

# Brazil

Energy Efficiency/CO <sub>2</sub> <sup>1</sup> Indicators	Units	1980	1990	2000	<sup>4</sup> 2008
<b>Key indicators</b>					
Primary energy intensity (at purchasing power parities (ppp))	koe/\$05p	0.123	0.130	0.137	0.134
Primary energy intensity excluding traditional fuels (ppp)	koe/\$05p	0.080	0.085	0.103	0.093
Primary energy intensity adjusted to EU structure (ppp)	koe/\$05p	0.131	0.148	0.146	0.141
Final energy intensity (at ppp)	koe/\$05p	0.100	0.097	0.104	0.101
Final energy intensity at 2005 GDP structure <sup>3</sup> (ppp)	koe/\$05p	0.092	0.100	0.103	0.101
Final energy intensity adjusted to EU economic structure (ppp)	koe/\$05p	0.096	0.103	0.103	0.100
Ratio final/primary intensity	%	85.4	81.8	83.3	80.6
CO <sub>2</sub> intensity (at ppp)	kCO <sub>2</sub> /\$05p	n.a.	0.176	0.214	0.191
CO <sub>2</sub> emissions per capita	tCO <sub>2</sub> /cap	n.a.	1.27	1.70	1.82
<b>Industry</b>					
Energy intensity of industry (to value added) (at ppp)	koe/\$05p	0.140	0.178	0.182	0.188
Energy intensity of manufacturing (at ppp)	koe/\$05p	0.211	0.269	0.283	0.291
Energy intensity of chemicals industry (at ppp)	koe/\$05p	n.a.	n.a.	0.247	0.253
Unit consumption of steel	toe/t	0.59	0.63	0.55	0.53
Share of electric process in steel production	%	25.9	23.8	20.6	23.5
Share of industrial cogeneration in power generation	%	0	0	0	0
CO <sub>2</sub> intensity of industry <sup>2</sup> (to value added) (at ppp)	kCO <sub>2</sub> /\$05p	n.a.	0.223	0.278	0.243
CO <sub>2</sub> emissions of industry <sup>2</sup> per capita	tCO <sub>2</sub> /cap	n.a.	0.36	0.52	0.52
<b>Transport</b>					
Energy intensity of transport to GDP (at ppp)	koe/\$05p	0.028	0.030	0.035	0.035
Average consumption of road transport per equivalent car	toe/car equiv.	n.a.	n.a.	n.a.	n.a.
Unit consumption of goods per ton km	toe/tkm	n.a.	n.a.	n.a.	n.a.
Share of biofuels in road transport energy consumption	%	6.5	20.7	14.2	19.8
CO <sub>2</sub> intensity of transport to GDP (at ppp)	kCO <sub>2</sub> /\$05p	n.a.	0.074	0.091	0.086
CO <sub>2</sub> emissions of transport per capita	tCO <sub>2</sub> /cap	n.a.	0.53	0.72	0.82
<b>Households</b>					
Average electricity consumption of households per capita	kWh/cap	191	325	479	498
Average electricity consumption of electrified households	kWh/hh	n.a.	1919	1765	1590
Households consumption for electrical appliances and lighting	kWh/hh	n.a.	n.a.	n.a.	n.a.
Per capita installed capacity of solar water heaters	m <sup>2</sup> /1000inhab	0	0	0	21.2
CO <sub>2</sub> emissions of residential sector per household	tCO <sub>2</sub> /hh	n.a.	0.39	0.35	0.25
<b>Services</b>					
Energy intensity of service sector (to value added) (at ppp)	koe/\$05p	0.008	0.009	0.010	0.010
Electricity intensity of service sector (to value added) (at ppp)	kWh/k\$05p	62	77	96	92
Unit consumption of services per employee	toe/emp	n.a.	0.14	0.17	0.17
Unit electricity consumption of services per employee	kWh/emp	n.a.	1233	1564	1693
CO <sub>2</sub> intensity of service sector (to value added) (at ppp)	kCO <sub>2</sub> /\$05p	n.a.	0.005	0.005	0.003
CO <sub>2</sub> emissions of service sector per employee	tCO <sub>2</sub> /emp	n.a.	0.08	0.09	0.06
<b>Agriculture</b>					
Energy intensity of agriculture (to value added) (at ppp)	koe/\$05p	0.080	0.104	0.110	0.094
CO <sub>2</sub> intensity of agriculture (to value added) (at ppp)	kCO <sub>2</sub> /\$05p	n.a.	0.171	0.213	0.161
CO <sub>2</sub> emissions of agriculture sector per capita	tCO <sub>2</sub> /cap	n.a.	0.07	0.08	0.08
<b>Transformation sector</b>					
Efficiency of total electricity generation	%	88.0	88.1	81.0	77.6
Rate of electricity transmission-distribution losses	%	14.9	15.9	21.6	20.5
Efficiency of thermal power plants	%	35.6	35.3	35.6	43.9
Share of renewables in electricity generating capacity	%	84.2	87.9	85.3	78.6
Share of renewables in gross electricity consumption	%	93.9	94.5	89.4	84.3

<sup>1</sup> CO<sub>2</sub> from fuel combustion

<sup>2</sup> incl. autoproducers

<sup>3</sup> by main sector

<sup>4</sup> Italic = 2007

GDP / PRICES	Units	1980	1990	2000	2008
GDP per capita (at ppp)	\$05p/cap	7572	7179	7920	9517
Average electricity price (at ppp)	c05p/kWh	n.a.	27.4	14.7	24.0
Average price of motor fuels (at ppp)	\$05p/l	1.53	1.55	1.01	1.26