	0	11.904	-71
2.160	0	722	187	-2.973	0	0	0	0	0	0	0	2.129	-69	0	2.157	138
0	0	0	0	0	-8	0	-7	0	-7.454	-130	-113	-84	-25	0	-7.821	-8.282
43.551	4.428	20.892	8.000	7.386	3.594	1.491	8.209	0	41.363	4.803	11.289	11.744	7.530	224	174.503	245.860
0	0	0	0	7.386	17	0	0	0	0	0	545	342	7.530	121	15.940	16.837
43.551	4.428	20.892	8.000	0	3.577	1.491	8.209	0	41.363	4.803	10.744	11.402	0	103	158.563	229.023
945	519	0	14	0	0	202	0	0	2.083	0	0	3.325	0	0	7.088	22.171
0	0	0	6.364	0	5	0	0	0	9.629	483	0	0	0	0	16.482	23.267
9	19	0	352	0	0	0	0	0	6.369	92	0	0	0	0	6.840	7.124
4	6	0	421	0	0	0	0	0	3.283	0	0	0	0	0	3.714	3.758
5.662	17	0	12	0	0	0	0	0	1.846	7	9	0	0	0	7.553	9.999
35.929	983	20.892	0	0	3.569	0	0	0	146	0	10.735	0	0	0	72.254	73.989
34.588	0	20.838	0	0	0	0	0	0	0	0	10.735	0	0	0	66.161	67.896
1.002	0	0	0	0	0	0	0	0	146	0	0	0	0	0	1.148	1.148
0	0	54	0	0	3.569	0	0	0	0	0	0	0	0	0	3.623	3.623
339	983	0	0	0	0	0	0	0	0	0	0	0	0	0	1.323	1.323
1.001	2.885	0	837	0	3	1.288	8.209	0	18.008	4.220	0	8.078	0	103	44.632	88.716
65	20	0	12	0	0	0	72	0	598	178	0	3.582	0	0	4.527	5.033
35	29	0	26	0	0	1.288	7.750	0	1.714	3.492	0	42	0	103	14.479	17.401
8	23	0	4	0	1	0	96	0	678	509	0	150	0	0	1.470	1.555
366	200	0	22	0	1	0	60	0	1.027	0	0	525	0	0	2.201	3.335
16	1.177	0	31	0	0	0	231	0	3.308	9	0	734	0	0	5.507	7.074
12	377	0	176	0	0	0	0	0	2.014	20	0	2.158	0	0	4.758	7.440
191	318	0	126	0	0	0	0	0	2.342	0	0	88	0	0	3.065	22.992
6	55	0	29	0	0	0	0	0	707	0	0	0	0	0	799	1.201
115	390	0	45	0	0	0	0	0	1.641	0	0	0	0	0	2.191	10.195
31	125	0	169	0	0	0	0	0	342	0	0	270	0	0	936	4.724
154	170	0	196	0	1	0	0	0	3.636	13	0	529	0	0	4.700	7.767
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
257	25	338	0	-1	-96	-7	0	0	0	0	-10	0	300	0	807	466

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2012 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	107.258	25.574	2.517	0	3.881	35.719	25.683	45.117	11.220	256.969
IMPORTS	17.855	11.602	3.313	7.841	3.854	0	0	0	0	44.465
STOCK VARIATIONS	543	0	108	185	-1.047	0	0	0	31	-181
TOTAL SUPPLY	125.656	37.176	5.938	8.026	6.688	35.719	25.683	45.117	11.250	301.253
EXPORTS	-27.608	0	0	0	0	0	0	0	0	-27.608
NON-UTILIZED	0	-1.430	0	0	0	0	0	0	0	-1.430
REINJECTION	0	-3.147	0	0	0	0	0	0	0	-3.147
GROSS DOMESTIC SUPPLY	98.048	32.598	5.938	8.026	6.688	35.719	25.683	45.117	11.250	269.067
TOTAL TRANSFORMATION	-98.066	-14.022	-2.341	-8.022	-6.688	-35.719	-9.213	-16.741	-5.314	-196.127
OIL REFINERIES	-97.676	0	0	0	0	0	0	0	-3.771	-101.447
NATURAL GAS PLANTS	0	-3.187	0	0	0	0	0	0	918	-2.269
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-8.022	0	0	0	0	0	-8.022
NUCLEAR CYCLE	0	0	0	0	-6.688	0	0	0	0	-6.688
PUBLIC SERVICE POWER PLANTS	0	-6.700	-2.180	0	0	-33.960	-45	0	-520	-43.405
SELF-PRODUCERS POWER PLANTS	0	-2.353	-161	0	0	-1.760	-258	-4.427	-2.613	-11.573
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-8.909	0	0	-8.909
DISTILLERIES	0	0	0	0	0	0	0	-12.314	0	-12.314
OTHER TRANSFORMATIONS	-390	-1.781	0	0	0	0	0	0	672	-1.500
LOSSES IN DISTRIBUTION AND STORAGE	0	-336	-8	-4	0	0	0	0	0	-348
FINAL CONSUMPTION	0	18.247	3.589	0	0	0	16.470	28.376	5.936	72.618
NON-ENERGY FINAL CONSUMPTION	0	898	0	0	0	0	0	0	0	898
ENERGY FINAL CONSUMPTION	0	17.349	3.589	0	0	0	16.470	28.376	5.936	71.720
ENERGY SECTOR	0	5.258	0	0	0	0	0	10.508	0	15.766
RESIDENTIAL	0	296	0	0	0	0	6.472	0	0	6.768
COMMERCIAL	0	193	0	0	0	0	96	0	0	289
PUBLIC	0	45	0	0	0	0	0	0	0	45
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	2.421	0	0	2.421
TRANSPORTATION - TOTAL	0	1.709	0	0	0	0	0	0	0	1.709
HIGHWAYS	0	1.709	0	0	0	0	0	0	0	1.709
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.849	3.589	0	0	0	7.480	17.868	5.936	44.723
CEMENT	0	55	108	0	0	0	81	0	356	600
PIG-IRON AND STEEL	0	1.067	1.854	0	0	0	0	0	0	2.922
IRON-ALLOYS	0	3	0	0	0	0	81	0	0	83
MINING AND PELLETIZATION	0	673	393	0	0	0	0	0	0	1.066
NON-FERROUS AND OTHER METALS	0	857	751	0	0	0	0	0	0	1.607
CHEMICAL	0	2.218	164	0	0	0	47	0	90	2.519
FOOD AND BEVERAGES	0	720	68	0	0	0	2.319	17.844	11	20.963
TEXTILES	0	317	0	0	0	0	73	0	0	390
PAPER AND PULP	0	769	124	0	0	0	1.532	24	5.417	7.865
CERAMICS	0	1.314	35	0	0	0	2.458	0	62	3.869
OTHERS	0	1.856	94	0	0	0	889	0	0	2.839
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	19	7	0	0	0	0	0	0	0	27

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	256.969
8.241	217	2.915	1.744	5.380	1.538	0	1.098	6.522	3.502	0	291	3.230	1.027	0	35.707	80.173
320	73	1.010	-60	57	22	0	226	-8.923	0	0	-250	-26	-31	0	-7.583	-7.765
8.561	290	3.925	1.684	5.437	1.560	0	1.324	-2.401	3.502	0	42	3.204	996	0	28.124	329.377
-671	-8.711	-116	-19	0	-2.256	0	0	0	-40	0	-1.602	-278	-241	0	-13.934	-41.543
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.430
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.147
7.890	-8.421	3.809	1.665	5.437	-696	0	1.324	-2.401	3.462	0	-1.560	2.926	755	0	14.190	283.257
38.301	12.483	20.685	6.346	1.856	4.477	1.471	6.681	2.401	47.515	4.722	12.203	8.523	6.731	216	174.610	-21.517
38.915	13.846	19.905	5.099	4.951	4.477	0	0	0	0	0	0	7.947	6.015	0	101.155	-291
0	0	140	1.057	0	0	0	0	0	0	0	0	0	882	0	2.079	-190
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.735	6.681	0	0	0	0	-835	0	225	7.806	-216
0	0	0	0	0	0	0	0	6.581	0	0	0	0	0	0	6.581	-107
-2.261	-1.053	0	0	0	0	0	0	-4.180	40.804	0	0	-53	0	0	33.258	-10.148
-391	-293	0	0	0	-265	0	0	6.710	0	0	0	-576	0	-9	5.176	-6.397
0	0	0	0	0	0	0	0	0	0	4.722	0	0	0	0	4.722	-4.187
0	0	0	0	0	0	0	0	0	0	0	12.203	0	0	0	12.203	-111
2.038	-17	639	190	-3.095	0	0	0	0	0	0	0	2.040	-165	0	1.630	130
0	0	0	0	0	0	0	-7	0	-8.116	-124	-105	-14	0	0	-8.366	-8.714
46.191	3.970	24.512	8.023	7.323	3.784	1.430	7.999	0	42.861	4.598	10.522	11.482	7.509	216	180.419	253.037
0	0	0	0	7.323	15	0	0	0	0	0	606	405	7.509	116	15.974	16.873
46.191	3.970	24.512	8.023	0	3.769	1.430	7.999	0	42.861	4.598	9.916	11.077	0	99	164.445	236.165
1.189	350	0	0	0	0	193	0	2.266	0	0	0	3.104	0	0	7.102	22.868
0	0	0	6.393	0	5	0	0	0	10.118	478	0	0	0	0	16.993	23.761
9	19	0	438	0	0	0	0	0	6.863	90	0	0	0	0	7.420	7.709
7	8	0	256	0	0	0	0	0	3.424	0	0	0	0	0	3.696	3.741
5.889	21	0	11	0	0	0	0	0	2.001	7	10	0	0	0	7.940	10.362
38.038	938	24.512	0	0	3.762	0	0	0	162	0	9.906	0	0	0	77.319	79.027
36.652	0	24.454	0	0	0	0	0	0	0	0	9.906	0	0	0	71.012	72.721
1.027	0	0	0	0	0	0	0	0	162	0	0	0	0	0	1.190	1.190
0	0	58	0	0	3.762	0	0	0	0	0	0	0	0	0	3.820	3.820
359	938	0	0	0	0	0	0	0	0	0	0	0	0	0	1.297	1.297
1.057	2.633	0	924	0	3	1.237	7.999	0	18.027	4.022	0	7.973	0	99	43.974	88.697
70	17	0	9	0	0	0	75	0	645	142	0	3.578	0	0	4.535	5.135
38	29	0	20	0	0	1.237	7.495	0	1.696	3.338	0	40	0	99	13.992	16.914
8	46	0	21	0	1	0	93	0	666	499	0	147	0	0	1.481	1.565
384	191	0	31	0	1	0	57	0	1.011	0	0	498	0	0	2.174	3.240
12	1.163	0	32	0	0	0	279	0	3.255	10	0	699	0	0	5.450	7.057
13	328	0	190	0	0	0	0	0	2.023	19	0	2.145	0	0	4.718	7.237
212	271	0	167	0	0	0	0	0	2.423	0	0	87	0	0	3.160	24.123
8	45	0	28	0	0	0	0	0	645	0	0	0	0	0	726	1.116
124	328	0	50	0	0	0	0	0	1.636	0	0	0	0	0	2.138	10.003
28	113	0	161	0	0	0	0	0	359	0	0	275	0	0	935	4.803
162	101	0	215	0	1	0	0	0	3.671	13	0	503	0	0	4.665	7.504
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	-92	19	12	29	3	-41	0	0	0	0	-15	47	23	0	-15	12

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2013 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	104.762	27.969	3.298	0	2.375	33.625	24.580	49.304	12.179	258.092
IMPORTS	20.373	14.926	4.206	7.838	601	0	0	0	0	47.944
STOCK VARIATIONS	-5	0	-143	-52	2.050	0	0	0	-28	1.822
TOTAL SUPPLY	125.130	42.895	7.361	7.786	5.026	33.625	24.580	49.304	12.151	307.858
EXPORTS	-20.511	0	0	0	0	0	0	0	0	-20.511
NON-UTILIZED	0	-1.294	0	0	0	0	0	0	0	-1.294
REINJECTION	0	-3.810	0	0	0	0	0	0	0	-3.810
GROSS DOMESTIC SUPPLY	104.619	37.792	7.361	7.786	5.026	33.625	24.580	49.304	12.151	282.244
TOTAL TRANSFORMATION	-105.124	-18.859	-3.724	-7.782	-5.026	-33.625	-8.398	-19.824	-5.802	-208.164
OIL REFINERIES	-105.085	0	0	0	0	0	0	0	-3.523	-108.607
NATURAL GAS PLANTS	0	-3.258	0	0	0	0	0	974	0	-2.284
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-7.782	0	0	0	0	0	-7.782
NUCLEAR CYCLE	0	0	0	0	-5.026	0	0	0	0	-5.026
PUBLIC SERVICE POWER PLANTS	0	-11.575	-3.566	0	0	-31.729	-64	0	-625	-47.559
SELF-PRODUCERS POWER PLANTS	0	-2.318	-158	0	0	-1.897	-270	-5.263	-2.892	-12.799
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-8.063	0	0	-8.063
DISTILLERIES	0	0	0	0	0	0	0	-14.561	0	-14.561
OTHER TRANSFORMATIONS	-39	-1.708	0	0	0	0	0	0	264	-1.483
LOSSES IN DISTRIBUTION AND STORAGE	0	-403	-6	-4	0	0	0	0	0	-415
FINAL CONSUMPTION	0	18.592	3.630	0	0	0	16.182	29.479	6.349	74.233
NON-ENERGY FINAL CONSUMPTION	0	836	0	0	0	0	0	0	0	836
ENERGY FINAL CONSUMPTION	0	17.756	3.630	0	0	0	16.182	29.479	6.349	73.397
ENERGY SECTOR	0	5.824	0	0	0	0	0	12.241	0	18.065
RESIDENTIAL	0	321	0	0	0	0	5.741	0	0	6.063
COMMERCIAL	0	181	0	0	0	0	96	0	0	277
PUBLIC	0	45	0	0	0	0	0	0	0	45
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	2.639	0	0	2.639
TRANSPORTATION - TOTAL	0	1.647	0	0	0	0	0	0	0	1.647
HIGHWAYS	0	1.647	0	0	0	0	0	0	0	1.647
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.737	3.630	0	0	0	7.706	17.238	6.349	44.660
CEMENT	0	31	133	0	0	0	83	0	368	615
PIG-IRON AND STEEL	0	1.020	1.808	0	0	0	0	0	0	2.828
IRON-ALLOYS	0	22	0	0	0	0	75	0	0	97
MINING AND PELLETIZATION	0	634	393	0	0	0	0	0	0	1.026
NON-FERROUS AND OTHER METALS	0	942	747	0	0	0	0	0	0	1.689
CHEMICAL	0	2.037	152	0	0	0	50	0	91	2.330
FOOD AND BEVERAGES	0	688	69	0	0	0	2.273	17.213	11	20.253
TEXTILES	0	312	0	0	0	0	71	0	0	384
PAPER AND PULP	0	809	124	0	0	0	1.616	25	5.815	8.388
CERAMICS	0	1.354	39	0	0	0	2.631	0	65	4.088
OTHERS	0	1.890	166	0	0	0	907	0	0	2.962
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	504	62	0	0	0	0	0	0	0	567

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	258.092
8.501	92	1.744	2.060	5.261	1.467	0	1.308	3.334	3.467	0	68	3.286	1.063	0	31.651	79.595
-130	35	1.032	4	125	34	0	24	-4.253	0	0	-228	6	64	0	-3.288	-1.465
8.371	127	2.776	2.065	5.386	1.500	0	1.332	-920	3.467	0	-160	3.292	1.127	0	28.363	336.222
-873	-8.483	-267	-55	0	-2.383	0	0	0	0	0	-1.543	-352	-350	0	-14.307	-34.817
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.294
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.810
7.498	-8.356	2.509	2.010	5.386	-882	0	1.332	-920	3.467	0	-1.703	2.939	777	0	14.057	296.301
41.519	12.436	21.955	6.325	1.176	4.578	1.429	6.481	920	49.072	4.273	14.368	9.054	7.078	210	180.874	-27.291
42.220	14.723	22.104	4.946	4.114	4.578	0	0	0	0	0	0	8.908	6.184	0	107.778	-830
0	0	0	1.193	0	0	0	0	0	0	0	0	0	906	0	2.099	-185
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.683	6.481	0	0	0	0	-818	0	218	7.564	-218
0	0	0	0	0	0	0	0	4.946	0	0	0	0	0	0	4.946	-80
-2.349	-2.016	0	0	0	0	0	0	-4.026	41.665	0	0	-75	0	0	33.198	-14.360
-301	-271	0	0	0	0	-255	0	7.407	0	0	0	-747	0	-8	5.826	-6.974
0	0	0	0	0	0	0	0	0	4.273	0	0	0	0	0	4.273	-3.790
0	0	0	0	0	0	0	0	0	0	14.368	0	0	0	0	14.368	-193
1.949	0	-148	185	-2.938	0	0	0	0	0	0	1.786	-11	0	0	822	-661
0	0	0	0	0	0	0	-6	0	-8.166	-112	-123	-14	0	0	-8.422	-8.837
48.797	4.043	24.451	8.314	6.574	3.623	1.387	7.807	0	44.373	4.161	12.566	11.886	7.794	210	185.985	260.218
0	0	0	0	6.574	8	0	0	0	0	0	666	339	7.794	121	15.502	16.338
48.797	4.043	24.451	8.314	0	3.614	1.387	7.807	0	44.373	4.161	11.900	11.547	0	89	170.483	243.880
1.307	354	0	78	0	0	187	0	0	2.555	0	0	3.596	0	0	8.078	26.143
0	0	0	6.521	0	4	0	0	0	10.737	402	0	0	0	0	17.663	23.726
6	14	0	420	0	0	0	0	0	7.255	90	0	0	0	0	7.785	8.062
5	11	0	257	0	0	0	0	0	3.553	0	0	0	0	0	3.826	3.871
5.888	29	0	12	0	0	0	0	0	2.045	8	11	0	0	0	7.993	10.632
40.437	957	24.451	0	0	3.608	0	0	0	162	0	11.889	0	0	0	81.505	83.152
39.077	0	24.393	0	0	0	0	0	0	0	0	11.889	0	0	0	75.359	77.007
1.019	0	0	0	0	0	0	0	0	162	0	0	0	0	0	1.181	1.181
0	0	58	0	0	3.608	0	0	0	0	0	0	0	0	0	3.667	3.667
341	957	0	0	0	0	0	0	0	0	0	0	0	0	0	1.298	1.298
1.154	2.677	0	1.027	0	2	1.200	7.807	0	18.066	3.661	0	7.950	0	89	43.634	88.294
68	17	0	12	0	0	0	79	0	673	128	0	3.696	0	0	4.672	5.287
37	40	0	19	0	0	1.200	7.309	0	1.691	3.021	0	40	0	89	13.447	16.274
7	62	0	23	0	1	0	84	0	626	469	0	137	0	0	1.407	1.505
396	203	0	38	0	1	0	59	0	1.018	0	0	506	0	0	2.220	3.247
9	1.148	0	44	0	0	0	276	0	3.104	11	0	654	0	0	5.246	6.935
23	424	0	192	0	0	0	0	0	1.962	19	0	2.035	0	0	4.655	6.985
260	198	0	186	0	0	0	0	0	2.355	0	0	85	0	0	3.085	23.338
6	46	0	31	0	0	0	0	0	635	0	0	0	0	0	717	1.101
137	304	0	60	0	0	0	0	0	1.684	0	0	0	0	0	2.186	10.574
24	125	0	163	0	0	0	0	0	380	0	0	289	0	0	981	5.069
188	111	0	257	0	0	0	0	0	3.939	13	0	508	0	0	5.016	7.979
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-220	-37	-13	-20	12	-73	-41	0	0	0	0	24	-93	-62	0	-523	44

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2014 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	116.705	31.661	3.059	0	681	32.116	24.936	49.273	14.191	272.622
IMPORTS	18.082	17.001	5.306	8.110	2.883	0	0	0	0	51.383
STOCK VARIATIONS	25	0	-89	-52	-1.818	0	0	0	-24	-1.958
TOTAL SUPPLY	134.812	48.662	8.276	8.059	1.747	32.116	24.936	49.273	14.167	322.047
EXPORTS	-26.800	0	0	0	0	0	0	0	0	-26.800
NON-UTILIZED	0	-1.601	0	0	0	0	0	0	0	-1.601
REINJECTION	0	-5.689	0	0	0	0	0	0	0	-5.689
GROSS DOMESTIC SUPPLY	108.012	41.373	8.276	8.059	1.747	32.116	24.936	49.273	14.167	287.957
TOTAL TRANSFORMATION	-107.697	-22.134	-4.344	-8.054	-1.747	-32.116	-8.264	-20.662	-7.549	-212.566
OIL REFINERIES	-107.285	0	0	0	0	0	0	0	-3.392	-110.676
NATURAL GAS PLANTS	0	-3.629	0	0	0	0	0	0	556	-3.073
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-8.054	0	0	0	0	0	-8.054
NUCLEAR CYCLE	0	0	0	0	-1.747	0	0	0	0	-1.747
PUBLIC SERVICE POWER PLANTS	0	-14.219	-4.140	0	0	-30.216	-68	0	-1.166	-49.809
SELF-PRODUCERS POWER PLANTS	0	-2.581	-203	0	0	-1.900	-309	-5.714	-3.697	-14.404
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-7.887	0	0	-7.887
DISTILLERIES	0	0	0	0	0	0	0	-14.948	0	-14.948
OTHER TRANSFORMATIONS	-412	-1.705	0	0	0	0	0	0	150	-1.967
LOSSES IN DISTRIBUTION AND STORAGE	0	-458	-6	-4	0	0	0	0	0	-470
FINAL CONSUMPTION	0	18.822	3.942	0	0	0	16.672	28.612	6.618	74.666
NON-ENERGY FINAL CONSUMPTION	0	684	0	0	0	0	0	0	0	684
ENERGY FINAL CONSUMPTION	0	18.138	3.942	0	0	0	16.672	28.612	6.618	73.981
ENERGY SECTOR	0	6.307	0	0	0	0	0	12.466	0	18.773
RESIDENTIAL	0	310	0	0	0	0	6.109	0	0	6.419
COMMERCIAL	0	179	0	0	0	0	97	0	0	276
PUBLIC	0	40	0	0	0	0	0	0	0	40
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	2.682	0	0	2.682
TRANSPORTATION - TOTAL	0	1.594	0	0	0	0	0	0	0	1.594
HIGHWAYS	0	1.594	0	0	0	0	0	0	0	1.594
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.708	3.942	0	0	0	7.785	16.146	6.618	44.199
CEMENT	0	25	123	0	0	0	79	0	364	591
PIG-IRON AND STEEL	0	1.036	2.053	0	0	0	0	0	0	3.088
IRON-ALLOYS	0	20	0	0	0	0	70	0	0	90
MINING AND PELLETIZATION	0	707	370	0	0	0	0	0	0	1.077
NON-FERROUS AND OTHER METALS	0	896	783	0	0	0	0	0	0	1.679
CHEMICAL	0	2.022	169	0	0	0	49	0	89	2.328
FOOD AND BEVERAGES	0	736	66	0	0	0	2.250	16.120	11	19.183
TEXTILES	0	248	0	0	0	0	69	0	0	317
PAPER AND PULP	0	848	117	0	0	0	1.713	25	6.088	8.791
CERAMICS	0	1.339	50	0	0	0	2.657	0	66	4.112
OTHERS	0	1.832	212	0	0	0	898	0	0	2.942
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	-315	42	16	0	0	0	0	0	0	-256

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	272.622
9.561	382	1.626	2.277	5.238	1.236	0	1.254	1.022	2.904	0	511	3.343	1.133	0	30.487	81.870
-180	-54	501	-10	-66	-57	0	-68	1.266	0	0	-848	-2	5	0	487	-1.471
9.382	327	2.127	2.266	5.172	1.179	0	1.187	2.289	2.904	0	-337	3.342	1.138	0	30.974	353.021
-794	-8.110	-281	-11	0	-2.506	0	0	0	0	0	-767	-385	-530	0	-13.384	-40.184
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.601
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5.689
8.588	-7.783	1.846	2.255	5.172	-1.327	0	1.187	2.289	2.904	0	-1.104	2.957	607	0	17.590	305.547
41.416	11.923	23.848	6.162	865	5.007	1.364	6.552	-2.289	50.766	4.204	14.842	9.282	7.502	238	181.683	-30.883
42.515	16.126	22.303	4.651	3.904	5.007	0	0	0	0	0	0	9.027	6.822	0	110.355	-322
0	0	616	1.347	0	0	0	0	0	0	0	0	0	912	0	2.875	-198
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.703	6.552	0	0	0	0	-841	0	248	7.662	-393
0	0	0	0	0	0	0	1.719	0	0	0	0	0	0	0	1.719	-28
-2.912	-3.396	0	0	0	0	0	0	-4.008	42.683	0	0	-79	0	0	32.288	-17.520
-379	-229	0	0	0	0	-339	0	0	8.083	0	0	-609	0	-10	6.518	-7.886
0	0	0	0	0	0	0	0	0	0	4.204	0	0	0	0	4.204	-3.683
0	0	0	0	0	0	0	0	0	0	0	14.842	0	0	0	14.842	-106
2.193	-578	929	164	-3.039	0	0	0	0	0	0	0	1.783	-232	0	1.221	-746
0	0	0	0	0	0	0	-6	0	-7.888	-62	-58	-110	0	0	-8.124	-8.594
49.935	4.115	25.740	8.363	6.203	3.661	1.387	7.733	0	45.782	4.142	13.602	12.113	8.095	238	191.108	265.774
0	0	0	0	6.203	6	0	0	0	0	0	583	301	8.095	146	15.333	16.018
49.935	4.115	25.740	8.363	0	3.655	1.387	7.733	0	45.782	4.142	13.019	11.813	0	92	175.775	249.756
1.513	311	0	5	0	0	187	0	0	2.679	0	0	3.985	0	0	8.680	27.453
0	0	0	6.535	0	3	0	0	0	11.373	478	0	0	0	0	18.390	24.808
7	22	0	442	0	0	0	0	0	7.792	91	0	0	0	0	8.354	8.630
4	11	0	257	0	0	0	0	0	3.684	0	0	0	0	0	3.956	3.996
6.184	24	0	2	0	0	0	0	0	2.285	8	11	0	0	0	8.514	11.196
41.019	1.133	25.740	0	0	3.651	0	0	0	170	0	13.008	0	0	0	84.721	86.315
39.661	0	25.682	0	0	0	0	0	0	0	0	13.008	0	0	0	78.351	79.945
1.006	0	0	0	0	0	0	0	0	170	0	0	0	0	0	1.176	1.176
0	0	58	0	0	3.651	0	0	0	0	0	0	0	0	0	3.709	3.709
352	1.133	0	0	0	0	0	0	0	0	0	0	0	0	0	1.485	1.485
1.208	2.614	0	1.121	0	2	1.200	7.733	0	17.799	3.564	0	7.828	0	92	43.160	87.358
72	14	0	18	0	0	0	77	0	681	122	0	3.763	0	0	4.747	5.338
35	35	0	26	0	0	1.200	7.237	0	1.671	2.962	0	41	0	92	13.299	16.387
7	86	0	24	0	0	0	78	0	582	436	0	127	0	0	1.341	1.431
424	166	0	28	0	1	0	61	0	1.057	0	0	544	0	0	2.281	3.358
9	1.200	0	42	0	0	0	279	0	2.798	14	0	595	0	0	4.937	6.616
20	323	0	217	0	0	0	0	0	1.922	18	0	1.880	0	0	4.380	6.708
249	177	0	220	0	0	0	0	0	2.324	0	0	84	0	0	3.055	22.238
5	34	0	40	0	0	0	0	0	622	0	0	0	0	0	700	1.017
164	365	0	73	0	0	0	0	0	1.780	0	0	0	0	0	2.382	11.173
26	102	0	171	0	0	0	0	0	376	0	0	292	0	0	967	5.079
198	111	0	262	0	0	0	0	0	3.985	13	0	503	0	0	5.072	8.014
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-69	-25	46	-55	166	-19	23	0	0	0	0	-78	-15	-15	0	-40	-297

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2015 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	126.127	34.871	3.066	0	512	30.938	24.519	50.424	16.013	286.471
IMPORTS	15.377	16.198	5.638	7.625	2.159	0	0	0	0	46.997
STOCK VARIATIONS	-1.165	0	-337	56	-1.701	0	0	0	8	-3.139
TOTAL SUPPLY	140.339	51.069	8.367	7.681	971	30.938	24.519	50.424	16.021	330.329
EXPORTS	-38.050	0	0	0	0	0	0	0	0	-38.050
NON-UTILIZED	0	-1.377	0	0	0	0	0	0	0	-1.377
REINJECTION	0	-8.722	0	0	0	0	0	0	0	-8.722
GROSS DOMESTIC SUPPLY	102.288	40.971	8.367	7.681	971	30.938	24.519	50.424	16.021	282.180
TOTAL TRANSFORMATION	-101.841	-21.737	-4.503	-7.676	-971	-30.938	-7.849	-21.757	-9.008	-206.278
OIL REFINERIES	-99.972	0	0	0	0	0	0	0	-3.783	-103.755
NATURAL GAS PLANTS	0	-3.727	0	0	0	0	0	0	245	-3.482
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-7.676	0	0	0	0	0	-7.676
NUCLEAR CYCLE	0	0	0	0	-971	0	0	0	0	-971
PUBLIC SERVICE POWER PLANTS	0	-13.704	-4.265	0	0	-29.126	-66	0	-2.001	-49.162
SELF-PRODUCERS POWER PLANTS	0	-2.706	-238	0	0	-1.812	-354	-5.959	-3.881	-14.951
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-7.429	0	0	-7.429
DISTILLERIES	0	0	0	0	0	0	0	-15.798	0	-15.798
OTHER TRANSFORMATIONS	-1.869	-1.600	0	0	0	0	0	0	412	-3.056
LOSSES IN DISTRIBUTION AND STORAGE	0	-464	-7	-5	0	0	0	0	0	-477
FINAL CONSUMPTION	0	18.765	3.855	0	0	0	16.670	28.667	7.013	74.971
NON-ENERGY FINAL CONSUMPTION	0	685	0	0	0	0	0	0	0	685
ENERGY FINAL CONSUMPTION	0	18.080	3.855	0	0	0	16.670	28.667	7.013	74.286
ENERGY SECTOR	0	6.112	0	0	0	0	0	13.155	0	19.266
RESIDENTIAL	0	312	0	0	0	0	6.334	0	0	6.645
COMMERCIAL	0	114	0	0	0	0	94	0	0	208
PUBLIC	0	43	0	0	0	0	0	0	0	43
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	2.814	0	0	2.814
TRANSPORTATION - TOTAL	0	1.553	0	0	0	0	0	0	0	1.553
HIGHWAYS	0	1.553	0	0	0	0	0	0	0	1.553
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.947	3.855	0	0	0	7.428	15.512	7.013	43.756
CEMENT	0	12	70	0	0	0	70	0	330	482
PIG-IRON AND STEEL	0	1.223	2.124	0	0	0	0	0	0	3.348
IRON-ALLOYS	0	6	0	0	0	0	63	0	0	69
MINING AND PELLETIZATION	0	657	417	0	0	0	0	0	0	1.075
NON-FERROUS AND OTHER METALS	0	593	689	0	0	0	0	0	0	1.282
CHEMICAL	0	2.222	172	0	0	0	48	0	85	2.527
FOOD AND BEVERAGES	0	834	65	0	0	0	2.171	15.485	10	18.565
TEXTILES	0	215	0	0	0	0	62	0	0	277
PAPER AND PULP	0	805	86	0	0	0	1.833	27	6.529	9.279
CERAMICS	0	1.324	62	0	0	0	2.312	0	59	3.757
OTHERS	0	2.057	168	0	0	0	871	0	0	3.096
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	-447	-4	-3	0	0	0	0	0	0	-454

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286.471
5.885	339	2.260	1.950	6.172	1.129	0	1.584	2.729	2.978	0	432	2.586	1.160	0	29.204	76.201
313	-28	-3	-2	66	26	0	44	155	0	0	899	-24	34	0	1.481	-1.658
6.199	312	2.257	1.948	6.238	1.155	0	1.627	2.885	2.978	0	1.331	2.562	1.194	0	30.685	361.014
-651	-7.932	-474	-17	0	-2.440	0	0	0	-19	0	-1.108	-385	-627	0	-13.654	-51.704
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.377
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8.722
5.548	-7.621	1.783	1.931	6.238	-1.285	0	1.627	2.885	2.959	0	223	2.176	567	0	17.031	299.211
42.511	10.876	21.518	6.367	688	4.656	1.337	6.265	-2.885	49.988	3.960	15.705	9.447	6.181	228	176.840	-29.439
42.248	14.188	19.864	4.582	3.545	4.656	0	0	0	0	0	0	9.127	5.134	0	103.346	-409
0	0	732	1.621	0	0	0	0	0	0	0	0	0	921	0	3.273	-208
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.635	6.265	0	0	0	0	-802	0	237	7.334	-341
0	0	0	0	0	0	0	0	955	0	0	0	0	0	0	955	-15
-2.031	-3.055	0	0	0	0	0	0	-3.840	41.684	0	0	-75	0	0	32.683	-16.479
-399	-257	0	0	0	0	-298	0	8.304	0	0	0	-623	0	-8	6.718	-8.232
0	0	0	0	0	0	0	0	0	0	3.960	0	0	0	0	3.960	-3.469
0	0	0	0	0	0	0	0	0	0	0	15.705	0	0	0	15.705	-93
2.692	0	922	165	-2.857	0	0	0	0	0	0	0	1.819	125	0	2.866	-191
0	0	0	0	0	0	0	-6	0	-8.001	-59	-54	-96	0	0	-8.215	-8.692
48.033	3.222	23.306	8.124	6.929	3.615	1.336	7.886	0	44.946	3.901	15.927	11.528	6.731	228	185.713	260.684
0	0	0	0	6.929	3	0	0	0	0	0	490	267	6.731	134	14.552	15.237
48.033	3.222	23.306	8.124	0	3.613	1.336	7.886	0	44.946	3.901	15.437	11.261	0	95	171.160	245.446
1.338	244	0	29	0	0	188	0	2.742	0	0	3.956	0	0	0	8.497	27.763
0	0	0	6.541	0	3	0	0	0	11.289	474	0	0	0	0	18.306	24.951
4	27	0	396	0	0	0	0	0	7.858	88	0	0	0	0	8.374	8.582
3	9	0	257	0	0	0	0	0	3.668	0	0	0	0	0	3.937	3.980
6.327	14	0	2	0	0	0	0	0	2.310	8	13	0	0	0	8.673	11.487
39.244	724	23.306	0	0	3.609	0	0	0	177	0	15.424	0	0	0	82.484	84.037
38.033	0	23.257	0	0	0	0	0	0	0	0	15.424	0	0	0	76.714	78.267
971	0	0	0	0	0	0	0	0	177	0	0	0	0	0	1.148	1.148
0	0	49	0	0	3.609	0	0	0	0	0	0	0	0	0	3.658	3.658
240	724	0	0	0	0	0	0	0	0	0	0	0	0	0	965	965
1.117	2.205	0	898	0	1	1.148	7.886	0	16.902	3.331	0	7.305	0	95	40.889	84.645
60	9	0	17	0	0	0	70	0	618	109	0	3.386	0	0	4.268	4.750
29	0	0	25	0	0	1.148	7.441	0	1.609	2.788	0	40	0	95	13.176	16.524
6	8	0	22	0	0	0	70	0	524	392	0	114	0	0	1.137	1.206
395	166	0	22	0	1	0	60	0	1.095	0	0	533	0	0	2.271	3.346
10	1.238	0	35	0	0	0	245	0	2.315	11	0	510	0	0	4.364	5.646
18	174	0	80	0	0	0	0	0	1.940	18	0	1.949	0	0	4.180	6.706
239	119	0	228	0	0	0	0	0	2.242	0	0	82	0	0	2.910	21.475
2	19	0	37	0	0	0	0	0	560	0	0	0	0	0	618	895
173	341	0	72	0	0	0	0	0	1.864	0	0	0	0	0	2.450	11.729
24	59	0	173	0	0	0	0	0	339	0	0	262	0	0	856	4.614
162	71	0	188	0	0	0	0	0	3.797	12	0	427	0	0	4.658	7.754
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-25	-33	5	-174	3	244	0	0	0	0	0	53	0	-17	0	57	-397

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2016 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	130.373	37.610	2.636	0	0	32.758	23.095	50.658	17.589	294.720
IMPORTS	8.009	10.320	4.992	7.917	4.173	0	0	0	0	35.411
STOCK VARIATIONS	-501	0	-150	-222	648	0	0	0	-2	-227
TOTAL SUPPLY	137.881	47.931	7.478	7.695	4.821	32.758	23.095	50.658	17.587	329.903
EXPORTS	-43.812	0	0	0	0	0	0	0	0	-43.812
NON-UTILIZED	0	-1.459	0	0	0	0	0	0	0	-1.459
REINJECTION	0	-10.903	0	0	0	0	0	0	0	-10.903
GROSS DOMESTIC SUPPLY	94.069	35.569	7.478	7.695	4.821	32.758	23.095	50.658	17.587	273.729
TOTAL TRANSFORMATION	-93.971	-16.463	-4.212	-7.691	-4.821	-32.758	-7.098	-20.868	-10.169	-198.050
OIL REFINERIES	-92.112	0	0	0	0	0	0	0	-4.437	-96.548
NATURAL GAS PLANTS	0	-3.992	0	0	0	0	0	0	640	-3.352
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-7.691	0	0	0	0	0	-7.691
NUCLEAR CYCLE	0	0	0	0	-4.821	0	0	0	0	-4.821
PUBLIC SERVICE POWER PLANTS	0	-8.740	-3.937	0	0	-30.917	-43	0	-3.026	-46.663
SELF-PRODUCERS POWER PLANTS	0	-2.663	-275	0	0	-1.841	-334	-6.109	-4.134	-15.356
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-6.721	0	0	-6.721
DISTILLERIES	0	0	0	0	0	0	0	-14.758	0	-14.758
OTHER TRANSFORMATIONS	-1.859	-1.068	0	0	0	0	0	0	788	-2.139
LOSSES IN DISTRIBUTION AND STORAGE	0	-387	-7	-4	0	0	0	0	0	-397
FINAL CONSUMPTION	0	18.868	3.258	0	0	0	15.997	29.791	7.418	75.331
NON-ENERGY FINAL CONSUMPTION	0	677	0	0	0	0	0	0	0	677
ENERGY FINAL CONSUMPTION	0	18.191	3.258	0	0	0	15.997	29.791	7.418	74.654
ENERGY SECTOR	0	6.559	0	0	0	0	0	12.237	0	18.796
RESIDENTIAL	0	357	0	0	0	0	6.064	0	0	6.420
COMMERCIAL	0	134	0	0	0	0	90	0	0	223
PUBLIC	0	43	0	0	0	0	0	0	0	43
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	2.618	0	0	2.618
TRANSPORTATION - TOTAL	0	1.593	0	0	0	0	0	0	0	1.593
HIGHWAYS	0	1.593	0	0	0	0	0	0	0	1.593
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.504	3.258	0	0	0	7.225	17.554	7.418	44.959
CEMENT	0	5	60	0	0	0	64	0	303	432
PIG-IRON AND STEEL	0	1.012	1.935	0	0	0	0	0	0	2.948
IRON-ALLOYS	0	0	0	0	0	0	62	0	0	62
MINING AND PELLETIZATION	0	410	247	0	0	0	0	0	0	656
NON-FERROUS AND OTHER METALS	0	564	707	0	0	0	0	0	0	1.271
CHEMICAL	0	2.198	126	0	0	0	43	0	81	2.447
FOOD AND BEVERAGES	0	833	51	0	0	0	2.150	17.524	10	20.567
TEXTILES	0	197	0	0	0	0	59	0	0	256
PAPER AND PULP	0	778	84	0	0	0	1.949	30	6.971	9.811
CERAMICS	0	1.325	37	0	0	0	2.081	0	54	3.496
OTHERS	0	2.183	11	0	0	0	819	0	0	3.012
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	-98	148	-1	0	0	0	0	0	0	50

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	294.720
7.182	62	2.934	2.111	6.630	786	0	764	2.180	3.551	0	434	1.790	1.042	0	29.468	64.878
-212	-2	-29	46	96	50	0	-16	-2.790	0	0	160	-8	64	0	-2.640	-2.867
6.970	61	2.904	2.157	6.727	835	0	748	-609	3.551	0	595	1.783	1.106	0	26.828	356.731
-706	-6.699	-561	0	0	-2.281	0	0	0	-45	0	-935	-406	-604	0	-12.237	-56.050
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.459
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10.903
6.264	-6.639	2.344	2.156	6.727	-1.446	0	748	-609	3.507	0	-341	1.377	503	0	14.590	288.319
40.012	9.689	21.703	6.239	-488	4.765	1.309	6.371	609	49.765	3.582	14.702	9.274	6.374	226	174.134	-23.916
38.575	11.506	20.467	4.492	2.452	4.765	0	0	0	0	0	0	8.810	5.243	0	96.311	-238
0	0	385	1.641	115	0	0	0	0	0	0	0	0	1.011	0	3.152	-200
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.569	6.371	0	0	0	0	-826	0	234	7.349	-342
0	0	0	0	0	0	0	0	4.744	0	0	0	0	0	0	4.744	-77
-834	-1.130	0	0	0	0	0	0	-4.134	41.294	0	0	-72	0	0	35.124	-11.539
-371	-229	0	0	0	0	-261	0	0	8.471	0	0	-528	0	-9	7.073	-8.283
0	0	0	0	0	0	0	0	0	0	3.582	0	0	0	0	3.582	-3.139
0	0	0	0	0	0	0	0	0	0	0	14.702	0	0	0	14.702	-56
2.642	-458	851	106	-3.054	0	0	0	0	0	0	1.890	121	0	0	2.097	-42
0	0	0	0	0	0	0	-5	0	-8.452	-53	-53	-96	0	0	-8.659	-9.056
46.247	3.100	24.225	8.267	6.258	3.310	1.320	7.114	0	44.820	3.529	14.332	10.552	6.917	226	180.216	255.547
0	0	0	0	6.258	3	0	0	0	0	0	443	311	6.917	143	14.075	14.752
46.247	3.100	24.225	8.267	0	3.307	1.320	7.114	0	44.820	3.529	13.889	10.241	0	82	166.142	240.795
975	203	0	1	0	0	206	0	0	2.559	0	0	3.567	0	0	7.511	26.307
0	0	0	6.573	0	2	0	0	0	11.424	429	0	0	0	0	18.429	24.849
8	17	0	396	0	0	0	0	0	7.643	84	0	0	0	0	8.149	8.372
3	1	0	258	0	0	0	0	0	3.726	0	0	0	0	0	3.988	4.031
5.240	11	0	18	0	0	0	0	0	2.428	8	9	0	0	0	7.714	10.332
38.957	515	24.225	0	0	3.303	0	0	0	173	0	13.880	0	0	0	81.054	82.647
37.781	0	24.181	0	0	0	0	0	0	0	0	13.880	0	0	0	75.842	77.436
952	0	0	0	0	0	0	0	0	173	0	0	0	0	0	1.125	1.125
0	0	44	0	0	3.303	0	0	0	0	0	0	0	0	0	3.347	3.347
224	515	0	0	0	0	0	0	0	0	0	0	0	0	0	740	740
1.064	2.353	0	1.020	0	1	1.114	7.114	0	16.868	3.009	0	6.673	0	82	39.298	84.257
55	5	0	14	0	0	0	49	0	548	99	0	3.048	0	0	3.819	4.250
25	2	0	59	0	0	1.114	6.728	0	1.484	2.490	0	37	0	82	12.022	14.969
6	51	0	20	0	0	0	69	0	518	381	0	112	0	0	1.156	1.218
385	152	0	41	0	1	0	40	0	1.016	0	0	423	0	0	2.058	2.714
10	1.244	0	31	0	0	0	228	0	2.331	10	0	523	0	0	4.378	5.648
16	326	0	185	0	0	0	0	0	1.900	17	0	1.851	0	0	4.295	6.743
242	87	0	241	0	0	0	0	0	2.314	0	0	80	0	0	2.964	23.531
2	15	0	31	0	0	0	0	0	537	0	0	0	0	0	586	842
183	368	0	68	0	0	0	0	0	1.952	0	0	0	0	0	2.571	12.382
19	48	0	163	0	0	0	0	0	322	0	0	223	0	0	776	4.272
120	56	0	166	0	0	0	0	0	3.946	12	0	376	0	0	4.675	7.687
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-29	50	178	-128	19	-10	11	0	0	0	0	23	-3	40	0	151	201

BRAZILIAN ENERGY BALANCE - CONSOLIDATED

2017 - 10³ toe

	PRIMARY SOURCES OF ENERGY									TOTAL PRIMARY ENERGY
	OIL	NATURAL GAS	STEAM COAL	METALLURGICAL COAL	URANIUM U ₃ O ₈	HYDRAULIC ENERGY	FIREWOOD	SUGAR-CANE PRODUCTS	OTHER PRIMARY SOURCES	
PRODUCTION	135.907	39.810	1.930	0	0	31.898	23.424	49.725	18.952	301.646
IMPORTS	7.491	9.434	5.335	8.559	5.206	0	0	0	0	36.025
STOCK VARIATIONS	225	0	65	74	518	0	0	0	0	882
TOTAL SUPPLY	143.622	49.243	7.331	8.633	5.724	31.898	23.424	49.725	18.952	338.552
EXPORTS	-53.882	0	0	0	0	0	0	0	0	-53.882
NON-UTILIZED	0	-1.346	0	0	0	0	0	0	0	-1.346
REINJECTION	0	-9.959	0	0	0	0	0	0	0	-9.959
GROSS DOMESTIC SUPPLY	89.741	37.938	7.331	8.633	5.724	31.898	23.424	49.725	18.952	273.366
TOTAL TRANSFORMATION	-89.623	-18.494	-3.810	-8.629	-5.724	-31.898	-6.737	-20.599	-11.312	-196.827
OIL REFINERIES	-87.239	0	0	0	0	0	0	0	-5.089	-92.328
NATURAL GAS PLANTS	0	-4.147	0	0	0	0	0	0	736	-3.411
GASIFICATION PLANTS	0	0	0	0	0	0	0	0	0	0
COKE PLANTS	0	0	0	-8.629	0	0	0	0	0	-8.629
NUCLEAR CYCLE	0	0	0	0	-5.724	0	0	0	0	-5.724
PUBLIC SERVICE POWER PLANTS	0	-10.351	-3.553	0	0	-30.299	-63	0	-3.891	-48.158
SELF-PRODUCERS POWER PLANTS	0	-2.764	-257	0	0	-1.599	-329	-6.145	-4.055	-15.150
CHARCOAL POWER PLANTS	0	0	0	0	0	0	-6.344	0	0	-6.344
DISTILLERIES	0	0	0	0	0	0	0	-14.454	0	-14.454
OTHER TRANSFORMATIONS	-2.384	-1.231	0	0	0	0	0	0	986	-2.629
LOSSES IN DISTRIBUTION AND STORAGE	0	-385	-7	-4	0	0	0	0	0	-396
FINAL CONSUMPTION	0	19.111	3.495	0	0	0	16.687	29.126	7.640	76.058
NON-ENERGY FINAL CONSUMPTION	0	685	0	0	0	0	0	0	0	685
ENERGY FINAL CONSUMPTION	0	18.426	3.495	0	0	0	16.687	29.126	7.640	75.373
ENERGY SECTOR	0	6.542	0	0	0	0	0	11.926	0	18.468
RESIDENTIAL	0	379	0	0	0	0	6.115	0	0	6.494
COMMERCIAL	0	92	0	0	0	0	90	0	0	182
PUBLIC	0	43	0	0	0	0	0	0	0	43
AGRICULTURAL AND LIVESTOCK	0	0	0	0	0	0	3.136	0	0	3.136
TRANSPORTATION - TOTAL	0	1.734	0	0	0	0	0	0	0	1.734
HIGHWAYS	0	1.734	0	0	0	0	0	0	0	1.734
RAILROADS	0	0	0	0	0	0	0	0	0	0
AIRWAYS	0	0	0	0	0	0	0	0	0	0
WATERWAYS	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL - TOTAL	0	9.635	3.495	0	0	0	7.346	17.200	7.640	45.316
CEMENT	0	4	64	0	0	0	60	0	286	414
PIG-IRON AND STEEL	0	1.161	2.124	0	0	0	0	0	0	3.284
IRON-ALLOYS	0	0	0	0	0	0	68	0	0	68
MINING AND PELLETIZATION	0	416	247	0	0	0	0	0	0	664
NON-FERROUS AND OTHER METALS	0	586	712	0	0	0	0	0	0	1.298
CHEMICAL	0	2.163	149	0	0	0	47	0	81	2.440
FOOD AND BEVERAGES	0	850	51	0	0	0	2.218	17.169	10	20.297
TEXTILES	0	223	0	0	0	0	61	0	0	285
PAPER AND PULP	0	812	96	0	0	0	1.985	31	7.208	10.132
CERAMICS	0	1.326	41	0	0	0	2.081	0	55	3.502
OTHERS	0	2.094	13	0	0	0	825	0	0	2.932
UNIDENTIFIED CONSUMPTION	0	0	0	0	0	0	0	0	0	0
AJUSTES	-117	52	-19	0	0	0	0	0	0	-84

SECONDARY SOURCES OF ENERGY

DIESEL OIL	FUEL OIL	GASOLINE	LPG	NAPHTHA	KEROSENE	COKE OVEN GAS	COAL COKE	URANIUM CONTAINED IN UO ₂	ELECTRICITY	CHARCOAL	ANHYDROUS AND HYDRATED ETHYL ALCOHOL	OTHER OIL SECONDARIES	NON-ENERGY OIL PRODUCTS	TAR	TOTAL SECONDARY ENERGY	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	301.646
10.986	72	3.456	2.012	8.160	473	0	504	3.063	3.139	0	975	1.939	1.136	0	35.915	71.940
-95	-64	-52	-67	41	-63	0	102	-4.593	0	0	-213	5	-11	0	-5.010	-4.128
10.891	8	3.405	1.945	8.201	411	0	606	-1.531	3.139	0	762	1.944	1.125	0	30.905	369.458
-582	-6.983	-368	-1	0	-2.234	0	0	0	-13	0	-728	-578	-682	0	-12.171	-66.053
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.346
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-9.959
10.309	-6.976	3.036	1.943	8.201	-1.823	0	606	-1.531	3.125	0	33	1.365	443	0	18.734	292.099
36.699	9.845	21.820	6.337	-1.069	5.075	1.388	7.148	1.531	50.545	3.382	14.404	9.589	5.859	255	172.806	-24.021
34.466	11.730	20.231	4.570	2.388	5.075	0	0	0	0	0	0	8.784	5.076	0	92.321	-6
0	0	474	1.649	115	0	0	0	0	0	0	0	0	934	0	3.172	-239
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1.761	7.148	0	0	0	0	-927	0	263	8.245	-384
0	0	0	0	0	0	0	0	5.632	0	0	0	0	0	0	5.632	-91
-631	-1.379	0	0	0	0	0	0	-4.102	42.222	0	0	-83	0	0	36.028	-12.130
-382	-237	0	0	0	0	-373	0	0	8.323	0	0	-520	0	-8	6.804	-8.347
0	0	0	0	0	0	0	0	0	0	3.382	0	0	0	0	3.382	-2.963
0	0	0	0	0	0	0	0	0	0	0	14.404	0	0	0	14.404	-50
3.245	-270	1.114	118	-3.571	0	0	0	0	0	0	2.333	-152	0	0	2.818	189
0	0	0	0	0	0	0	-5	0	-8.432	-50	-56	-96	0	0	-8.638	-9.035
46.738	2.822	24.856	8.304	7.132	3.301	1.387	7.749	0	45.238	3.332	14.348	10.831	6.308	255	182.600	258.659
0	0	0	0	7.132	2	0	0	0	0	0	491	276	6.308	164	14.373	15.059
46.738	2.822	24.856	8.304	0	3.299	1.387	7.749	0	45.238	3.332	13.857	10.554	0	91	168.227	243.600
889	177	0	26	0	0	210	0	2.548	0	0	3.698	0	0	0	7.549	26.018
0	0	0	6.606	0	2	0	0	0	11.517	353	0	0	0	0	18.478	24.972
14	18	0	394	0	0	0	0	0	7.754	84	0	0	0	0	8.264	8.446
2	7	0	259	0	0	0	0	0	3.723	0	0	0	0	0	3.991	4.034
4.793	13	0	20	0	0	0	0	0	2.470	9	9	0	0	0	7.314	10.450
40.018	624	24.856	0	0	3.296	0	0	0	177	0	13.848	0	0	0	82.818	84.553
38.774	0	24.816	0	0	0	0	0	0	0	0	13.848	0	0	0	77.439	79.174
1.032	0	0	0	0	0	0	0	0	177	0	0	0	0	0	1.209	1.209
0	0	39	0	0	3.296	0	0	0	0	0	0	0	0	0	3.335	3.335
211	624	0	0	0	0	0	0	0	0	0	0	0	0	0	835	835
1.022	1.983	0	999	0	1	1.177	7.749	0	17.049	2.885	0	6.856	0	91	39.812	85.127
52	5	0	12	0	0	0	46	0	516	94	0	2.835	0	0	3.560	3.974
28	3	0	43	0	0	1.177	7.345	0	1.603	2.333	0	40	0	91	12.664	15.948
6	16	0	23	0	0	0	76	0	570	419	0	123	0	0	1.231	1.299
368	84	0	38	0	1	0	42	0	1.074	0	0	386	0	0	1.993	2.657
10	1.202	0	31	0	0	0	241	0	2.346	11	0	520	0	0	4.362	5.660
18	133	0	211	0	0	0	0	0	1.856	17	0	2.295	0	0	4.530	6.969
234	86	0	234	0	0	0	0	0	2.363	0	0	83	0	0	3.000	23.298
1	15	0	28	0	0	0	0	0	560	0	0	0	0	0	605	890
184	293	0	70	0	0	0	0	0	1.998	0	0	0	0	0	2.545	12.677
17	58	0	157	0	0	0	0	0	322	0	0	225	0	0	778	4.280
104	86	0	152	0	0	0	0	0	3.841	12	0	349	0	0	4.545	7.477
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-270	-47	0	24	0	48	-1	0	0	0	0	-34	-28	7	0	-301	-385

Anexo X. Balanço Energético 2017 (Unidades Comerciais)

	PETRÓLEO	GÁS NATURAL ÚMIDO	GÁS NATURAL SECO	CARVÃO VAPOR 3100	CARVÃO VAPOR 3300	CARVÃO VAPOR 3700	CARVÃO VAPOR 4200	CARVÃO VAPOR 4500	CARVÃO VAPOR 4700	CARVÃO VAPOR 5200	CARVÃO VAPOR 5900	CARVÃO VAPOR 6000
PRODUÇÃO	152.533	40.103			1.488		15	2.501	120	591	19	79
IMPORTAÇÃO	8.407		10.720						205			9.201
VARIAÇÃO DE ESTOQUES	252		-				-15			200		-47
OFERTA TOTAL	161.192	40.103	10.720		1.488			2.501	324	791	19	9.233
EXPORTAÇÃO	-60.473											
NÃO APROVEITADA		-1.200	-176									
REINJEÇÃO		-9.678	-400									
OFERTA INTERNA BRUTA	100.719	29.225	10.144		1.488			2.501	324	791	19	9.233
TOTAL TRANSFORMAÇÃO	-100.587	-26.090	8.416		-1.436			-2.445	-24	-168	-	-3.918
REFINARIAS DE PETRÓLEO	-97.912											
PLANTAS DE GÁS NATURAL		-23.748	22.076									
USINAS DE GASEIFICAÇÃO												
COQUERIAS												
CICLO DO COMBUSTÍVEL NUCLEAR												
CENTRAIS. ELET. SERV. PÚBLICO			-11.762		-1.436			-2.445				-3.629
CENTRAIS ELET. AUTOPRODUTORAS		-1.971	-917		0				-24	-168		-289
CARVOARIAS												
DESTILARIAS												
OUTRAS TRANSFORMAÇÕES	-2.676	-371	-981									
PERDAS DISTRIB. ARMAZENAGEM		-201	-212									-12
CONSUMO FINAL		2.934	18.407		20	1		48	308	569	19	5.333
CONSUMO FINAL NÃO ENERGÉTICO		-	779									
CONSUMO FINAL ENERGÉTICO		2.934	17.628		20	1		48	308	569	19	5.333
SETOR ENERGÉTICO		2.934	4.124		0							
RESIDENCIAL			431									
COMERCIAL			105									
PÚBLICO			49									
AGROPECUÁRIO			-									
TRANSPORTES - TOTAL			1.971		0							
RODOVIÁRIO			1.971									
FERROVIÁRIO												
AÉREO												
HIDROVIÁRIO												
INDUSTRIAL - TOTAL			10.949		20	1		48	308	569	19	5.333
CIMENTO			5					2		14		98
FERRO GUSA E AÇO			1.319									3.726
FERRO LIGAS			-									
MINERAÇÃO E PELOTIZAÇÃO			473		4				215			261
NÃO FERROSOS E OUT. METALURG.			666									1.248
QUÍMICA			2.458			1				303		
ALIMENTOS E BEBIDAS			966		16				42	54		
TÊXTIL			254									
PAPEL E CELULOSE			923							196		
CERÂMICA			1.507					46	48	0		
OUTRAS INDÚSTRIAS			2.379					0	3	1	19	
CONSUMO NÃO IDENTIFICADO												
AJUSTES ESTATÍSTICOS	-132	0	59	0	-32	1	0	-8	7	-55	0	31

	GASOLINA AUTOMOTIVA	GASOLINA AVIAÇÃO	GLP	NAFTA	QUEROSENE ILUMINANTE	QUEROSENE DE AVIAÇÃO	GÁS DE COQUEARIA	GÁS CAN. RJ	GÁS CAN. SP	COQUE DE CARVÃO MINERAL	URÂNIO CONTIDO NO UO ₂	ELETRICIDADE
	mil m3	mil m3	mil m3	mil m3	mil m3	mil m3	mil m3	mil m3	mil m3	mil t	t	GWh
FLUXO												
PRODUÇÃO												
IMPORTAÇÃO	4.489	0	3.293	10.666		576				731	41	36.511
VARIAÇÃO DE ESTOQUES	-66	-1	-110	54		-76				148	-62	
OFERTA TOTAL	4.422	-1	3.183	10.720		500				879	-21	36.511
EXPORTAÇÃO	-471	-7	-2			-2.717						-156
NÃO APROVEITADA												
REINJEÇÃO												
OFERTA INTERNA BRUTA	3.951	-8	3.181	10.720		-2.218				879	-21	36.355
TOTAL TRANSFORMAÇÃO	28.278	60	10.371	-1.397	6	6.169	3.228			10.359	21	587.962
REFINARIAS DE PETRÓLEO	26.215	60	7.480	3.122	6	6.169						
PLANTAS DE GÁS NATURAL	616		2.699	150								
USINAS DE GASEIFICAÇÃO												
COQUEARIAS							4.095			10.359		
CICLO DO COMBUSTÍVEL NUCLEAR											76	
CENTRAIS. ELET. SERV. PÚBLICO											-55	491.148
CENTRAIS ELET. AUTOPRODUTORAS							-867					96.815
CARVOARIAS												
DESTILARIAS												
OUTRAS TRANSFORMAÇÕES	1.447		192	-4.668								
PERDAS DISTRIB. ARMAZENAGEM										-7	0	-98.083
CONSUMO FINAL	32.229	51	13.591	9.323	6	4.009	3.226			11.231		526.234
CONSUMO FINAL NÃO ENERGÉTICO				9.323	2							
CONSUMO FINAL ENERGÉTICO	32.229	51	13.591		4	4.009	3.226			11.231		526.234
SETOR ENERGÉTICO			43				489					29.642
RESIDENCIAL			10.812		3							133.976
COMERCIAL			645		-							90.198
PÚBLICO			423		-							43.308
AGROPECUÁRIO			32		0							28.736
TRANSPORTES - TOTAL	32.229	51	-	-	-	4.009						2.055
RODOVIÁRIO	32.229											
FERROVIÁRIO												2.055
AÉREO		51				4.009						
HIDROVIÁRIO												
INDUSTRIAL - TOTAL			1.635		1		2.737			11.231		198.319
CIMENTO			20							67		6.005
FERRO GUSA E AÇO			71				2.737			10.645		18.652
FERRO LIGAS			37		0,00					110		6.626
MINERAÇÃO E PELOTIZAÇÃO			62		1					61		12.497
NÃO FERROSOS E OUT. METALURG.			51							349		27.292
QUÍMICA			345									21.585
ALIMENTOS E BEBIDAS			383		0							27.483
TÊXTIL			46									6.514
PAPEL E CELULOSE			114									23.243
CERÂMICA			256									3.743
OUTRAS INDÚSTRIAS			249		0							44.678
CONSUMO NÃO IDENTIFICADO												
AJUSTES ESTATÍSTICOS	0	0	39	-1	0,1	59	-2	0	0	0	0	0

Annex X. Brazilian Energy Balance 2017 (Usual Units)

	Oil	Natural Gas (Wet)	Natural Gas (Dry)	Steam Coal 3100	Steam Coal 3300	Steam Coal 3700	Steam Coal 4200	Steam Coal 4500	Steam Coal 4700	Steam Coal 5200	Steam Coal 5900
	10 ³ m ³	10 ⁶ m ³	10 ⁶ m ³	10 ³ t	10 ³ t	10 ³ t	10 ³ t	10 ³ t	10 ³ t	10 ³ t	10 ³ t
<i>Production</i>	152.533	40.103			1.488		15	2.501	120	591	19
<i>Imports</i>	8.407		10.720						205		
<i>Stock Variations</i>	252		-				-15			200	
<i>Total Supply</i>	161.192	40.103	10.720		1.488			2.501	324	791	19
<i>Exports</i>	-60.473										
<i>Non-Utilized</i>		-1.200	-176								
<i>Reinjection</i>		-9.678	-400								
<i>Gross Domestic Supply</i>	100.719	29.225	10.144		1.488			2.501	324	791	19
<i>Total Transformation</i>	-100.587	-26.090	8.416		-1.436			-2.445	-24	-168	-
<i>Oil Refineries</i>	-97.912										
<i>Natural Gas Plants</i>		-23.748	22.076								
<i>Gasification Plants</i>											
<i>Coke Plants</i>											
<i>Nuclear Cycle</i>											
<i>Public Service Power Plants</i>			-11.762		-1.436			-2.445			
<i>Self-Producers Power Plants</i>		-1.971	-917		0				-24	-168	
<i>Charcoal Power Plants</i>											
<i>Distilleries</i>											
<i>Other Transformations</i>	-2.676	-371	-981								
<i>Losses In Distribution And Storage</i>		-201	-212								
<i>Final Consumption</i>		2.934	18.407		20	1		48	308	569	19
<i>Non Energy Final Consumption</i>		-	779								
<i>Energy Final Consumption</i>		2.934	17.628		20	1		48	308	569	19
<i>Energy Sector</i>		2.934	4.124		0						
<i>Residential</i>			431								
<i>Commercial</i>			105								
<i>Public</i>			49								
<i>Agricultural And Livestock</i>			-								
<i>Transportation - Total</i>			1.971		0						
<i>Highways</i>			1.971								
<i>Railroads</i>											
<i>Airways</i>											
<i>Waterways</i>											
<i>Industrial - Total</i>			10.949		20	1		48	308	569	19
<i>Cement</i>			5					2		14	
<i>Pig-Iron And Steel</i>			1.319								
<i>Iron-Alloys</i>			-								
<i>Mining And Pelletization</i>			473		4				215		
<i>Non-Ferrous And Other Metallurgical</i>			666								
<i>Chemical</i>			2.458			1				303	
<i>Food And Beverages</i>			966		16				42	54	
<i>Textiles</i>			254								
<i>Paper And Pulp</i>			923							196	
<i>Ceramics</i>			1.507					46	48	0	
<i>Others</i>			2.379					0	3	1	19
<i>Unidentified Consumption</i>											
<i>Adjustments</i>	-132	0	59	0	-32	1	0	-8	7	-55	0

Steam Coal 6000	Steam Coal (Non Specified)	Metallurgical Coal (National)	Metallurgical Coal (Imported)	Uranium (U ₃ O ₈)	Other Non-Renewable	Hydraulic Energy	Eolic	Solar	Firewood	Sugar-Cane Juice	Molasses	Sugar-Cane Bagasse	Black-Liquor	Other Renewable	Diesel Oil	Fuel Oil	
10 ³ t	10 ³ t	10 ³ t	10 ³ t	t	10 ³ tep	GWh			10 ³ t	10 ³ t	10 ³ t	10 ³ t	10 ³ t	10 ³ tep	10 ³ m ³	10 ³ m ³	
79	4				1.831	370.906	42.373	832	75.561	179.900	21.335	165.612	30.236	4.748			
9.201			11.566	513											12.955	75	
-47			100	51											-111	-67	
9.233	4		11.666	565	1.831	370.906	42.373	832	75.561	179.900	21.335	165.612	30.236	4.748	12.844	8	
															-687	-7.297	
9.233	4		11.666	565	1.831	370.906	42.373	832	75.561	179.900	21.335	165.612	30.236	4.748	12.157	-7.289	
-3.918	-		-11.661	-565	-1.576	-370.906	-42.373	-832	-21.733	-179.900	-21.335	-28.854	-7.642	-3.833	43.277	10.287	
					-5.089										40.644	12.258	
					736												
			-11.661														
				-565													
-3.629						-352.313	-42.352	-650	-205						-193	-744	-1.441
-289					-1.576	-18.593	-21	-182	-1.063			-28.854	-7.642	-274	-450	-248	
									-20.466								
										-179.900	-21.335						
					4.352										-3.366	3.827	-282
-12			-5	-0						-0	0						
5.333	4				255				53.828			136.758	22.594	916	55.116	2.949	
5.333	4				255				53.828			136.758	22.594	916	55.116	2.949	
											55.997				1.048	185	
									19.726								
									290						16	19	
															3	7	
									10.116						5.652	14	
															47.191	652	
															45.724		
															1.217	-	
															249	652	
5.333	4				255				23.696			80.761	22.594	916	1.206	2.072	
98					174				195					112	61	5	
3.726														0	33	3	
									219						7	17	
261	4		-												434	88	
1.248															12	1.256	
					81				151						21	139	
									7.155			80.615		10	276	90	
									198						2	16	
									6.405			146	22.594	738	217	307	
									6.711					55	20	60	
									2.662						123	90	
															-	-	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-318	-49	

	Automotive Gasoline	Aviation Gasoline	LPG	Naphtha	Lighting Fuel	Jet-Kerosene	Coke Oven Gas	Con. Gas RJ	Con. Gas SP	Coal Coke	Uranium (Contained in UO ₂)	Electricity
	10 ³ m ³	10 ³ m ³	10 ³ m ³	10 ³ m ³	10 ³ m ³	10 ³ m ³	10 ⁶ m ³	10 ⁶ m ³	10 ⁶ m ³	10 ³ t	t	GWh
<i>Production</i>												
<i>Imports</i>	4.489	0	3.293	10.666		576				731	41	36.511
<i>Stock Variations</i>	-66	-1	-110	54		-76				148	-62	
<i>Total Supply</i>	4.422	-1	3.183	10.720		500				879	-21	36.511
<i>Exports</i>	-471	-7	-2			-2.717						-156
<i>Non-Utilized</i>												
<i>Reinjection</i>												
<i>Gross Domestic Supply</i>	3.951	-8	3.181	10.720		-2.218				879	-21	36.355
<i>Total Transformation</i>	28.278	60	10.371	-1.397	6	6.169	3.228			10.359	21	587.962
<i>Oil Refineries</i>	26.215	60	7.480	3.122	6	6.169						
<i>Natural Gas Plants</i>	616		2.699	150								
<i>Gasification Plants</i>												
<i>Coke Plants</i>							4.095			10.359		
<i>Nuclear Cycle</i>											76	
<i>Public Service Power Plants</i>											-55	491.148
<i>Self-Producers Power Plants</i>							-867					96.815
<i>Charcoal Power Plants</i>												
<i>Distilleries</i>												
<i>Other Transformations</i>	1.447		192	-4.668								
<i>Losses In Distribution And Storage</i>										-7	0	-98.083
<i>Final Consumption</i>	32.229	51	13.591	9.323	6	4.009	3.226			11.231		526.234
<i>Non Energy Final Consumption</i>				9.323	2							
<i>Energy Final Consumption</i>	32.229	51	13.591		4	4.009	3.226			11.231		526.234
<i>Energy Sector</i>				43			489					29.642
<i>Residential</i>				10.812	3							133.976
<i>Commercial</i>				645	-							90.198
<i>Public</i>				423	-							43.308
<i>Agricultural And Livestock</i>				32	0							28.736
<i>Transportation - Total</i>	32.229	51	-	-	-	4.009						2.055
<i>Highways</i>	32.229											
<i>Railroads</i>												2.055
<i>Airways</i>		51				4.009						
<i>Waterways</i>												
<i>Industrial - Total</i>			1.635		1		2.737			11.231		198.319
<i>Cement</i>			20							67		6.005
<i>Pig-Iron And Steel</i>			71				2.737			10.645		18.652
<i>Iron-Alloys</i>			37		0,00					110		6.626
<i>Mining And Pelletization</i>			62		1					61		12.497
<i>Non-Ferrous And Other Metallurgical</i>			51							349		27.292
<i>Chemical</i>			345									21.585
<i>Food And Beverages</i>			383		0							27.483
<i>Textiles</i>			46									6.514
<i>Paper And Pulp</i>			114									23.243
<i>Ceramics</i>			256									3.743
<i>Others</i>			249		0							44.678
<i>Unidentified Consumption</i>												
<i>Adjustments</i>	0	0	39	-1	0,1	59	-2	0	0	0	0	0

