

[GHG Emission by Sector and Activity](#)

MtCO₂e⁽¹⁾

Sector and Activity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Industry	9.09	6.98	7.35	8.96	8.24	11.31	10.64	12.46	11.30	10.88
Transport	13.79	13.02	15.12	17.10	17.94	21.19	23.98	23.78	24.48	24.18
Others ⁽²⁾	2.67	2.67	2.97	3.27	3.52	4.03	4.33	5.79	6.11	6.66
Electricity Generation	10.21	13.48	14.30	14.76	15.49	16.60	18.20	21.76	22.09	19.44
Energy ⁽³⁾	1.171	1.08	1.26	1.26	1.24	1.34	1.56	1.50	1.62	1.81
Total	36.93	37.24	41.00	45.35	46.45	54.49	58.71	65.29	65.61	62.97

Notes:

(1) Million tons of CO₂ Equivalent (MTCO₂e)

(2) includes Residential, Commercial and Agriculture Sectors

(3) includes Oil refining, Electricity and other Energy sector own use and losses

[GHG Emission by Fuel Type](#)

MtCO₂e

Fuel type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Liquid Fossils (Oil)	32.70	32.02	36.26	40.05	41.12	48.68	50.66	55.23	54.45	50.23
Solid Fossils (Coal)	4.23	5.21	4.75	5.30	5.32	5.79	8.03	10.05	11.14	12.73
Gaseous Fossil (Natural Gas)	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.02	0.01
Total	36.93	37.24	41.00	45.35	46.45	54.49	58.71	65.29	65.61	62.97

[GHG Emission by Sector and](#)

MtCO₂e⁽¹⁾

Sector and Activity	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Industry	8.91	8.37	7.85	9.06	8.88	9.33	9.51	10.02	11.71	10.09
Transport	24.25	24.19	25.08	24.47	25.34	24.12	22.65	23.45	21.71	22.74
Others ⁽²⁾	6.49	6.54	6.61	6.21	6.02	5.21	4.94	4.67	4.70	5.57
Electricity Generation	21.44	22.48	21.45	22.55	23.95	26.53	23.12	25.00	27.76	28.27
Energy ⁽³⁾	2.19	1.83	1.79	2.15	1.71	1.59	1.15	1.18	0.98	0.90
Total	63.29	63.40	62.78	64.46	65.91	66.79	61.38	64.33	66.86	67.57

Notes:

(1) Million tons of CO₂ Equivalent

(2) includes Residential, Commercial

(3) includes Oil refining, Electricity

[GHG Emission by Fuel Type](#)

MtCO₂e

Fuel type	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Liquid Fossils (Oil)	45.76	46.02	43.28	42.99	44.07	40.21	36.38	36.91	35.17	36.98
Solid Fossils (Coal)	17.50	17.11	16.11	16.30	17.06	20.25	19.08	20.33	24.21	23.07
Gaseous Fossil (Natural Gas)	0.02	0.27	3.39	5.17	4.77	6.32	5.92	7.10	7.47	7.53
Total	63.29	63.40	62.78	64.46	65.91	66.79	61.38	64.33	66.86	67.57

[GHG Emission by Sector and](#)

MtCO₂e ⁽¹⁾

Sector and Activity	2010	2011	2012	2013	2014	2015	2016	2017	2018
Industry	11.68	11.38	10.54	12.16	12.68	12.99	15.05	16.36	13.99
Transport	22.96	22.75	23.68	24.75	25.69	29.71	32.15	33.20	34.36
Others ⁽²⁾	5.92	5.90	5.80	6.22	7.04	6.96	8.47	10.01	10.47
Electricity Generation	31.28	32.32	34.58	40.18	43.07	46.89	50.95	58.24	63.76
Energy ⁽³⁾	1.02	0.94	1.04	0.89	1.05	0.91	0.63	0.68	0.74
Total	72.85	73.29	75.64	84.20	89.53	97.46	107.25	118.48	123.32

Notes:

(1) Million tons of CO₂ Equivalent

(2) includes Residential, Commercial

(3) includes Oil refining, Electricity

[GHG Emission by Fuel Type](#)

MtCO₂e

Fuel type	2010	2011	2012	2013	2014	2015	2016	2017	2018
Liquid Fossils (Oil)	38.71	35.88	37.20	38.85	41.50	45.97	49.22	51.15	51.73
Solid Fossils (Coal)	27.05	29.75	31.11	38.59	40.93	44.81	50.37	59.78	63.16
Gaseous Fossil (Natural Gas)	7.09	7.65	7.34	6.76	7.11	6.68	7.66	7.55	8.43
Total	72.85	73.29	75.64	84.20	89.53	97.46	107.25	118.48	123.32

Environmental Emission Indicators

GHG emission is expressed in carbon dioxide equivalent (CO₂e) which accounts for the global warming potential (GWP) of CH₄ and N₂O, as prescribed by the Inter-governmental Panel on Climate Change. The GWP of CH₄ and N₂O is 21 times and 310 times the CO₂ emission resulting from the emission of one kilogram of a greenhouse gas to that of one kilogram emission of CO₂ over a fixed period of time (i.e. CH₄ and N₂O GWP is 21 times and 310 times the CO₂ emission).

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GHG emission-to-GDP ratio															
(tCO ₂ e/PhP 100K, 2000=100)	1.37	1.39	1.52	1.65	1.62	1.81	1.85	1.95	1.97	1.84	1.77	1.72	1.64	1.61	1.54
GHG emission per capita															
(tCO ₂ e/person)	0.61	0.60	0.64	0.69	0.69	0.80	0.84	0.91	0.87	0.82	0.82	0.81	0.78	0.79	0.79
GHG emission per Electricity Generation															
(tCO ₂ e/MWh)	0.39	0.53	0.55	0.56	0.51	0.49	0.50	0.55	0.53	0.47	0.47	0.48	0.44	0.43	0.43
GHG emission per Oil consumption															
(tCO ₂ e/TOE)	2.54	1.95	1.94	2.49	1.98	2.14	2.25	2.29	2.33	2.46	2.46	2.50	2.53	2.58	2.70
GHG emission per TPES															
(tCO ₂ e/TOE)	1.43	1.39	1.46	1.70	1.53	1.69	1.75	1.86	1.81	1.67	1.63	1.72	1.68	1.72	1.77

Environmental Emission Indicators

GHG emission is expressed in carbon dioxideange (IPCC). GWP is the ratio of the warming resulting from the emission of one kilogram ofn, respectively)

Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GHG emission-to-GDP ratio														
(tCO ₂ e/PhP 100K, 2000=100)	1.49	1.30	1.28	1.28	1.28	1.28	1.24	1.20	1.25	1.25	1.28	1.32	1.37	1.34
GHG emission per capita														
(tCO ₂ e/person)	0.78	0.71	0.73	0.75	0.74	0.79	0.78	0.78	0.86	0.90	0.96	1.04	1.13	1.16
GHG emission per Electricity Generation														
(tCO ₂ e/MWh)	0.47	0.41	0.42	0.46	0.46	0.46	0.47	0.47	0.53	0.56	0.57	0.56	0.62	0.64
GHG emission per Oil consumption														
(tCO ₂ e/TOE)	2.63	2.60	2.62	2.50	2.63	2.50	2.61	2.51	2.58	2.58	2.41	2.45	2.45	2.48
GHG emission per TPES														
(tCO ₂ e/TOE)	1.75	1.62	1.67	1.65	1.69	1.77	1.75	1.74	1.87	1.91	1.90	1.96	2.04	2.07