



DEPARTMENT
OF ENERGY

KEY ENERGY STATISTICS

2018

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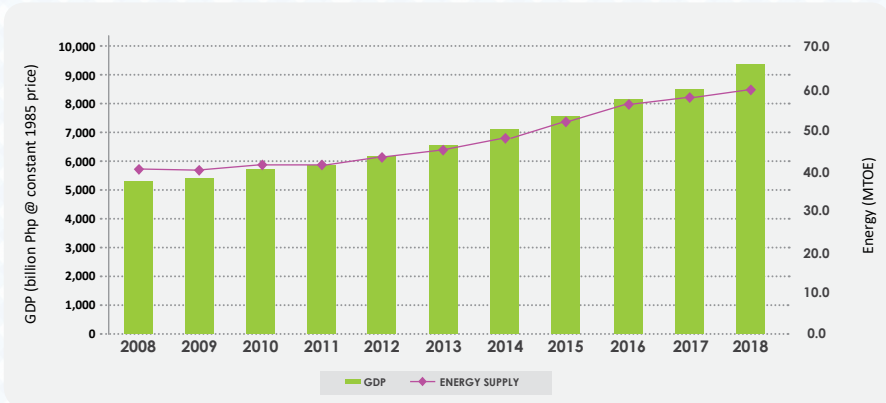
ENERGY AND ECONOMY

Energy and Economic Indicators

	2008	2009	2010	2011	2012	2013
GDP (in billion pesos: at constant 2000 prices)	5,237.1	5,297.2	5,701.5	5,910.2	6,305.2	6,750.6
Total Final Energy Consumption (in MTOE)	23.3	23.9	25.1	25.2	25.8	27.3
Total Primary Energy Supply (in MTOE)	40.5	39.9	41.0	41.9	43.5	45.0
Population (in million)	89.4	91.0	92.6	94.2	96.5	98.2
Forex (in Pesos/US D)	47.5	46.4	43.9	43.9	41.2	44.4
Average Crude Price (in USD / barrel)	93.6	61.7	78.0	106.2	109.0	105.0

	2014	2015	2016	2017	2018	AAGR*
GDP (in billion pesos: at constant 2000 prices)	7,165.5	7,600.2	8,123.4	8,665.8	9,206.9	5.8%
Total Final Energy Consumption (in MTOE)	28.5	31.0	33.5	35.5	35.7	4.4%
Total Primary Energy Supply (in MTOE)	47.0	51.3	54.6	58.0	59.7	4.0%
Population (in million)	99.9	101.6	103.2	104.9	106.6	1.8%
Forex (in Pesos/US D)	44.6	47.2	49.8	49.9	52.7	1.1%
Average Crude Price (in USD / barrel)	97.0	50.9	42.2	54.2	69.4	-2.9%

GDP VS. TOTAL ENERGY SUPPLY

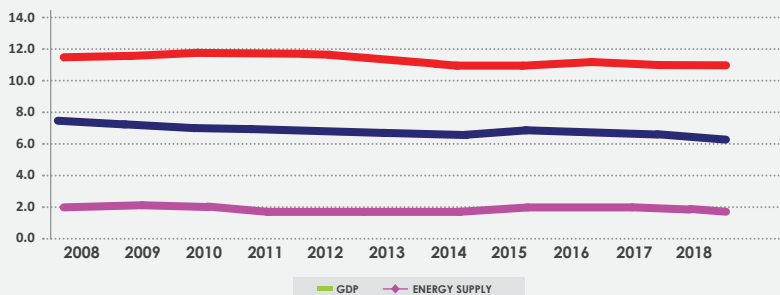


*AAGR - Average Annual Growth Rate

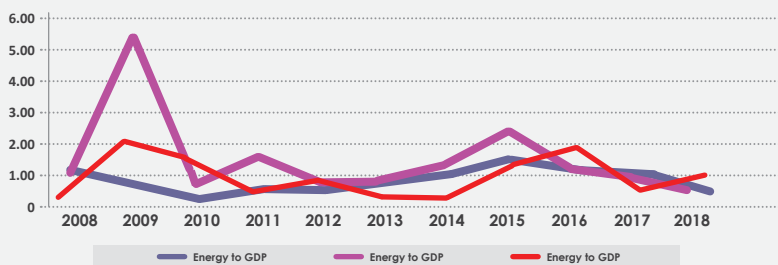
Sources:
 Gross Domestic Product (GDP), Population -National Accounts, Philippine Statistical Authority
 Foreign Exchange Rate - Bangko Sentral ng Pilipinas (BSP)
 Energy Supply - Policy Formulation and Research Division (PFRD), DOE
 Crude Oil Price - Oil Industry Management Bureau (OIMB), DOE

INDICATOR	2008	2009	2010	2011	2012	2013
Intensity						
Energy to GDP** (TOE/Php 1M)	7.61	7.58	7.18	7.05	6.82	6.67
Oil to GDP (BBL/Php 100,000)	1.80	1.89	1.84	1.67	1.64	1.62
Electricity to GDP (Wh/Php)	11.61	11.69	11.88	11.70	11.57	11.15
Elasticity						
Energy to GDP	1.00	0.66	0.26	0.50	0.48	0.66
Oil to GDP	0.97	5.43	0.62	1.61	0.67	0.83
Electricity to GDP	0.49	1.59	1.23	0.58	0.81	0.46
Energy Per Capita (TOE/person)	0.45	0.44	0.44	0.44	0.45	0.46
INDICATOR	2014	2015	2016	2017	2018	AAGR*
Intensity						
Energy to GDP** (TOE/Php 1M)	6.61	6.74	6.71	6.66	6.44	-1.7%
Oil to GDP (BBL/Php 100,000)	1.64	1.78	1.79	1.78	1.69	-0.6%
Electricity to GDP (Wh/Php)	10.78	10.84	11.18	10.89	10.84	-0.7%
Elasticity						
Energy to GDP	0.85	1.35	0.92	0.89	0.42	-8.2%
Oil to GDP	1.25	2.44	1.14	0.91	0.14	-17.4%
Electricity to GDP	0.43	1.10	1.48	0.59	0.92	6.5%
Energy Per Capita (TOE/person)	0.47	0.50	0.53	0.55	0.56	2.1%

Energy Intensity



Elasticity



*AAGR - Average Annual Growth Rate

**GDP @ constant 2000 price

ENERGY AND ENVIRONMENT

GHG Emission by Sector and Activity

MtCO₂e⁽¹⁾

SECTOR AND ACTIVITY	2008	2009	2010	2011	2012	2103
Industry	11.71	10.09	11.68	11.38	10.54	12.16
Transport	21.71	22.74	22.96	22.75	23.68	24.75
Others ⁽²⁾	4.70	5.57	5.92	5.90	5.80	6.22
Electricity Generation	27.76	28.27	31.28	32.32	34.58	40.18
Energy ⁽³⁾	0.98	0.90	1.02	0.94	1.04	0.89
Total	66.86	67.57	72.85	73.29	75.64	84.20

SECTOR AND ACTIVITY	2014	2015	2016	2017	2018	AAGR*
Industry	12.68	12.99	15.05	16.36	13.99	1.8%
Transport	25.69	29.71	32.15	33.20	34.36	4.7%
Others ⁽²⁾	7.04	6.96	8.47	10.01	10.47	8.3%
Electricity Generation	43.07	46.89	50.95	58.24	63.76	8.7%
Energy ⁽³⁾	1.05	0.91	0.63	0.68	0.74	-2.8%
Total	89.53	97.46	107.25	118.48	123.32	6.3%

GHG Emission, by Fuel Type

MtCO₂e

FUEL TYPE	2008	2009	2010	2011	2012	2103
Liquid Fossils (Oil)	35.17	36.98	38.71	35.88	37.20	38.85
Solid Fossils (Coal)	24.21	23.07	27.05	29.75	31.11	38.59
Gaseous Fossil (Natural Gas)	7.47	7.53	7.09	7.65	7.34	6.76
Total	66.86	67.57	72.85	73.29	75.64	84.20

FUEL TYPE	2014	2015	2016	2017	2018	AAGR*
Liquid Fossils (Oil)	41.50	45.97	49.22	51.15	51.73	3.9%
Solid Fossils (Coal)	40.93	44.81	50.37	59.78	63.16	10.1%
Gaseous Fossil (Natural Gas)	7.11	6.68	7.66	7.55	8.43	1.2%
Total	89.53	97.46	107.25	118.48	123.32	6.3%

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

*AAGR- average annual growth rate

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 (IPCC). GWP is the ratio of the warming 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, respectively)

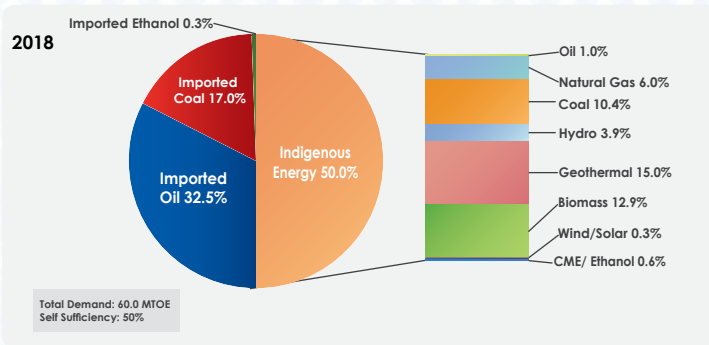
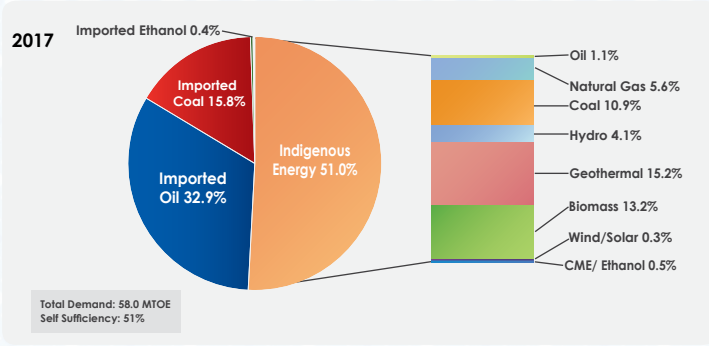
INDICATOR	2008	2009	2010	2011	2012	2103
GHG emission-to-GDP ratio (tCO ₂ e/PhP 100K, 2000=100)	1.28	1.28	1.28	1.24	1.20	1.25
GHG emission per capita (tCO ₂ e/person)	0.75	0.74	0.79	0.78	0.78	0.86
GHG emission per Electricity Generation (tCO ₂ e/MWh)	0.46	0.46	0.46	0.47	0.47	0.53
GHG emission per Oil consumption (tCO ₂ e/TOE)	2.50	2.63	2.50	2.61	2.51	2.58
GHG emission per TPES (tCO ₂ e/TOE)	1.65	1.69	1.77	1.75	1.74	1.87

INDICATOR	2014	2015	2016	2017	2018	AAGR*
GHG emission-to-GDP ratio (tCO ₂ e/PhP 100K, 2000=100)	1.25	1.28	1.32	1.37	1.34	0.5%
GHG emission per capita (tCO ₂ e/person)	0.90	0.96	1.04	1.13	1.16	4.5%
GHG emission per Electricity Generation (tCO ₂ e/MWh)	0.56	0.57	0.56	0.62	0.64	3.4%
GHG emission per Oil consumption (tCO ₂ e/TOE)	2.58	2.41	2.45	2.45	2.48	-0.1%
GHG emission per TPES (tCO ₂ e/TOE)	1.91	1.90	1.96	2.04	2.07	2.3%

*AAGR - Average Annual Growth Rate

ENERGY MIX

Primary Energy Supply Mix



Total Energy and Self Sufficiency

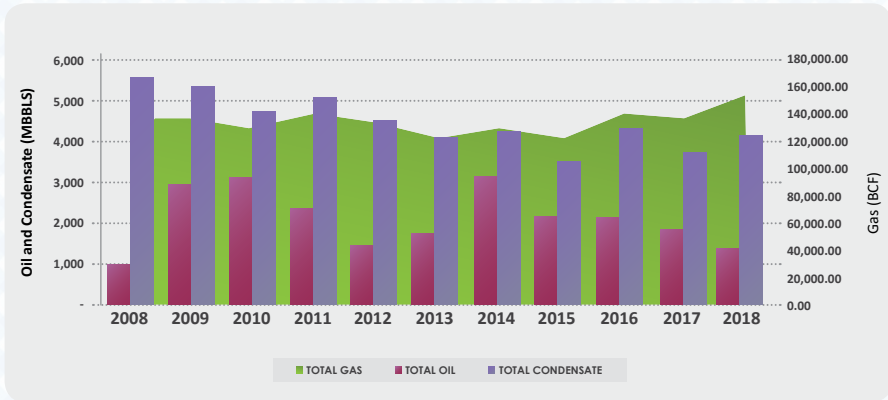
	2008	2009	2010	2011	2012	2013
Indigenous Energy (KTOE)	23,858	24,590	24,725	25,706	26,248	25,469
Oil	715	962	916	842	700	680
Natural Gas	3,192	3,215	3,028	3,269	3,134	2,887
Coal	1,905	2,474	3,510	3,648	3,874	3,747
Hydro	2,450	2,437	1,943	2,414	2,552	2,494
Geothermal	9,220	8,877	8,538	8,549	8,813	8,258
Biomass	6,315	6,496	6,679	6,874	7,035	7,237
Wind/Solar	5	6	5	8	7	6
Biofuels	54	125	107	102	134	160
Imported Energy (KTOE)	16,599	15,313	16,322	16,145	17,275	19,520
Oil	12,111	11,688	12,693	11,945	12,906	13,075
Coal	4,451	3,593	3,521	4,078	4,210	6,255
Biofuels	37	33	108	121	159	190
Total Energy (KTOE)	40,457	39,904	41,046	41,851	43,524	44,989
RE (Ktoe)	18,083	17,973	17,379	18,068	18,700	18,345
Green Energy (RE + Natgas) (Ktoe)	21,275	21,187	20,407	21,337	21,834	21,232
Self Sufficiency (%)	59	62	60	61	60	57

	2014	2015	2016	2017	2018	AAGR*
Indigenous Energy (KTOE)	26,606	26,881	29,405	29,515	29,920	2.3%
Oil	849	715	702	622	594	-1.8%
Natural Gas	3,036	2,854	3,270	3,226	3,601	1.2%
Coal	4,012	3,894	5,917	6,298	6,204	12.5%
Hydro	2,275	2,157	2,019	2,393	2,336	-0.5%
Geothermal	8,863	9,496	9,519	8,831	8,973	-0.3%
Biomass	7,356	7,431	7,494	7,651	7,668	2.0%
Wind/Solar	14	76	178	197	207	44.0%
Biofuels	200	258	305	298	338	20.1%
Imported Energy (KTOE)	20,383	24,393	25,185	28,443	29,739	6.0%
Oil	13,571	16,496	17,844	19,048	19,400	4.8%
Coal	6,630	7,721	7,169	9,177	10,145	8.6%
Biofuels	182	176	172	219	194	17.9%
Total Energy (KTOE)	46,990	51,274	54,590	57,958	59,660	4.0%
RE (Ktoe)	18,891	19,594	19,687	19,588	19,715	0.9%
Green Energy (RE + Natgas) (Ktoe)	21,927	22,448	22,957	22,814	23,316	0.9%
Self Sufficiency (%)	57	52	54	51	50	

*Average Annual Growth Rate

OIL AND GAS

Oil and Gas Production, by Source



	2008	2009	2010	2011	2012	2013
In MMBLS						
Total Oil	965	2,920	3,010	2,326	1,638	1,884
Nido	88	83	87	75	74	84
Matinloc	46	68	70	51	71	66
North Matinloc ^(a)	-	33	19	16	11	10
Galoc	831	2,736	2,684	2,183	1,483	1,723
Tindalo ^(b)	-	-	152	-	-	-
Alegria	-	-	-	-	-	-
Total Condensate	5,606	5,457	4,895	5,072	4,594	4,084
Malampaya Condensate	5,606	5,457	4,895	5,072	4,594	4,084

	2008	2009	2010	2011	2012	2013
In MMSCF						
Total Gas	137,072	138,030	130,008	140,368	134,563	123,944
Libertad ^(c)	-	-	-	-	72	79
San Antonio ^(d)	187	-	-	-	-	-
Malampaya Gas	136,886	138,030	130,008	140,368	134,491	123,866

*average annual growth rate

(a) average annual growth rate from 2009 to 2017

(b) only one (1) entry (2010)

(c) only one (1) entry (2018)

(d) average annual growth rate from 2012 to 2015

	2014	2015	2016	2017	2018	AAGR*
In MBBLS						
Total Oil	3,079	2,410	2,014	1,587	1,262	3%
Nido	79	71	54	56	52	-5%
Matinloc	70	71	73	67	43	-1%
North Matinloc ^(a)	9	8	9	2	-	-29%
Galoc	2,921	2,260	1,878	1,461	1,167	3%
Tindalo ^(b)	-	-	-	-	-	-
Alegria	-	-	-	-	2	-
Total Condensate	4,173	3,746	4,136	3,914	4,061	-3%
Malampaya Condensate	4,173	3,746	4,136	3,914	4,061	-3%
In MMSCF						
Total Oil	130,351	122,541	140,398	138,497	154,622	1%
Libertad ^(d)	35	15	-	-	-	-41%
San Antonio ^(e)	-	-	-	-	-	-
Malampaya Gas	130,316	122,527	140,398	138,497	154,622	1%

*average annual growth rate

(a) average annual growth rate from 2008 to 2011

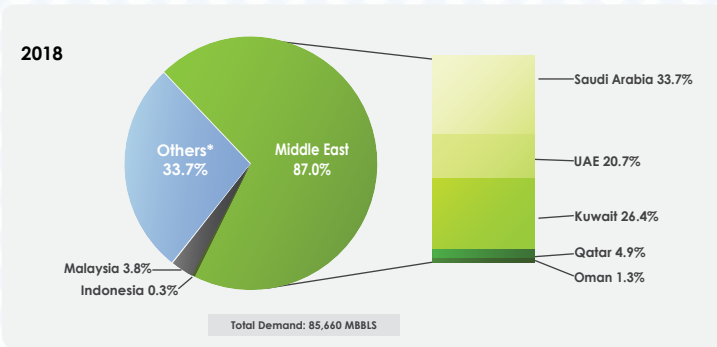
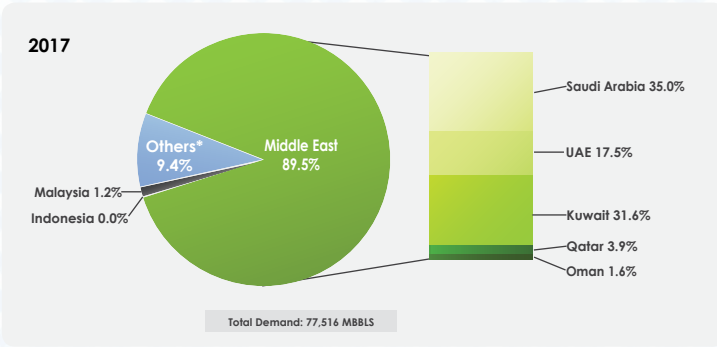
(b) only one (1) entry (2010)

(c) only one (1) entry (2018)

(d) average annual growth rate from 2012 to 2015

(e) only one (1) entry (2008)

Crude Oil Importation, by Country of Source



**others include asphalt, solvents, naptha/reformate, condensate

in MBBLs

SOURCE	2008	2009	2010	2011	2012	2013
Middle East	61,572	42,243	54,232	52,955	51,032	42,727
Saudi Arabia	46,603	22,578	30,359	30,795	29,784	23,500
Iran ^(a)	1,915	-	819	5,874	-	-
Iraq ^(b)	-	99	-	-	-	-
Kuwait ^(c)	-	-	-	-	-	-
UAE	13,054	10,144	18,088	14,730	16,230	9,717
Qatar	-	8,372	4,273	1,551	5,018	8,459
Oman ^(d)	-	1,050	693	6	-	-
Yemen ^(e)	-	-	-	-	-	1,050
Indonesia	22	230	-	-	191	162
Malaysia	4,222	4,090	6,864	2,102	2,410	1,023
Others**	3,252	3,497	5,503	14,399	9,930	12,273
Total	69,067	50,061	66,599	69,456	63,562	56,186

SOURCE	2014	2015	2016	2017	2018	AAGR*
Middle East	49,086	67,133	68,537	69,345	74,555	1.9%
Saudi Arabia	37,103	34,427	28,438	27,097	28,880	-4.7%
Iran ^(a)	-	-	-	-	-	45.3%
Iraq ^(b)	-	-	-	-	-	-
Kuwait ^(c)	-	16,877	26,448	24,475	22,589	10.2%
UAE	6,403	8,365	10,507	13,549	17,759	3.1%
Qatar	5,579	7,464	2,618	2,999	4,235	-7.3%
Oman ^(d)	-	-	524	1,225	1,091	0.4%
Yemen ^(e)	-	-	-	-	-	-
Indonesia	-	-	396	-	221	26.0%
Malaysia	3,583	5,747	4,160	916	3,215	-2.7%
Others**	12,194	5,031	5,544	7,255	7,669	9.0%
Total	64,862	77,911	78,637	77,516	85,660	2.2%

*average annual growth rate

(a) average (annual growth rate from 2008 to 2011)

(b) only one (1) entry (2009)

(c) average annual growth rate from 2015 to 2018

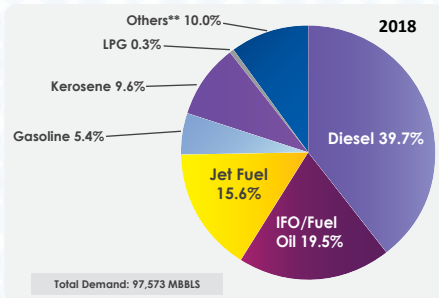
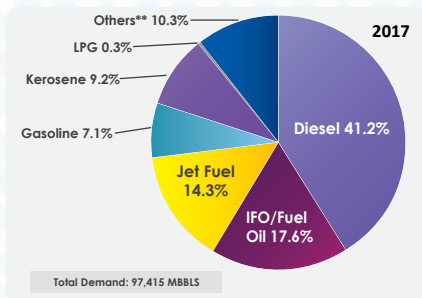
(d) average annual growth rate from 2009 to 2018

(e) average annual growth rate from 2009 to 2018

(f) only one (1) entry (2013)

** includes Singapore, Brunei, Russia, Vietnam, Korea, Australia and other Asia and Pacific Region

Petroleum Products Importation, by Fuel Type



in MBBLs

FUEL	2008	2009	2010	2011	2012	2013
Diesel	18,065	23,836	22,368	18,672	24,941	26,464
Gasoline	10,794	13,111	12,575	11,248	12,378	14,599
LPG	8,064	9,621	8,758	8,599	8,218	9,074
IFO/Fuel Oil	7,107	5,534	5,660	2,287	1,876	2,685
Jet Fuel	3,310	3,998	3,547	4,838	5,928	6,449
Kerosene	301	483	289	247	228	1,490
Others**	667	1,260	1,411	781	1,211	1,756
Total	48,307	57,843	54,607	46,671	54,780	62,517

FUEL	2014	2015	2016	2017	2018	AAGR*
Diesel	30,343	28,375	35,345	40,105	38,784	8%
Gasoline	14,828	15,148	15,705	17,162	19,004	6%
LPG	9,299	9,691	11,613	13,910	15,224	7%
IFO/Fuel Oil	4,901	10,129	7,162	6,921	5,244	-3%
Jet Fuel	6,579	5,722	6,837	8,928	9,331	11%
Kerosene	430	199	252	317	265	-1%
Others**	3,279	8,670	9,194	10,073	9,721	31%
Total	69,658	77,934	86,108	97,415	97,573	7%

*average annual growth rate

**others include asphalt, solvents, naptha/reformate, condensate

Petroleum Product Importation, by Country of Source

in MBBLs

SOURCE	2008	2009	2010	2011	2012	2013
MIDDLE EAST	1,329	3,378	2,257	3,177	1,597	2,449
Bahrain	-	-	-	113	319	86
Iran	586	1,258	643	-	0	-
Iraq	-	-	-	-	-	-
KSA	74	251	86	429	251	843
Kuwait	-	260	250	361	340	504
Oman	29	-	-	-	-	251
Qatar	365	1,108	619	1,454	48	276
UAE	275	501	659	821	639	489
ASEAN	23,132	23,518	31,933	17,729	14,275	17,312
Indonesia	98	662	484	915	548	97
Malaysia	4,261	3,288	2,185	1,145	884	1,835
Philippines	4,541	5,621	5,609	3,720	3,025	4,427
Singapore	13,267	12,894	18,137	8,717	6,011	7,547
Thailand	923	874	5,269	3,174	3,767	3,148
Vietnam	42	178	250	58	41	258
OTHER ASIA	21,493	29,737	19,919	25,686	38,613	42,531
Bangladesh	-	229	601	-	-	-
China	1,553	3,958	3,076	6,422	5,561	8,117
Hong Kong	-	182	-	80	266	64
India	255	-	583	-	-	31
Japan	1,333	3,976	1,292	1,018	687	299
Russia	-	-	-	-	-	-
South Korea	8,384	9,621	5,744	8,124	13,893	14,875
Sri Lanka	-	-	-	-	-	-
Taiwan	9,968	11,772	8,623	10,042	18,206	19,145
Pakistan	-	-	-	-	-	-
OTHERS**	2,353	1,210	498	79	295	224
Total	48,307	57,843	54,607	46,671	54,780	62,517

*average annual growth rate

** Others include countries from Africa, Asia and Pacific, Europe and North America

SOURCE	2014	2015	2016	2017	2018	AAGR*
MIDDLE EAST	1,966	1,678	6,280	5,272	11,521	24%
Bahrain	-	-	-	-	-	
Iran	-	-	1	3	1	
Iraq	-	-	-	-	163	
KSA	551	1,085	1,402	1,081	1,204	
Kuwait	406	228	692	1,150	443	
Oman	-	135	-	90	3	
Qatar	450	-	1,490	1,263	1,265	
UAE	559	231	2,695	1,684	8,442	
ASEAN	16,523	19,979	19,556	19,732	18,321	-2%
Indonesia	697	228	1,610	1,186	539	
Malaysia	1,758	7,523	4,572	7,557	7,661	
Philippines	805	-	-	-	-	
Singapore	9,982	10,323	12,147	10,273	7,910	
Thailand	2,473	1,272	36	377	930	
Vietnam	808	633	1,192	340	1,281	
OTHER ASIA	50,335	53,160	58,342	67,305	64,491	12%
Bangladesh	-	-	-	-	-	
China	10,504	10,938	24,997	32,460	29,421	
Hong Kong	1	-	51	158	-	
India	1,064	3,258	2,763	4,686	2,682	
Japan	368	1,824	4,701	4,261	2,673	
Russia	-	605	-	-	-	
South Korea	21,229	17,886	16,233	22,521	28,083	
Sri Lanka	-	-	-	-	271	
Taiwan	16,993	17,674	9,204	2,216	1,028	
Pakistan	177	975	393	1,002	333	
OTHERS**	834	3,117	1,930	5,106	3,240	3%
Total	69,658	77,934	86,108	97,415	97,573	7%

*average annual growth rate

** Others include countries from Africa, Asia and Pacific, Europe and North America

Petroleum Product Exportation, by Country of Destination

MBBLS

DESTINATION	2008	2009	2010	2011	2012	2013
MIDDLE EAST	-	-	6	9	-	-
UAE	-	-	6	9	-	-
ASEAN	11,075	5,897	4,034	5,574	2,870	4,000
Indonesia	133	230	-	36	19	433
Malaysia	448	320	188	516	667	944
Myanmar	19	-	-	-	-	-
Singapore	9,533	3,117	3,255	4,030	1,737	2,279
Thailand	941	1,957	591	991	446	344
Vietnam	-	274	-	-	-	-
OTHER ASIA	5,015	4,881	7,991	7,888	6,524	4,619
China	1,143	1,244	1,137	970	315	473
Hong Kong	240	296	-	396	678	629
India	8	-	32	141	-	-
Japan	169	-	456	101	-	78
South Korea	1,321	1,423	4,691	4,416	4,284	2,806
Taiwan	2,134	1,919	1,675	1,852	1,249	632
Pakistan	-	-	-	11	-	-
OTHERS	1,743	-	-	-	1	1
Australia	1,515	-	-	-	-	-
New Zealand	227	-	-	-	-	-
Saipan	-	-	-	-	1	1
Total	17,833	10,779	12,031	13,470	9,395	8,619

DESTINATION	2014	2015	2016	2017	2018	AAGR*
MIDDLE EAST ^(a)	-	-	-	122	-	53%
UAE	-	-	-	122	-	
ASEAN	5,916	6,691	6,027	7,561	9,552	-1%
Bangladesh	-	-	-	36	-	
Indonesia	21	98	67	119	252	
Malaysia	679	2,416	1,259	2,131	1,319	
Singapore	3,704	3,066	2,711	2,849	4,812	
Thailand	1,513	919	1,683	2,333	3,025	
Vietnam	-	192	308	93	144	
OTHER ASIA	3,643	6,433	7,727	6,899	7,040	3%
China	717	1,441	1,897	2,670	3,986	
Hong Kong	-	-	-	-	-	
India	-	-	-	-	-	
Japan	-	-	20	62	60	
South Korea	2,284	3,453	3,385	2,645	1,911	
Taiwan	643	1,539	2,424	1,523	1,083	
Pakistan	-	-	-	-	-	
OTHERS	2	864	18	48	160	-23%
Australia	-	862	-	-	-	
Belgium	-	-	6	-	3	
Guam	-	-	10	-	-	
Saipan	2	2	2	3	3	
USA	-	-	-	45	154	
Total	9,561	13,988	13,772	14,631	16,752	-1%

*average annual growth rate

(a) average annual growth rate from 2010 to 2017

Final Energy Consumption, by Sector and Fuel Type

in KTOE

	2008	2009	2010	2011	2012	2013
Industry	5,778	5,369	5,948	5,948	5,806	6,312
Coal	1,746	1,469	1,841	1,838	1,671	2,082
Natgas	70	70	69	77	58	62
Oil	1,535	1,359	1,402	1,317	1,273	1,278
Biomass	958	993	1,028	1,047	1,067	1,099
Biodiesel	5	9	10	6	12	13
Electricity	1,464	1,469	1,597	1,662	1,726	1,778
Transport	7,496	7,914	8,035	7,983	8,364	8,784
Natgas ^(a)	0	0	0	1	1	1
Oil	7,407	7,773	7,843	7,770	8,092	8,460
Biodiesel	41	86	85	94	89	92
Bioethanol	39	45	98	108	172	222
Electricity	10	10	9	10	10	10
Residential	7,377	7,633	7,878	7,991	8,171	8,386
Oil	894	938	930	916	901	880
Biomass	5,051	5,190	5,329	5,468	5,577	5,733
Electricity	1,431	1,505	1,619	1,607	1,693	1,772
Commercial	2,044	2,413	2,663	2,739	2,830	3,038
Oil	519	826	941	979	965	1,121
Biomass	306	309	313	318	323	327
Biodiesel	3	9	11	13	13	15
Electricity	1,215	1,269	1,398	1,429	1,529	1,574
AFF	366	330	347	302	318	352
Oil	254	205	215	186	181	189
Biodiesel	2	4	4	1	3	4
Electricity	110	121	128	115	133	160
Total	23,060	23,659	24,872	24,963	25,489	26,872

* does not include energy for power application and non-energy use

	2014	2015	2016	2017	2018	AAGR*
Industry	6,529	6,750	7,449	7,925	7,523	2.7%
Coal	2,261	2,218	2,677	3,008	2,411	3.3%
Natgas	77	50	65	53	59	-1.6%
Oil	1,206	1,382	1,458	1,470	1,469	-0.4%
Biomass	1,131	1,152	1,164	1,181	1,199	2.3%
Biodiesel	11	12	13	14	13	10.0%
Electricity	1,843	1,936	2,074	2,199	2,372	4.9%
Transport	9,133	10,557	11,425	11,823	12,238	5.0%
Natgas ^(a)	0.08	-	-	-	-	-22.6%
Oil	8,782	10,151	10,986	11,352	11,753	4.7%
Biodiesel	96	116	121	123	127	12.1%
Bioethanol	246	281	309	339	350	24.5%
Electricity	10	8	9	10	9	-0.5%
Residential	8,488	8,731	9,035	9,192	9,431	2.5%
Oil	862	973	1,122	1,159	1,255	3.4%
Biomass	5,823	5,802	5,709	5,731	5,746	1.3%
Electricity	1,803	1,956	2,204	2,303	2,430	5.4%
Commercial	3,397	3,370	3,865	4,404	4,668	8.6%
Oil	1,432	1,292	1,632	2,074	2,223	15.7%
Biomass	332	337	340	345	350	1.4%
Biodiesel	20	14	21	28	30	26.5%
Electricity	1,613	1,727	1,872	1,958	2,065	5.4%
AFF	354	401	450	516	440	1.9%
Oil	172	194	229	290	208	-2.0%
Biodiesel	3	4	4	5	4	7.5%
Electricity	178	203	218	220	228	7.5%
Total	27,901	29,809	32,224	33,861	34,300	4.1%

*average annual growth rate

(a) AAGR from 2008-2014

Petroleum Products Consumption, by Sector and Fuel Type

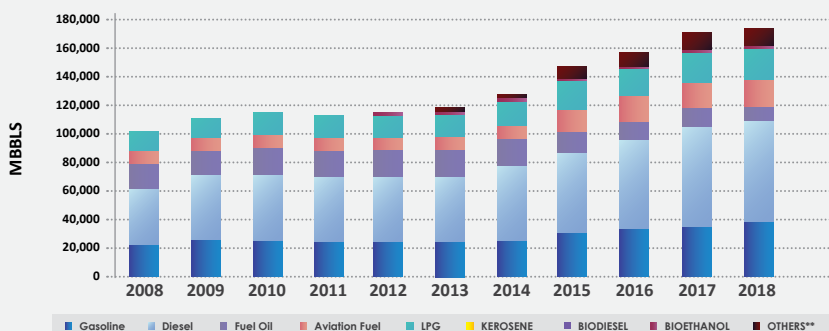
MMBLS

	2008	2009	2010	2011	2012	2013
Industry	11,305	10,041	10,310	9,886	9,648	9,727
Kerosene	63	158	151	155	138	120
LPG	965	825	700	1,147	1,169	1,203
Diesel	4,198	3,535	3,727	4,274	4,461	4,863
Fuel Oil	6,039	5,451	5,655	4,263	3,789	3,442
Biodiesel	40	72	76	48	91	99
Transport	66,691	70,052	71,115	71,532	74,568	77,985
Gasoline	21,606	23,262	23,484	23,152	23,882	24,940
Diesel	31,175	32,504	32,423	32,099	33,794	34,715
Fuel Oil	3,539	2,726	3,008	3,003	2,418	2,458
Aviation Fuel	8,883	9,487	9,647	10,845	11,432	12,049
LPG	736	907	800	495	420	621
Bioethanol	441	507	1,099	1,216	1,935	2,496
Biodiesel	311	659	656	721	686	705
Residential	9,247	9,757	9,712	9,605	9,461	9,233
LPG	8,048	8,667	8,710	8,726	8,637	8,413
Kerosene	1,199	1,090	1,001	880	825	820
Commercial	4,348	6,798	7,720	8,005	7,894	9,163
LPG	1,760	2,157	2,335	2,256	2,209	2,477
Diesel	1,389	3,370	4,075	4,646	4,693	5,764
Fuel Oil	1,176	1,202	1,226	1,005	896	804
Biodiesel	22	68	83	97	96	118
AFF	1,892	1,548	1,631	1,390	1,376	1,429
Gasoline	14	31	62	33	56	17
Kerosene	3	4	7	6	9	7
Diesel	1,758	1,427	1,486	1,300	1,253	1,349
Fuel Oil	103	57	47	41	32	27
Biodiesel	14	29	30	10	26	28
Power Generation	7,123	8,327	10,463	5,608	6,847	7,608
Diesel	1,729	1,935	2,447	1,342	1,431	1,827
Fuel Oil	5,378	6,352	7,966	4,256	5,386	5,744
Biodiesel	15	40	50	11	29	37
Non-Energy Use	593	776	858	830	1,198	2,345
Total	101,199	107,299	111,809	106,857	110,991	117,489

	2014	2015	2016	2017	2018	AAGR*
Industry	9,224	10,528	11,046	11,022	11,392	0.1%
Kerosene	126	139	148	170	16	-13.1%
LPG	1,387	1,528	1,412	924	2,129	8.2%
Diesel	3,975	4,357	4,869	5,570	5,144	2.1%
Fuel Oil	3,649	4,413	4,520	4,247	4,000	-4.0%
Biodiesel	86	92	97	111	103	10.0%
Transport	79,996	91,891	99,456	105,255	108,811	5.0%
Gasoline	25,795	29,601	32,568	35,411	36,516	5.4%
Diesel	36,097	43,435	45,749	46,067	48,043	4.4%
Fuel Oil	1,690	1,386	1,707	2,431	1,845	-6.3%
Aviation Fuel	12,463	13,086	14,879	16,474	17,390	6.9%
LPG	453	321	146	112	108	-17.4%
Bioethanol	2,765	3,168	3,477	3,818	3,936	24.5%
Biodiesel	734	893	929	942	972	12.1%
Residential	9,074	10,301	11,938	12,342	13,373	3.8%
LPG	8,343	9,632	11,314	11,749	12,754	4.7%
Kerosene	731	669	624	593	620	-6.4%
Commercial	11,641	10,692	13,456	17,357	18,393	15.5%
LPG	2,890	3,360	4,054	5,767	5,495	12.1%
Diesel	7,819	6,262	7,853	10,368	11,641	23.7%
Fuel Oil	780	959	1,390	1,011	1,025	-1.4%
Biodiesel	151	111	158	212	233	26.5%
AFF	1,306	1,471	1,731	2,202	1,579	-1.8%
Gasoline	37	66	61	98	58	15.0%
Kerosene	3	3	5	3	3	1.1%
Diesel	1,227	1,355	1,577	2,008	1,484	-1.7%
Fuel Oil	13	18	56	52	5	-26.4%
Biodiesel	26	29	32	41	30	7.5%
Power Generation	9,762	9,976	8,833	6,965	5,292	-2.9%
Diesel	2,477	2,137	3,573	2,926	2,770	4.8%
Fuel Oil	7,233	7,793	5,188	3,979	2,460	-7.5%
Biodiesel	52	45	72	60	62	15.0%
Non-Energy Use	3,501	8,368	8,954	11,397	9,964	32.6%
Total	124,503	143,226	155,414	166,539	168,805	5.2%

*average annual growth rate

Petroleum Products Consumption, by Fuel Type



in MBBLs

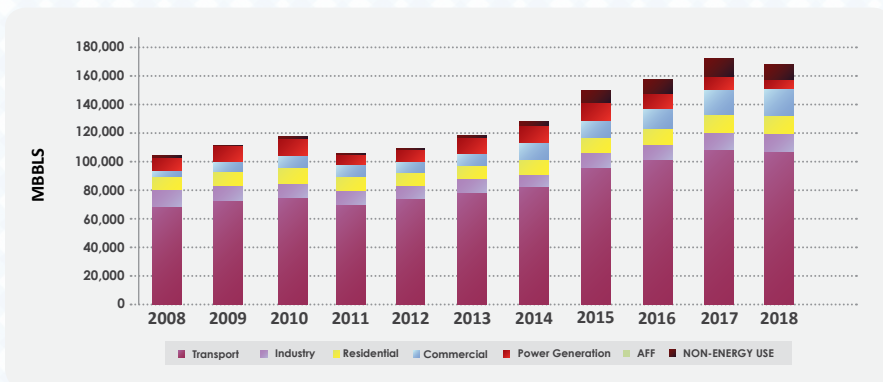
	2008	2009	2010	2011	2012	2013
Gasoline	21,620	23,293	23,545	23,185	23,938	24,957
Diesel	40,249	42,770	44,158	43,660	45,632	48,518
Fuel Oil	16,235	15,789	17,901	12,568	12,521	12,475
Aviation Fuel	8,883	9,487	9,647	10,845	11,432	12,049
LPG	11,510	12,557	12,546	12,624	12,434	12,714
Kerosene	1,265	1,252	1,159	1,041	971	947
Biodiesel	403	868	896	887	929	987
Bioethanol	441	507	1,099	1,216	1,935	2,496
Others**	593	776	858	830	1,198	2,345
Total	101,199	107,299	111,809	106,857	110,991	117,489

	2014	2015	2016	2017	2018	AAGR*
Gasoline	25,833	29,667	32,630	35,509	36,574	5.4%
Diesel	51,595	57,545	63,622	66,939	69,082	5.6%
Fuel Oil	13,364	14,568	12,862	11,719	9,335	-5.4%
Aviation Fuel	12,463	13,086	14,879	16,474	17,390	6.9%
LPG	13,073	14,842	16,926	18,552	20,486	5.9%
Kerosene	860	811	777	767	638	-6.6%
Biodiesel	1,049	1,171	1,289	1,364	1,400	13.3%
Bioethanol	2,765	3,168	3,477	3,818	3,936	24.5%
Others**	3,501	8,368	8,954	11,397	9,964	32.6%
Total	124,503	143,226	155,414	166,539	168,805	5.2%

*average annual growth rate

** Includes asphalts, solvents, naptha/reformate, condensate

Petroleum Products Consumption, by Sector



MBBLs

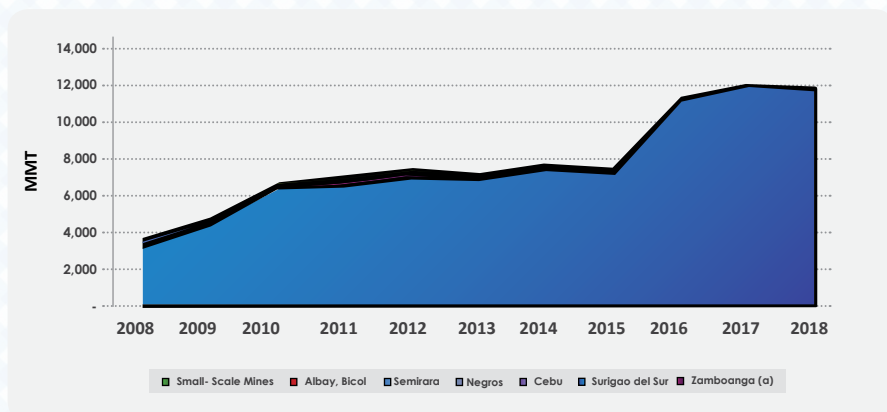
	2008	2009	2010	2011	2012	2013
Transport	66,691	70,052	71,115	71,532	74,568	77,985
Industry	11,305	10,041	10,310	9,886	9,648	9,727
Residential	9,247	9,757	9,712	9,605	9,461	9,233
Commercial	4,348	6,798	7,720	8,005	7,894	9,163
AFF	1,892	1,548	1,631	1,390	1,376	1,429
Power Generation	7,123	8,327	10,463	5,608	6,847	7,608
Non-Energy Use	593	776	858	830	1,198	2,345
Total	101,199	107,299	111,809	106,857	110,991	117,489

	2014	2015	2016	2017	2018	AAGR*
Transport	79,996	91,891	99,456	105,255	108,811	5.0%
Industry	9,224	10,528	11,046	11,022	11,392	0.1%
Residential	9,074	10,301	11,938	12,342	13,373	3.8%
Commercial	11,641	10,692	13,456	17,357	18,393	15.5%
AFF	1,306	1,471	1,731	2,202	1,579	-1.8%
Power Generation	9,762	9,976	8,833	6,965	5,292	-2.9%
Non-Energy Use	3,501	8,368	8,954	11,397	9,964	32.6%
Total	124,503	143,226	155,414	166,539	168,805	5.2%

*average annual growth rate

COAL

Coal Production, by Source



in MMT at 10,000 BTU/lb

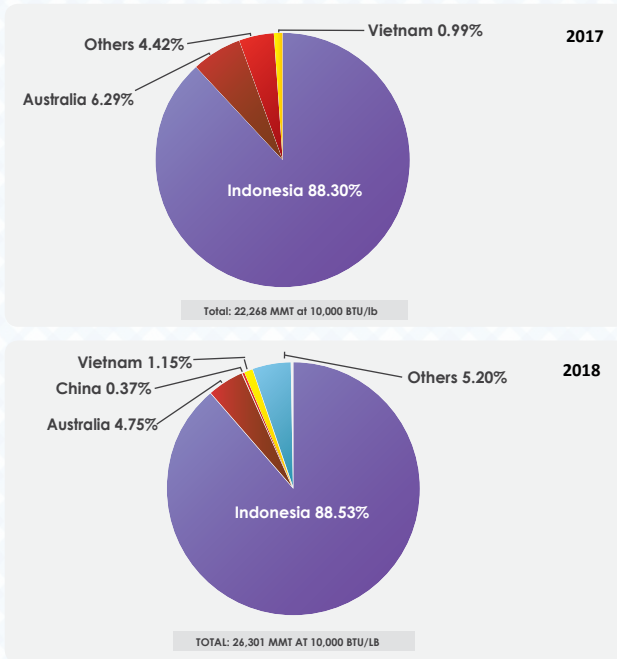
	2008	2009	2010	2011	2012	2013
Semirara	3,124	4,362	6,318	6,471	6,911	6,813
Zamboanga ^(a)	71	34	81	180	193	30
Cebu	35	27	67	83	60	66
Albay, Bicol	51	49	31	17	18	23
Surigao del Sur	207	105	3	23	21	52
Negros	1	-	1	2	0	-
Small-scale Mines	119	110	148	134	138	116
Total Production	3,609	4,687	6,650	6,911	7,340	7,100
Run of Mine (MMT)	3,977	5,176	7,337	7,612	8,083	7,859

	2014	2015	2016	2017	2018	AAGR*
Semirara	7,345	7,168	11,084	11,839	11,654	14.1%
Zamboanga ^(a)	15	5	0.4	-	-	-47.2%
Cebu	44	29	35	13	7	-14.5%
Albay, Bicol	21	28	16	12	13	-13.1%
Surigao del Sur	50	28	21	23	26	-18.8%
Negros	-	-	-	0	0.14	-17.7%
Small-scale Mines	127	119	54	44	55	-7.5%
Total Production	7,601	7,378	11,211	11,932	11,755	12.5%
Run of Mine (MMT)	8,419	8,173	12,087	13,264	13,054	12.6%

*average annual growth rate

(a) average annual growth rate from 2008 to 2016

Coal Importation, by Country of Source



in MMT at 10,000 BTU/lb

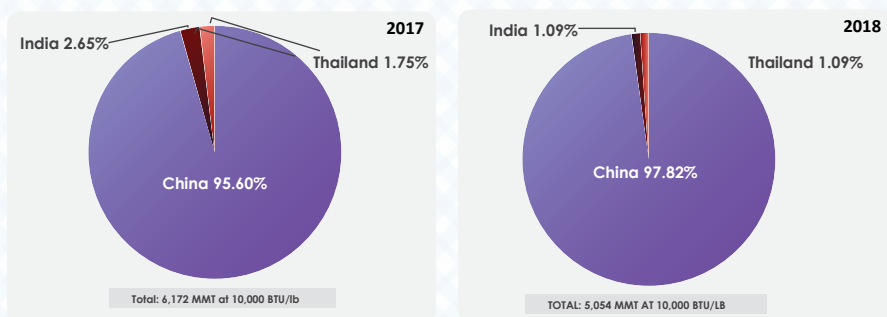
COUNTRY	2008	2009	2010	2011	2012	2013
Indonesia	7,125	6,381	10,602	10,894	11,700	13,964
Australia	330	-	65	-	195	201
China	1,170	527	18	-	-	-
Vietnam	393	118	278	68	0	249
Others**	60	-	3	-	-	-
Total	9,078	7,027	10,966	10,963	11,895	14,415

COUNTRY	2014	2015	2016	2017	2018	AAGR*
Indonesia	14,975	16,673	17,988	19,663	23,285	12.6%
Australia	-	306	1,310	1,401	1,249	14.2%
China	-	-	-	-	96	-22.1%
Vietnam	191	168	270	219	303	-2.6%
Others**	15	132	462	984	1,368	36.7%
Total	15,182	17,279	20,030	22,268	26,301	11.2%

*average annual growth rate (AAGR)

**Imports from Russia, Taiwan, South Korea, South Africa and USA

Coal Exportation, by Country of Destination



in MMT at 10,000 BTU/lb

COUNTRY	2008	2009	2010	2011	2012	2013
China	521	493	3,115	2,682	2,942	2,987
India	322	760	309	-	57	-
Hongkong	50	49	105	-	-	-
Japan	-	15	-	-	-	-
Thailand	-	651	484	55	164	218
Taiwan	-	26	19	-	11	196
S. Korea	-	-	66	-	-	-
Total	893	1,994	4,099	2,736	3,173	3,401

COUNTRY	2014	2015	2016	2017	2018	AAGR*
China	4,630	2,760	6,565	5,719	4,944	25.2%
India	55	-	47	159	55	-16.2%
Hongkong ^(a)	270	-	-	-	-	32.3%
Japan**	-	-	-	-	-	-
Thailand ^(b)	309	322	223	105	55	-24.0%
Taiwan ^(c)	78	-	-	190	-	28.1%
S. Korea ^(d)	207	-	-	-	-	33.2%
Cambodia**	212	-	-	-	-	-
Papua New Guinea**	5	-	-	-	-	-
Vietnam**	-	23	-	-	-	-
Total	5,767	3,105	6,835	6,172	5,054	18.9%

*average annual growth rate (AAGR)

(a) average annual growth rate from 2008 to 2014

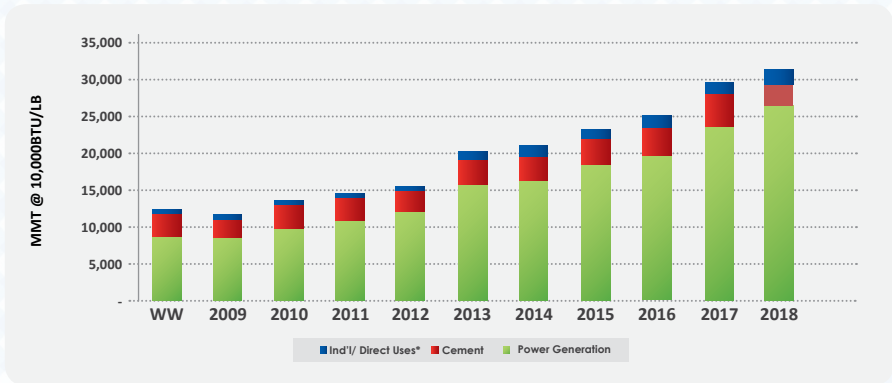
(b) average annual growth rate from 2009 to 2018

(c) average annual growth rate from 2009 to 2017

(d) average annual growth rate from 2010 to 2014

** - one entry only

Coal Consumption, by Major Type of User



in MMT at 10,000 BTU/lb

	WW	2009	2010	2011	2012	2013
Power Generation	8,447	8,416	9,643	10,961	11,937	14,791
Cement	3,012	2,450	3,118	3,127	2,799	3,156
Ind'l/Direct Uses**	583	628	559	551	581	1,005
Total	12,043	11,494	13,321	14,639	15,317	18,952

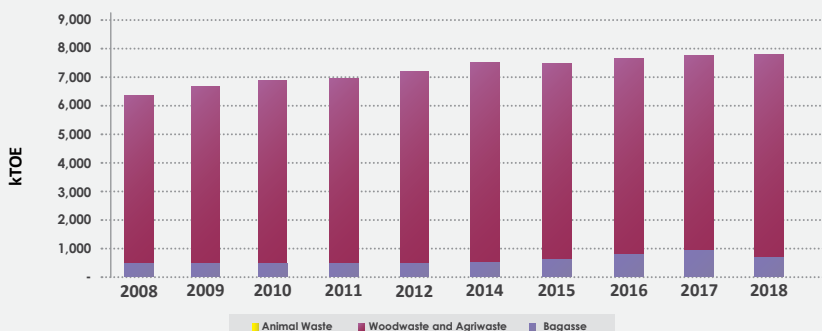
	2014	2015	2016	2017	2018	AAGR*
Power Generation	15,587	17,554	19,386	23,327	26,101	11.9%
Cement	3,203	3,348	3,893	4,423	2,848	-0.6%
Ind'l/Direct Uses**	1,372	1,104	1,515	1,569	2,027	13.3%
Total	20,163	22,006	24,794	29,320	30,976	9.9%

*average annual growth rate

**non-energy use as raw materials

RENEWABLE ENERGY PRODUCTION

Biomass Production, by Fuel Type



in kTOE

	2008	2009	2010	2011	2012	2013
Bagasse	407	424	445	477	515	533
Woodwaste and Agriwaste	5,891	6,055	6,215	6,378	6,500	6,684
Ricehull	49	50	51	52	52	54
Charcoal	835	876	917	958	1,005	1,058
Fuelwood	4,158	4,245	4,331	4,419	4,483	4,575
Municipal Waste (a)	-	4	4	13	11	17
Agriwaste	850	881	912	936	949	980
Animal Waste	17	18	18	19	19	20
Total	6,315	6,496	6,679	6,874	7,035	7,237

	2014	2015	2016	2017	2018	AAGR*
Bagasse	540	627	780	899	718	6%
Woodwaste and Agriwaste	6,796	6,783	6,693	6,731	6,928	2%
Ricehull	55	55	56	57	58	2%
Charcoal	1,107	1,138	1,193	1,236	1,281	4%
Fuelwood	4,623	4,596	4,472	4,465	4,458	1%
Municipal Waste (a)	19	11	5	6	173	52%
Agriwaste	992	982	967	968	958	1%
Animal Waste	20	21	21	21	21	2%
Total	7,356	7,431	7,494	7,651	7,668	2%

*average annual growth rate

(a) average annual growth rate from 2009 to 2018

Geothermal

	2007	2008	2009	2010	2011	2012
Installed Generating Capacity (Cumulative, MW)	2,834	2,831	2,831	2,861	2,861	2,862
Dependable Generating Capacity (Cumulative, MW)	1,667	1,388	1,321	1,351	1,434	1,462
Electricity Generation (GWh)	10,215	10,723	10,324	9,929	9,942	10,250
	2013	2014	2015	2016	2017	2018
Installed Generating Capacity (Cumulative, MW)	2,862	2,862	2,862	3,431	3,447	1,944
Dependable Generating Capacity (Cumulative, MW)	1,482	1,607	1,601	1,689	1,752	1,770
Electricity Generation (GWh)	9,605	10,308	11,044	11,070	10,270	10,435

Hydropower

	2007	2008	2009	2010	2011	2012
Installed Generating Capacity (Cumulative, MW)	3,616	3,353	3,193	3,193	2,994	3,074
Dependable Generating Capacity (Cumulative, MW)	2,962	2,950	2,914	3,021	2,963	2,983
Electricity Generation (GWh)	8,563	9,843	9,788	7,803	9,698	10,252
	2013	2014	2015	2016	2017	2018
Installed Generating Capacity (Cumulative, MW)	3,353	3,476	3,610	3,618	3,627	3,701
Dependable Generating Capacity (Cumulative, MW)	2,983	2,982	3,073	3,181	3,269	3,473
Electricity Generation (GWh)	10,019	9,137	8,665	8,111	9,611	9,384

Wind

	2007	2008	2009	2010	2011	2012
Installed Generating Capacity (Cumulative, MW)	25	33	33	33	33	33
Dependable Generating Capacity (Cumulative, MW)	9	33	33	20	33	17
Electricity Generation (GWh)	58	61	64	62	88	75
	2013	2014	2015	2016	2017	2018
Installed Generating Capacity (Cumulative, MW)	33	283	427	427	427	427
Dependable Generating Capacity (Cumulative, MW)	17	103	379	383	383	427
Electricity Generation (GWh)	66	152	748	975	1,094	1,153

Solar

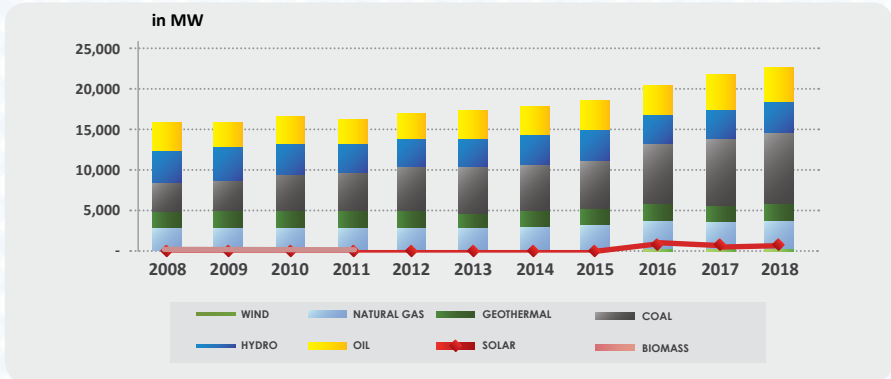
	2007	2008	2009	2010	2011	2012
Installed Generating Capacity (Cumulative, MW)	1	1	1	1	1	1
Dependable Generating Capacity (Cumulative, MW)	1	1	1	1	1	0
Electricity Generation (GWh)	1	1	1	1	1	1
	2013	2014	2015	2016	2017	2018
Installed Generating Capacity (Cumulative, MW)	1	23	165	765	885	896
Dependable Generating Capacity (Cumulative, MW)	0	17	125	594	700	740
Electricity Generation (GWh)	1	17	139	1,097	1,201	1,249

Biomass

	2007	2008	2009	2010	2011	2012
Installed Generating Capacity (Cumulative, MW)	-	-	30	38	83	119
Dependable Generating Capacity (Cumulative, MW)	-	-	10	20	46	76
Electricity Generation (GWh)	-	-	14	27	115	183
	2013	2014	2015	2016	2017	2018
Installed Generating Capacity (Cumulative, MW)	119	131	221	233	224	258
Dependable Generating Capacity (Cumulative, MW)	76	81	146	157	160	182
Electricity Generation (GWh)	212	196	367	726	1,013	1,105

POWER

Installed Generating Capacity, by Source



in MW

	2008	2009	2010	2011	2012	2013
Total Installed Capacity	15,681	15,610	16,358	16,162	17,025	17,325
Oil	3,353	3,193	3,193	2,994	3,074	3,353
Hydro	3,291	3,291	3,400	3,491	3,521	3,521
Geothermal	1,958	1,953	1,966	1,783	1,848	1,868
Coal	4,213	4,277	4,867	4,917	5,568	5,568
Natural Gas	2,831	2,831	2,861	2,861	2,862	2,862
Wind	33	33	33	33	33	33
Solar ^(a)	1	1	1	1	1	1
Biomass ^(b)	-	30	38	83	119	119

	2014	2015	2016	2017	2018	AAGR*
Total Installed Capacity	17,944	18,765	21,423	22,728	23,815	4%
Oil	3,476	3,610	3,616	4,153	4,292	2%
Hydro	3,543	3,600	3,618	3,627	3,701	1%
Geothermal	1,918	1,917	1,916	1,916	1,944	0%
Coal	5,708	5,963	7,419	8,049	8,844	8%
Natural Gas	2,862	2,862	3,431	3,447	3,453	2%
Wind	283	427	427	427	427	29%
Solar ^(a)	23	165	765	885	896	150%
Biomass ^(b)	131	221	233	224	258	27%

*average annual growth rate

(a) average annual growth rate from 2014 to 2018

(b) average annual growth rate from 2009 to 2018

Power Generation, by Source and Grid

in GWh

LUZON	2008	2009	2010	2011	2012	2013
Coal	13,504	14,091	20,047	19,681	21,878	25,756
Oil	1,928	1,864	3,287	1,291	1,800	1,601
Natural Gas	19,576	19,887	19,518	20,591	19,642	18,783
Hydro	5,400	5,549	4,014	4,836	5,292	5,156
Geothermal	3,730	3,516	3,323	3,486	3,588	3,399
Biomass ^(a)	-	3	14	44	37	60
Wind	61	64	62	88	75	66
Total	44,200	44,975	50,265	50,017	52,312	54,820
LUZON	2014	2015	2016	2017	2018	AAGR*
Coal	27,346	29,680	33,143	33,953	37,362	11%
Oil	2,342	1,845	2,562	2,379	2,188	1%
Natural Gas	18,686	18,878	19,854	20,547	21,334	1%
Hydro	4,357	4,769	5,011	5,730	5,945	1%
Geothermal	3,817	4,096	4,227	3,910	3,871	0%
Biomass ^(a)	65	187	439	599	594	59%
Wind	152	592	767	899	931	31%
Solar ^(b)	-	66	495	496	503	96%
Total	56,766	60,113	66,498	68,512	72,728	5%
VISAYAS	2008	2009	2010	2011	2012	2013
Coal	746	822	1,529	4,032	4,701	4,690
Oil	1,665	1,864	1,727	683	734	796
Natural Gas ^(a)	-	-	-	-	-	7.81
Hydro	40	42	36	53	46	37
Geothermal	6,199	5,985	5,771	5,616	5,930	5,463
Biomass ^(b)	-	11	13	72	71	106
Total	8,650	8,724	9,075	10,456	11,483	11,100
VISAYAS	2014	2015	2016	2017	2018	AAGR*
Coal	4,449	4,968	5,270	6,624	6,785	25%
Oil	766	672	637	541	353	-14%
Natural Gas ^(a)	4	0	0	0	0	-45%
Hydro	35	38	64	90	73	6%
Geothermal	5,627	6,105	5,974	5,564	5,737	-1%
Biomass ^(b)	117	159	276	414	439	51%
Wind	-	157	209	194	222	12%
Solar ^(c)	15	71	525	627	658	157%
Total	11,014	12,170	12,955	14,054	14,266	5%

* average annual growth rate

Luzon: (a) AAGR from 2010 to 2018

(b) AAGR from 2015 to 2018

Visayas: (a) AAGR from 2013 to 2014

(b) AAGR from 2009 to 2018

(c) AAGR from 2015 to 2018

(d) AAGR from 2014 to 2018

MINDANAO	2008	2009	2010	2011	2012	2013
Coal	1,499	1,563	1,726	1,629	1,686	1,635
Oil	1,275	1,652	2,087	1,424	1,720	2,094
Hydro	4,402	4,196	3,754	4,808	4,913	4,827
Geothermal	794	823	834	841	731	743
Biomass ^(a)	-	-	-	-	75	47
Solar	1	1	1	1	1	1
Total	7,972	8,235	8,403	8,703	9,127	9,347
MINDANAO	2014	2015	2016	2017	2018	AAGR*
Coal	1,258	2,038	4,890	6,271	7,785	18%
Oil	2,599	3,369	2,462	867	633	-7%
Hydro	4,745	3,858	3,036	3,791	3,366	-2.6%
Geothermal	864	842	869	797	826	0.4%
Biomass ^(a)	1	2	77	78	88	3%
Solar	14	21	11	-	72	49%
Total	9,481	10,130	11,345	11,804	12,770	5%
PHILIPPINES	2008	2009	2010	2011	2012	2013
Coal	15,749	16,476	23,301	25,342	28,265	32,081
Oil	4,868	5,381	7,101	3,398	4,254	4,491
Hydro	9,843	9,788	7,803	9,698	10,252	10,019
Geothermal	10,723	10,324	9,929	9,942	10,250	9,605
Wind	61	64	62	88	75	66
Solar ^(a)	1	1	1	1	1	1
Natural Gas	19,576	19,887	19,518	20,591	19,642	18,791
Biomass ^(b)	-	14	27	115	183	212
Total	60,821	61,934	67,743	69,176	72,922	75,266
Self-sufficiency level (%)	67	66	57	61	59	56
PHILIPPINES	2014	2015	2016	2017	2018	AAGR*
Coal	33,054	36,686	43,303	46,847	51,932	13%
Oil	5,708	5,886	5,661	3,787	3,173	-4%
Hydro	9,137	8,665	8,111	9,611	9,384	0%
Geothermal	10,308	11,044	11,070	10,270	10,435	0%
Wind	152	748	975	1,094	1,153	34%
Solar ^(a)	29	158	1,031	1,123	1,233	155%
Natural Gas	18,690	18,878	19,854	20,547	21,334	1%
Biomass ^(b)	183	348	792	1,091	1,121	59%
Total	77,261	82,413	90,798	94,370	99,765	5%
Self-sufficiency level (%)	53	53	51	54	51	

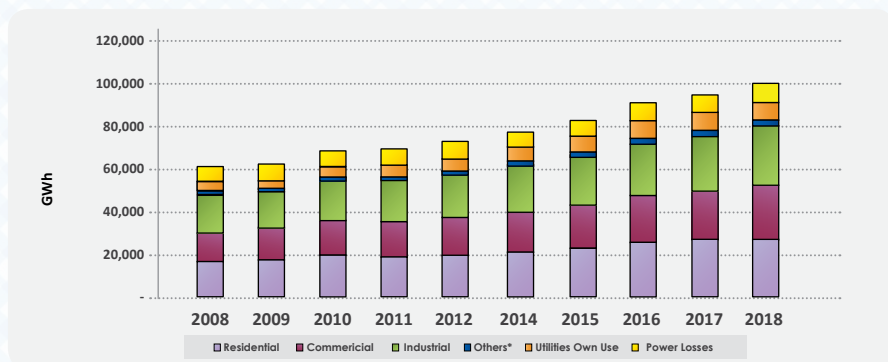
* average annual growth rate

Mindanao: (a) AAGR from 2012 to 2018

Philippines: (a) AAGR from 2014 to 2018

(b) AAGR from 2010 to 2018

Electricity Consumption, by Sector



in GWh

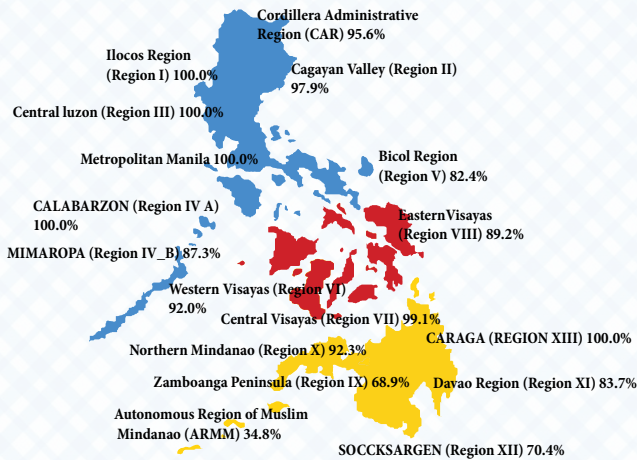
	2008	2009	2010	2011	2012	2013
Residential	16,644	17,504	18,833	18,694	19,695	20,614
Commercial	14,136	14,756	16,261	16,624	17,777	18,304
Industrial	17,031	17,084	18,576	19,334	20,071	20,677
Others*	1,395	1,523	1,596	1,446	1,668	1,971
Utilities Own Use	3,935	3,524	4,677	5,398	5,351	5,959
Power Losses	7,680	7,542	7,800	7,680	8,360	7,741
Total	60,821	61,934	67,743	69,176	72,922	75,266

	2014	2015	2016	2017	2018	AAGR*
Residential	20,969	22,747	25,631	26,782	28,261	5%
Commercial	18,761	20,085	21,770	22,768	24,016	5%
Industrial	21,429	22,514	24,119	25,573	27,587	5%
Others*	2,186	2,462	2,634	2,670	2,753	7%
Utilities Own Use	6,646	7,124	8,357	8,316	8,141	8%
Power Losses	7,270	7,481	8,286	8,262	9,007	2%
Total	77,261	82,413	90,798	94,370	99,765	5%

* others include Transport and AFF

**average annual growth rate

Regional Household Electrification Level*



REGION	POTENTIAL HH**	TOTAL HHS	SERVED HH	UNSERVED HH	HH ELECT'N LEVEL %
Luzon	13,318,261	14,783,432	13,833,515	949,917	100.0
NCR	3,095,766	3,618,588	3,331,503	287,085	100.0
CAR	395,881	421,221	378,550	42,671	95.62
I	1,151,629	1,227,920	1,176,984	50,936W	100.0
II	804,380	865,145	787,599	77,546	97.9
III	2,566,558	2,841,119	2,800,745	40,374	100.0
IV-A	3,404,958	3,824,401	3,760,214	64,187	100.0
IV-B	682,668	730,785	595,766	135,019	87.3
V	1,216,421	1,254,253	1,002,154	252,099	82.4
Visayas	4,401,698	4,642,779	4,142,520	500,259	94.1
VI	1,716,637	1,808,012	1,579,496	228,516	92.0
VII	1,699,148	1,811,687	1,683,983	127,704	99.1
VIII	985,913	1,023,080	879,041	144,039	89.2
Mindanao	5,265,443	5,442,490	4,117,747	1,324,743	78.2
IX	799,219	801,446	550,730	250,716	68.9
X	1,043,360	1,086,267	963,290	122,977	92.3
XI	1,177,461	1,190,498	985,374	205,124	83.7
XII	1,050,680	1,063,755	739,965	323,790	70.4
CARAGA	574,338	679,529	662,330	17,199	100.0
ARMM	620,385	620,995	216,058	404,937	34.8
Philippines	22,985,402	24,868,701	22,093,782	2,774,919	96.1

* report of REAMD-EPIMB as of July 2019

**Based on the PSA 2015 Census of Population

Transmission Profile

Transmission Lines (Circuit-Kilometers)	2008	2009	2010	2011	2012*
Luzon	9,527	9,568	9,638	9,529	9,374
Visayas	4,745	4,600	4,680	4,918	4,971
Mindanao	5,506	5,257	5,258	5,257	5,145
Total Philippines	19,778	19,425	19,576	19,704	19,490

Transmission Lines (Circuit-Kilometers)	2013*	2014	2015	2016	2017
Luzon	9,439	9,370	9,428	9,602	9,795
Visayas	4,840	4,821	4,813	4,476	4,973
Mindanao	5,146	5,272	5,832	6,081	6,081
Total Philippines	19,425	19,463	20,073	20,159	20,849

*There was a decrease in total transmission line length in circuit-km due to modification and divestment of various sub-transmission assets.

Substation Capacity (In Million Volt-Amperes)	2008	2009	2010	2011	2012
Luzon	18,861	18,452	19,937	20,590	21,170
Visayas	3,154	3,161	3,263	3,414	3,414
Mindanao	2,200	2,260	2,643	2,793	3,142
Total Philippines	24,215	23,873	25,843	26,796	27,726

Substation Capacity (In Million Volt-Amperes)	2013*	2014	2015	2016	2017
Luzon	21,110	23,395	23,785	25,900	25,887
Visayas	3,504	3,734	3,926	3,899	4,474
Mindanao	3,318	3,478	3,327	3,902	3,646
Total Philippines	27,932	30,607	31,038	33,701	34,007

Source: NGCP Transmission Development Plan 2016-2040 Volume 1 (Final Report)

GLOSSARY

Condensate	Liquid hydrocarbons separated from gas production.
Energy Intensity	Calculated as units of energy (million tons of oil equivalent, MTOE) per unit of GDP (in billion pesos).
Energy Per Capita	Amount of energy used per person. It is calculated as total primary energy demand (in MTOE) over population (in millions).
Energy Self Sufficiency	The ratio of the country's domestic energy supply to total supply; measures the degree at which domestic energy forms can support total energy demand.
Energy to GDP Elasticity	The percentage change in energy supply to achieve one per cent change in national GDP. Calculated as the ratio of growth of primary energy demand over GDP growth.
Gas (or Natural Gas)	A naturally occurring mixture of hydrocarbon and non-hydrocarbon gases in porous formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane.
Geothermal Energy	Energy generated by heat stored in the earth, or the collection of absorbed heat derived from underground in the atmosphere and oceans.
Gross Domestic Product (GDP)	Total market value of all final goods and services produced within the country in a given period of time (usually a calendar year), or the sum of value added of all final goods and services produced within a country in a given period of time.
Gross National Product (GNP)	The value of all (final) goods and services produced in a country in one year, plus income earned by its citizens abroad, minus income earned by foreigners in the country.
Hydropower	"Also called hydraulic power or water power; derived from the force or energy of moving water, which may be harnessed for useful purposes."
Indigenous Energy	Refers to all energy forms produced/sourced from within the country's natural resources.
Non-coincidental Peak Demand	The actual individual peak demand of each individual customer or sub-system whose the time when the individual peak demand occurs does not necessarily coincides with time when the system peak happens
Renewable Energy	Energy generated from natural resources which are naturally replenished. It includes solar power, wind power, hydroelectricity, micro hydro, biomass and biofuels.

Run of Mine	Coal directly coming from the mine
Total Final Energy Consumption (TFEC)	The sum of all energy forms consumed/used by different economic sectors
Total Primary Energy Supply (TPES)	The sum of all energy derived from domestic sources (indigenous, renewable), imported from outside the country, stock change (+/-) and export (-)
Total Primary Energy Demand (TPED)	The sum of total final consumption, power generation, other energy sector (own use and losses).
Dependable Capacity	The capacity that can be relied upon to carry system load for a specified time interval and period, provide assumed reserve, and/or meet firm power obligations.
Electrification	Electrification is either done through grid or off-grid connection. When a barangay is provided with electricity through grid connection, it means that the distribution line has reached the barangay proper. It may also mean that almost 50.0 percent of potential households in the barangay are connected to a distribution utility (DU) (i.e. MERALCO) or at least one is connected to other DUs. Off-grid connection pertains to a barangay having about 20 to 30 households availing the connection.
Installed Capacity	The total of the capacities shown on the nameplates of the generating units in a powerplant.

UNIT OF MEASUREMENT

BCF	Billion Cubic Feet
BTu	British Thermal Units
Ckt-Km	Circuit-Kilometer
GWh	Gigawatt-Hour
KWh	Kilowatt-hour
Ktoe	Thousand tonnes of oil equivalent
Lb	Pound
MB	Thousand Barrels
MMMT	Million Metric Tons
MMSCF	Million Standard Cubic Feet
MMT	Thousand Metric Tons
MVA	Megavolt Ampere
MW	Megawatt
Php	Philippine Peso
ROM	Run of Mine
USD	US Dollar

CONVERSION TABLE

Fuels	to KTOE
Coal (MT@10,000 btu/lb.)	0.000528
Natural Gas (MMSCF)	0.023290
Crude (MB)	0.134400
Condensate (NGL) (MB)	0.104400
Premium Gasoline (MB)	0.124500
Regular Gasoline (MB)	0.122300
Kerosene (MB)	0.127000
Diesel (MB)	0.134700
Fuel Oil (MB)	0.144400
LPG (MB)	0.092200
Jet (MB)	0.127000
Avgas (MB)	0.122400
Naphtha (MB)	0.123800
Asphalts (MB)	0.152100
Lubes & Greases (MB)	0.141200
Others (MB)	0.123300
Ricehull (MT)	0.000345
Charcoal (MT)	0.000600
Fuelwood (MT)	0.000329
Bagasse (MT)	0.000426
Agriwaste (MT)	0.000329
Animal Waste (MT)	0.000516
Ethanol (BBL)	0.000089
CME (BBL)	0.000130
Hydro (GWh)	0.086000
Geothermal (GWh)	0.860000
Wind (GWh)	0.860000
Solar (GWh)	0.860000



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