Suruhanjaya Tenaga
Energy Commission

MALAYSIA ENERGY STATISTICS HANDBOOK 2014

MALAYSIA ENERGY STATISTICS HANDBOOK 2014

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PREFACE

The Energy Statistics Handbook 2014 is a handy pocket-sized guide that features the summary of key energy data. This handbook which is published for the first time is the supplementary guide to both of Energy Commission's publications - the National Energy Balance 2012 and Electricity Supply Industry 2012 in Malaysia.

This handbook consists of the following parts:

1. Energy Resources
2. Key Economic and Energy Data
3. Primary Energy Supply
4. Energy Transformation
5. Final Energy Consumption
6. Energy Balances
7. Energy Indicators
8. Energy Prices
9. Electricity Supply Performance

The Supply part describes the Total Primary Energy Supply by type of fuels, net imports and exports while the Transformation part shows Conversions in Gas Plants, Refineries and Power Stations. The Consumption part indicates both Final Energy Consumption of commercial energy by Sectors and by Type of Fuels. The Energy Balances part includes Malaysia energy balance tables for annual and quarters of 2012. The Energy Indicators part contains several indicators based on Population and Gross Domestic Product (GDP).

This handbook has been derived from the National Energy Balance (NEB) and Electricity Supply Industry in Malaysia database that was under the Malaysia Energy Information Hub database. The purpose of this handbook is to establish a comprehensive and handy database that is easy to carry around. The handbook will be a good reference for policy makers, public and private organisations, students as wellas the general public.

All enquiries with regard to figures and graphs published in this handbook should be sent to the address below:

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Reserves of Crude Oil and Condensates

Year	Reserves of Crude Oil and Condensates By Region (Billion Barrels)			
	Peninsular Malaysia	Sarawak	Sabah	Total
1980	1.825	-	-	1.825
1981	2.313	-	-	2.313
1982	2.295	-	-	2.295
1983	2.570	-	-	2.570
1984	2.952	-	-	2.952
1985	3.066	-	-	3.066
1986	3.023	-	-	3.023
1987	2.906	-	-	2.906
1988	2.922	-	-	2.922
1989	3.054	-	-	3.054
1990	2.943	-	-	2.943
1991	3.045	-	-	3.045
1992	3.743	1.267	0.604	5.614
1993	4.279	1.205	0.631	6.115
1994	2.500	1.200	0.600	4.300
1995	2.455	1.067	0.590	4.112
1996	2.500	0.900	0.600	4.000
1997	2.700	0.680	0.470	3.850
1998	2.440	0.860	0.580	3.880
1999	2.080	0.830	0.510	3.420
2000	1.920	0.850	0.620	3.390
2001	1.920	0.850	0.620	3.390
2002	2.110	1.340	0.780	4.230
2003	2.040	1.300	1.210	4.550
2004	1.980	1.420	1.430	4.830
2005	1.770	1.560	1.970	5.290
2006	1.791	1.334	2.129	5.254
2007	1.452	0.889	1.975	4.316
2008	1.719	1.315	2.424	5.458
2009	1.781	1.388	2.348	5.517
2010	2.061	1.362	2.376	5.799
2011	2.374	1.492	1.992	5.858
2012	2.413	1.600	1.941	5.954
2013	2.335	1.592	1.923	5.850

Source: PETRONAS

Reserves of Natural Gas

Year	Reserves of Natural Gas by Region in Trillion Standard Cubic Feet (TSCF)								
	PENINSULAR			SABAH			SARAWAK		
	Non Associated	Associated	Total	Associated	Non Associated	Total	Non Associated	Associated	Total
1980	17.960	6.220	24.180	0.970	-	0.970	14.640	1.880	16.520
1981	17.330	5.640	22.970	1.020	-	1.020	17.340	1.940	19.280
1982	18.330	6.290	24.620	1.150	1.170	2.320	18.910	2.280	21.190
1983	20.020	6.150	26.170	1.090	1.220	2.310	19.050	2.480	21.530
1984	18.760	6.050	24.810	1.100	1.200	2.300	18.930	2.560	21.490
1985	20.200	6.010	26.210	1.170	1.230	2.400	21.050	2.640	23.690
1986	20.510	6.070	26.580	1.080	1.290	2.370	21.180	2.830	24.010
1987	20.280	5.880	26.160	1.020	1.300	2.320	20.850	2.800	23.650
1988	20.780	5.580	26.360	1.030	1.210	2.240	20.120	2.860	22.980
1989	20.710	5.720	26.430	1.070	0.050	1.120	19.770	3.850	23.620
1990	21.350	6.080	27.430	1.030	1.320	2.350	23.840	3.310	27.150
1991	21.320	6.200	27.520	0.980	1.380	2.360	25.770	3.400	29.170
1992	22.500	6.700	29.200	1.100	1.800	2.900	31.900	3.800	35.700
1993	23.900	7.800	31.700	1.700	3.000	4.700	36.600	3.800	40.400
1994	26.600	7.900	34.500	1.200	2.900	4.100	37.900	4.200	42.100
1995	28.000	8.200	36.200	1.300	6.000	7.300	37.000	4.200	41.200
1996	28.300	8.300	36.600	1.200	4.900	6.100	33.200	4.300	37.500
1997	29.400	8.900	38.300	1.200	4.800	6.000	32.500	3.000	35.500
1998	27.700	8.900	36.600	1.200	4.900	6.100	40.600	3.700	44.300
2000	25.300	8.400	33.700	1.300	6.700	8.000	37.400	3.400	40.800
2001	25.300	8.400	33.700	1.300	6.700	8.000	37.400	3.400	40.800
2002	24.900	8.400	33.300	1.200	6.800	8.000	42.600	3.400	46.000
2003	23.900	8.500	32.400	1.800	8.100	9.900	42.700	4.000	46.700
2004	21.740	9.520	31.260	1.880	7.750	9.630	42.750	3.380	46.130
2005	21.590	9.200	30.790	2.500	8.230	10.730	40.540	3.130	43.670
2006	23.170	9.650	32.820	2.750	8.210	10.960	41.240	2.930	44.170
2007	24.030	9.440	33.469	3.137	8.461	11.598	40.850	3.008	43.858
2008	24.190	9.269	33.459	3.584	9.132	12.716	38.974	2.861	41.835
2009	24.079	9.153	33.232	3.523	8.578	12.101	39.727	2.908	42.635
2010	25.139	9.280	34.419	3.787	8.681	12.468	39.187	2.513	41.700
2011	25.337	9.797	35.134	3.327	8.638	11.965	39.856	3.033	42.889
2012	26.144	9.594	35.738	3.502	9.801	13.303	39.901	3.180	43.081
2013	25.649	9.325	34.974	3.764	9.454	13.218	46.798	3.330	50.123

Source: PETRONAS

Reserves of Coal as of 31st December 2012

Location	Reserves (Million Tonnes)			Coal Type
	Measured	Indicated	Inferred	
SARAWAK				
1. Abok & Silantek, Sri Aman	7.25	10.60	32.40	Coking Coal, Semi-Anthracite and Anthracite
2. Merit-Pila, Kapit	170.26	107.02	107.84	Sub-Bituminous
3. Bintulu	6.00	0.00	14.00	Bituminous (partly coking coal)
4. Mukah - Balingian	86.95	170.73	646.53	Lignite, Hydrous Lignite and Sub-Bituminous
5. Tutoh Area	5.58	34.66	162.33	Sub-Bituminous
Subtotal	**276.04**	**323.01**	**963.10**	
SABAH				
1. Salimpopon	4.80	14.09	7.70	Sub-Bituminous
2. Labuan			8.90	Sub-Bituminous
3. Maliau			215.00	Bituminous
4. Malibau		17.90	25.00	
5. SW Malibau		23.23		
6. Pinangan West Middle Block			42.60	Bituminous
Subtotal	**4.80**	**55.22**	**299.20**	
SELANGOR				
1. Batu Arang			17.00	Sub-Bituminous
Subtotal	0.00	0.00	17.00	
Total	**280.84**	**378.23**	**1,279.30**	
Grand Total	**1,938.37**			

Source: Department of Mineral and Geosciences Malaysia

Installed Capacity as of 31st December 2012 in MW

		Hydro	Natural Gas	Coal	Fuel Oil	Diesel	Biomass	Others	Total
Peninsular Malaysia	TNB	1,911	5,075	-	-	-	-	-	**6,986**
	IPPs	20	8,069	7,200	-	-	-	-	**15,289**
	Co-Generation	-	834	-	35	7	105	25	**1,006**
	Self-Generation	-	31	-	-	577	370	1	**979**
	SREP / FiT	9	-	-	-	-	30	11	**50**
	Subtotal	**1,940**	**14,009**	**7,200**	**35**	**584**	**504**	**36**	**24,309**
Sabah	SESB	69	105	-	-	244	-	-	**417**
	IPPs	-	494	-	144	-	-	-	**638**
	Co-Generation	-	42	-	-	60	111	-	**212**
	Self-Generation	-	-	-	-	526	123	11	**660**
	SREP / FiT	7	-	-	-	-	30	-	**37**
	Subtotal	**76**	**640**	**-**	**144**	**829**	**264**	**11**	**1,963**
Sarawak	SEB	101	608	480	-	163	-	-	**1,352**
	IPPs	1,200	-	-	-	-	-	-	**1,200**
	Co-Generation	-	289	-	-	-	-	1	**290**
	Self-Generation	-	-	-	-	13	16	-	**29**
	Subtotal	**1,301**	**897**	**480**	**-**	**176**	**16**	**1**	**2,871**
	Total	**3,317**	**15,546**	**7,680**	**179**	**1,589**	**784**	**49**	**29,143**

Source: Power Utilities and IPPs

Key Economic and Energy Data

	2012				
	1Q	2Q	3Q	4Q	Total
GDP at 2005 prices (RM million)*	179,402	184,763	190,915	196,391	**751,471**
GDP at current prices (RM million)*	226,961	233,197	237,604	243,475	**941,237**
GNI at 2005 prices (RM million)*	165,360	166,293	176,434	185,028	**693,115**
GNI at current prices (RM million)*	218,300	220,396	228,658	237,859	**905,213**
Population ('000 people)**	29,244	29,337	29,431	29,526	**29,337**
Primary Energy Supply (ktoe)	20,746	21,316	20,743	21,133	**83,938**
Final Energy Consumption (ktoe)	11,197	11,650	12,000	11,864	**46,711**
Electricity Consumption (ktoe)	2,393	2,546	2,543	2,530	**10,011**
Electricity Consumption (GWh)	27,812	29,590	29,552	29,399	**116,353**
Per Capita					
GDP at 2005 prices (RM)*	6,135	6,298	6,487	6,651	**25,615**
Primary Energy Supply (toe)	0.709	0.727	0.705	0.716	**2.861**
Final Energy Consumption (toe)	0.383	0.397	0.408	0.402	**1.592**
Electricity Consumption (kWh)	951	1,009	1,004	996	**3,966**
Energy Intensity					
Primary Energy Supply (toe/GDP at 2005 prices (RM million))	115.6	115.4	108.6	107.6	**111.7**
Final Energy Consumption (toe/GDP at 2005 prices (RM million))	62.4	63.1	62.9	60.4	**62.2**
Electricity Consumption (toe/GDP at 2005 prices (RM million))	13.3	13.8	13.3	12.9	**13.3**
Electricity Consumption (GWh/GDP at 2005 prices (RM million))	0.155	0.160	0.155	0.150	**0.155**

Note (*): Quarterly data from Department of Statistics Malaysia
(**): Mid-year population from Department of Statistics Malaysia

Key Economic and Energy Data by Region

Peninsular Malaysia	2005	2006	2007	2008	2009	2010	2011	2012
GDP at 2005 prices (RM million)*	453,451	479,450	509,486	534,981	524,726	567,605	597,866	635,163
Population ('000 people)**	21,075	21,370	21,662	21,951	22,241	22,656	23,132	23,429
Final Energy Demand (ktoe)	32,195	34,390	37,921	38,530	34,521	35,593	35,968	36,683
Electricity Consumption (ktoe)	6,366	6,669	7,030	7,307	7,567	8,145	8,427	8,791
Electricity Consumption (GWh)	73,987	77,504	81,710	84,924	87,950	94,666	97,939	102,174
Per Capita								
GDP at 2005 prices (RM)*	21,516	22,436	23,520	24,371	23,593	25,053	25,846	27,110
Final Energy Consumption (toe)	1.528	1.609	1.751	1.755	1.552	1.571	1.555	1.566
Electricity Consumption (kWh)	3,511	3,627	3,772	3,869	3,955	4,178	4,234	4,361
Energy Intensity								
Final Energy Consumption (toe/GDP at 2005 prices (RM million))	71.0	71.7	74.4	72.0	65.8	62.7	60.2	57.8
Electricity Consumption (toe/GDP at 2005 prices (RM million))	14.0	13.9	13.8	13.7	14.4	14.4	14.1	13.8
Electricity Consumption (GWh/GDP at 2005 prices (RM million))	0.163	0.162	0.160	0.159	0.168	0.167	0.164	0.161

Note (*): Annual data from Department of Statistics Malaysia
(**): Mid-year population from Department of Statistics Malaysia

Key Economic and Energy Data by Region

Sabah	2005	2006	2007	2008	2009	2010	2011	2012
GDP at 2005 prices (RM million)*	32,427	34,221	35,318	39,114	40,986	42,101	42,664	44,434
Population ('000 people)**	3,076	3,099	3,125	3,154	3,184	3,207	3,316	3,359
Final Energy Consumption (ktoe)	2,806	2,587	2,879	3,068	3,046	2,758	3,466	4,671
Electricity Consumption (ktoe)	238	255	285	299	329	355	368	425
Electricity Consumption (GWh)	2,766	2,969	3,317	3,474	3,818	4,127	4,275	4,943
Per Capita								
GDP at 2005 prices (RM)*	10,543	11,043	11,301	12,401	12,873	13,129	12,865	13,228
Final Energy Consumption (toe)	0.912	0.835	0.921	0.973	0.957	0.860	1.045	1.390
Electricity Consumption (kWh)	899	958	1,061	1,102	1,199	1,287	1,289	1,471
Energy Intensity								
Final Energy Consumption (toe/GDP at 2005 prices (RM million))	86.5	75.6	81.5	78.4	74.3	65.5	81.2	105.1
Electricity Consumption (toe/GDP at 2005 prices (RM million))	7.3	7.5	8.1	7.6	8.0	8.4	8.6	9.6
Electricity Consumption (GWh/GDP at 2005 prices (RM million))	0.085	0.087	0.094	0.089	0.093	0.098	0.100	0.111

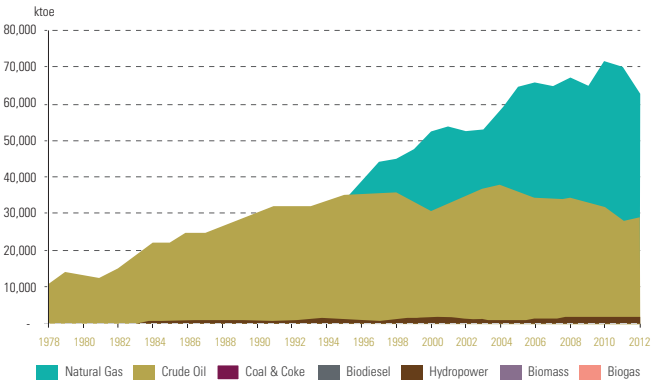
Note (*): Annual data from Department of Statistics Malaysia
(**): Mid-year population from Department of Statistics Malaysia

Key Economic and Energy Data by Region

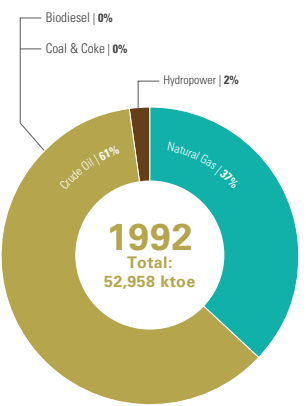
Sarawak	2005	2006	2007	2008	2009	2010	2011	2012
GDP at 2005 prices (RM million)*	57,700	60,265	65,283	65,470	64,173	66,947	70,821	71,874
Population ('000 people)**	2,327	2,363	2,399	2,435	2,471	2,507	2,516	2,549
Final Energy Consumption (ktoe)	3,274	3,330	3,461	3,302	3,277	3,125	4,086	5,358
Electricity Consumption (ktoe)	339	348	368	380	391	493	445	795
Electricity Consumption (GWh)	3,940	4,045	4,277	4,416	4,544	5,730	5,172	9,237
Per Capita								
GDP at 2005 prices (RM)*	24,801	25,507	27,213	26,887	25,972	26,709	28,146	28,202
Final Energy Consumption (toe)	1.407	1.409	1.443	1.356	1.326	1.247	1.624	2.102
Electricity Consumption (kWh)	1,694	1,712	1,783	1,814	1,839	2,286	2,055	3,624
Energy Intensity								
Final Energy Consumption (toe/GDP at 2005 prices (RM million))	56.7	55.3	53.0	50.4	51.1	46.7	57.7	74.5
Electricity Consumption (toe/GDP at 2005 prices (RM million))	5.9	5.8	5.6	5.8	6.1	7.4	6.3	11.1
Electricity Consumption (GWh/GDP at 2005 prices (RM million))	0.068	0.067	0.066	0.067	0.071	0.086	0.073	0.129

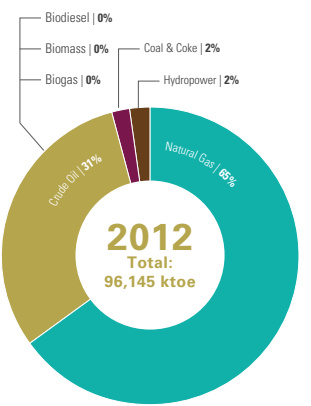
Note (*): Annual data from Department of Statistics Malaysia
(**): Mid-year population from Department of Statistics Malaysia

Primary Production by Fuel Types



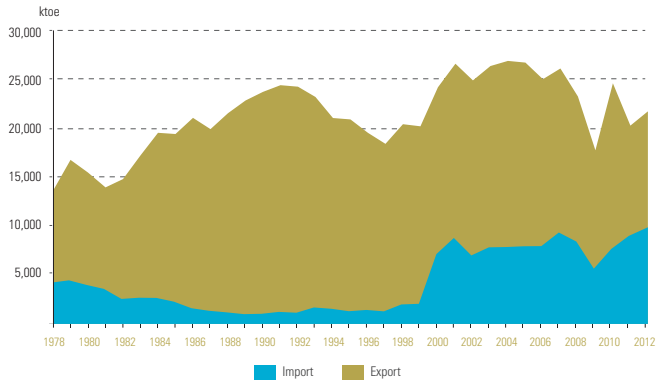
Source: National Energy Balance 2012



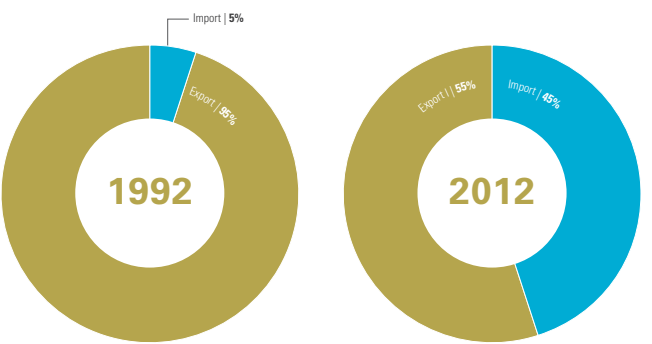


Year	Primary Production in ktoe							
	Natural Gas	Crude Oil	Coal & Coke	Biodiesel	Hydropower	Biomass	Biogas	Total
1978	2,034	10,920	-	-	244	-	-	13,198
1979	2,524	14,115	-	-	296	-	-	16,935
1980	2,245	13,707	-	-	383	-	-	16,335
1981	1,891	12,815	-	-	403	-	-	15,109
1982	2,379	15,048	-	-	394	-	-	17,821
1983	5,737	19,045	-	-	454	-	-	25,236
1984	8,715	22,207	-	-	913	-	-	31,835
1985	9,629	22,187	-	-	1,019	-	-	32,835
1986	12,950	24,979	-	-	1,070	-	-	38,999
1987	14,002	24,742	-	-	1,212	-	-	39,956
1988	14,455	26,923	15	-	1,288	-	-	42,681
1989	15,645	28,967	76	-	1,203	-	-	45,891
1990	15,487	30,629	70	-	915	-	-	47,101
1991	18,390	31,843	126	-	1,053	-	-	51,412
1992	19,644	32,264	53	-	997	-	-	52,958
1993	26,898	32,218	264	-	1,262	-	-	60,642
1994	28,335	32,798	89	-	1,652	-	-	62,874
1995	33,268	35,090	85	-	1,540	-	-	69,983
1996	39,031	35,744	153	-	1,243	-	-	76,171
1997	44,318	35,600	153	-	790	-	-	80,861
1998	45,054	35,784	221	-	1,113	-	-	82,172
1999	47,746	32,835	174	-	1,668	-	-	82,423
2000	52,432	30,839	242	-	1,612	-	-	85,125
2001	53,659	32,851	344	-	1,687	-	-	88,541
2002	52,465	34,838	223	-	1,329	-	-	88,855
2003	53,010	37,026	107	-	1,056	-	-	91,199
2004	57,768	38,041	241	-	1,329	-	-	97,379
2005	64,337	36,127	430	-	1,313	-	-	102,207
2006	65,752	34,386	569	-	1,568	-	-	102,275
2007	64,559	33,967	576	-	1,517	-	-	100,619
2008	67,191	34,195	791	-	1,964	-	-	104,141
2009	64,661	32,747	1,348	-	1,627	-	-	100,383
2010	71,543	32,163	1,511	-	1,577	-	-	106,794
2011	69,849	28,325	1,838	176	1,850	-	-	102,038
2012	62,581	29,115	1,860	253	2,149	183	4	96,145

Import and Export of Crude Oil

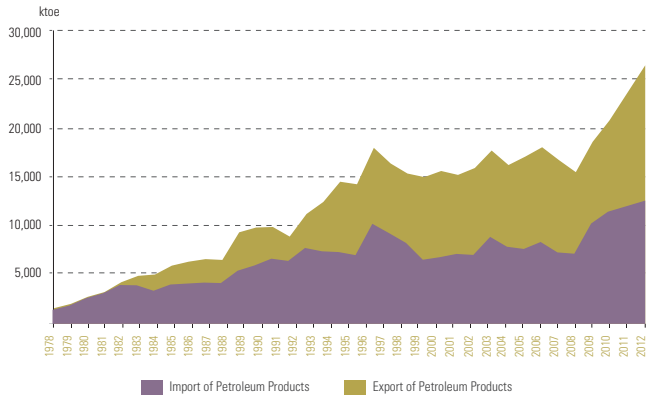


Source: National Energy Balance 2012

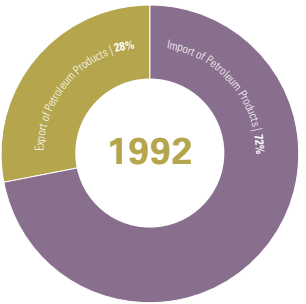


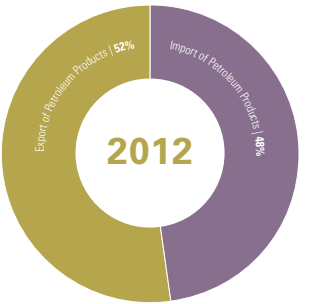
Year	Import and Export of Crude Oil in ktoe	
	Import	Export
1978	4,303	9,472
1979	4,508	12,455
1980	4,034	11,619
1981	3,622	10,497
1982	2,587	12,392
1983	2,709	14,720
1984	2,690	17,073
1985	2,302	17,338
1986	1,625	19,683
1987	1,360	18,784
1988	1,198	20,593
1989	1,012	22,090
1990	1,047	22,949
1991	1,244	23,444
1992	1,159	23,374
1993	1,703	21,766
1994	1,566	19,726
1995	1,315	19,833
1996	1,446	18,315
1997	1,300	17,322
1998	2,014	18,640
1999	2,081	18,355
2000	7,218	17,254
2001	8,890	18,018
2002	7,083	18,100
2003	7,921	18,747
2004	7,953	19,245
2005	8,031	18,994
2006	8,048	17,262
2007	9,453	16,962
2008	8,519	15,001
2009	5,718	12,235
2010	7,760	17,125
2011	9,104	11,404
2012	9,995	11,988

Import and Export of Petroleum Products



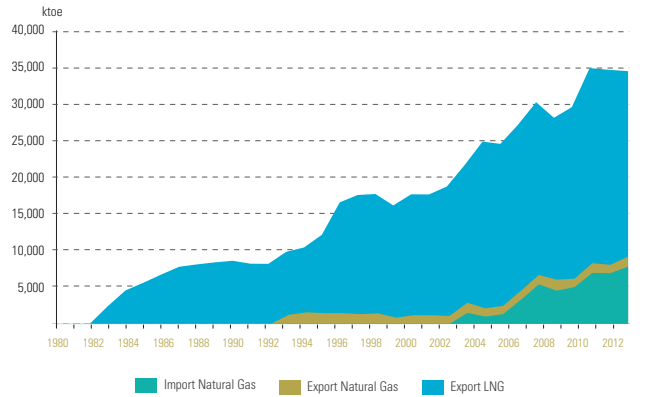
Source: National Energy Balance 2012



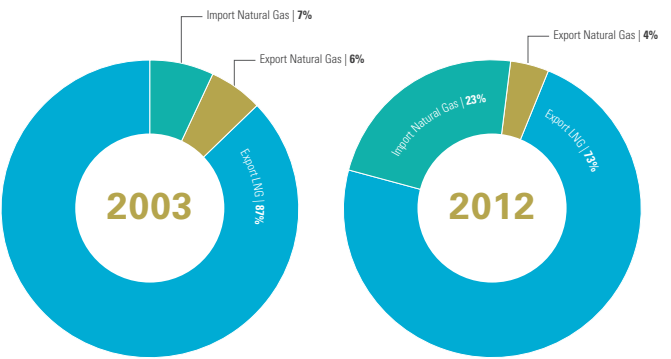


Year	Import and Export of Petroleum Products in ktoe	
	Import of Petroleum Products	Export of Petroleum Products
1978	1,450	170
1979	1,888	177
1980	2,658	132
1981	3,160	123
1982	4,011	291
1983	3,981	976
1984	3,418	1,676
1985	4,062	1,949
1986	4,162	2,257
1987	4,259	2,425
1988	4,211	2,388
1989	5,490	3,960
1990	6,031	3,913
1991	6,728	3,272
1992	6,499	2,513
1993	7,835	3,507
1994	7,492	5,094
1995	7,411	7,261
1996	7,095	7,317
1997	10,331	7,840
1998	9,360	7,194
1999	8,357	7,161
2000	6,619	8,533
2001	6,881	8,900
2002	7,220	8,158
2003	7,116	8,972
2004	8,980	8,912
2005	7,961	8,435
2006	7,734	9,535
2007	8,452	9,780
2008	7,376	9,527
2009	7,243	8,419
2010	10,359	8,431
2011	11,579	9,421
2012	12,725	13,967

Import and Export of Natural Gas and LNG

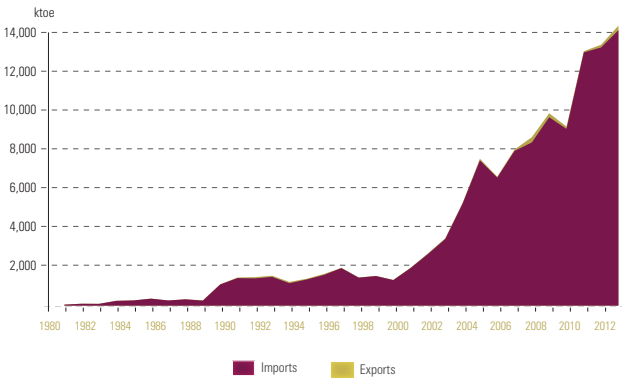


Source: National Energy Balance 2012

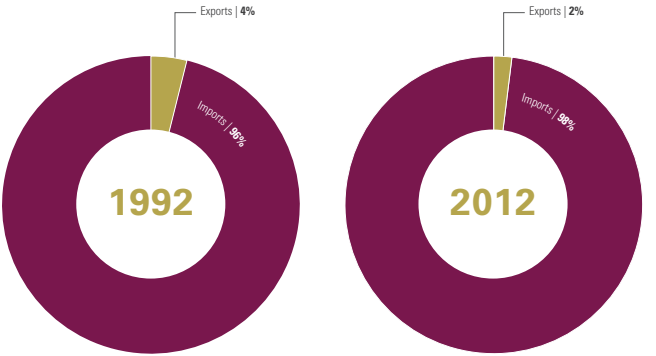


Year	Import and Export of Natural Gas and LNG in ktoe		
	Import Natural Gas	Export Natural Gas	Export LNG
1980	-	8	-
1981	-	10	-
1982	-	11	-
1983	-	2	2,416
1984	-	-	4,603
1985	-	-	5,658
1986	-	-	6,788
1987	-	-	7,855
1988	-	-	8,184
1989	-	-	8,464
1990	-	-	8,686
1991	-	-	8,278
1992	-	1	8,262
1993	-	1,258	8,654
1994	-	1,589	8,928
1995	-	1,474	10,790
1996	-	1,474	15,251
1997	-	1,340	16,396
1998	-	1,444	16,429
1999	-	860	15,445
2000	-	1,198	16,633
2001	-	1,178	16,636
2002	-	1,098	17,803
2003	1,501	1,402	18,965
2004	999	1,143	22,944
2005	1,340	1,134	22,299
2006	3,313	1,257	22,874
2007	5,435	1,295	23,777
2008	4,565	1,524	22,277
2009	5,055	1,166	23,606
2010	7,013	1,340	26,857
2011	6,979	1,147	26,856
2012	7,866	1,368	25,547

Import and Export of Coal and Coke

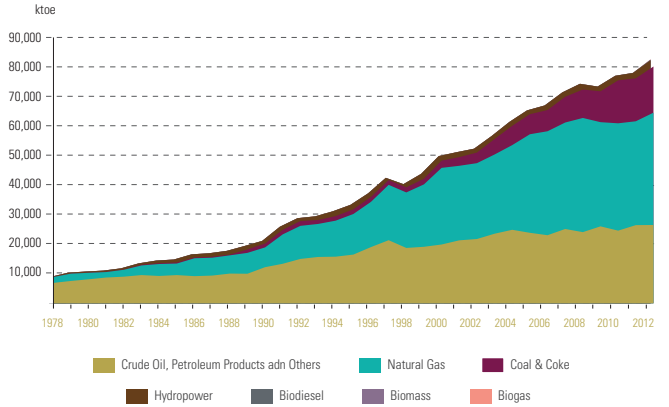


Source: National Energy Balance 2012

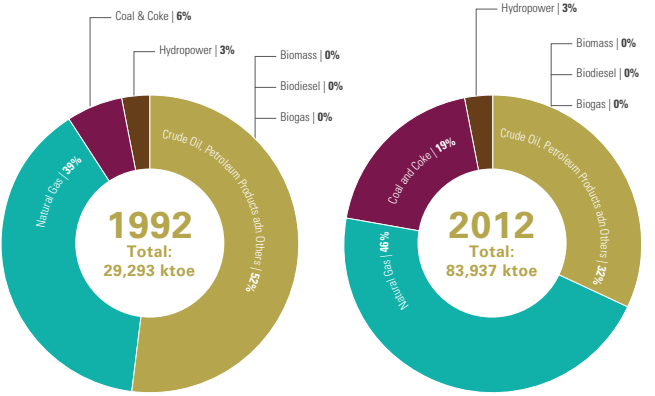


Year	Import and Export of Coal and Coke in ktoe	
	Imports	Exports
1980	53	-
1981	99	-
1982	93	-
1983	249	-
1984	270	-
1985	362	-
1986	268	-
1987	327	-
1988	260	15
1989	1,093	11
1990	1,424	28
1991	1,407	66
1992	1,485	60
1993	1,158	70
1994	1,351	40
1995	1,588	50
1996	1,938	15
1997	1,446	9
1998	1,529	7
1999	1,321	8
2000	1,943	19
2001	2,665	34
2002	3,442	37
2003	5,268	36
2004	7,498	85
2005	6,612	44
2006	7,988	71
2007	8,425	273
2008	9,725	206
2009	9,126	119
2010	13,073	62
2011	13,330	141
2012	14,220	232

Total Primary Energy Supply by Type of Fuels

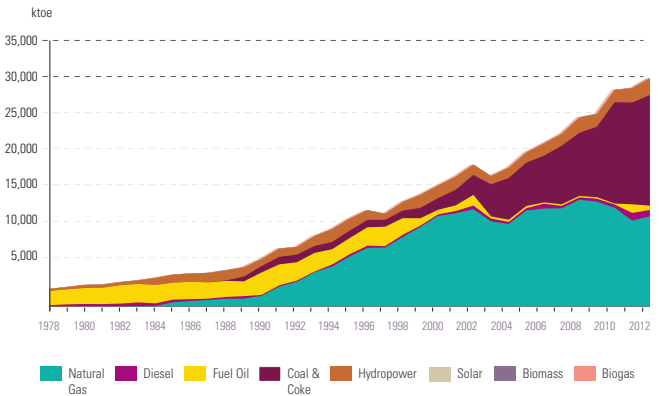


Source: National Energy Balance 2012

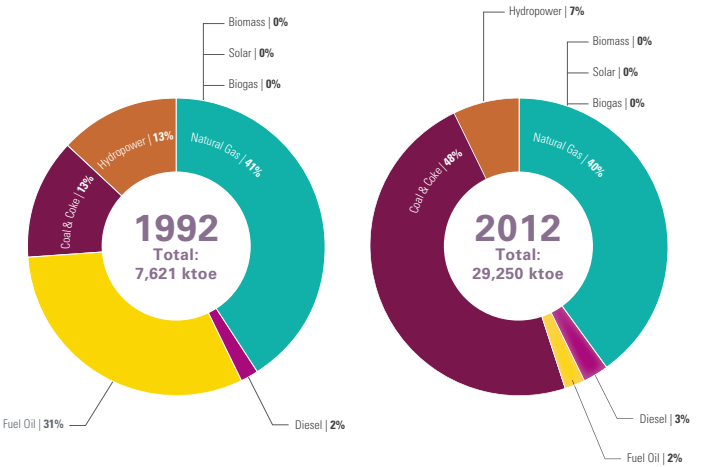


Year	Primary Energy Supply in ktoe							
	Crude Oil, Petroleum Products and Others	Natural Gas	Coal and Coke	Hydro power	Biodiesel	Biomass	Biogas	Total
1978	7,022	2,021	23	244	-	-	-	9,310
1979	7,691	2,515	33	296	-	-	-	10,535
1980	8,261	2,237	53	383	-	-	-	10,934
1981	8,873	1,881	99	403	-	-	-	11,256
1982	9,171	2,368	93	394	-	-	-	12,026
1983	9,718	3,319	249	454	-	-	-	13,740
1984	9,412	4,112	270	913	-	-	-	14,707
1985	9,715	3,971	362	1,019	-	-	-	15,067
1986	9,346	6,162	268	1,070	-	-	-	16,846
1987	9,543	6,147	327	1,212	-	-	-	17,229
1988	10,232	6,271	260	1,288	-	-	-	18,051
1989	10,177	7,181	1,158	1,203	-	-	-	19,719
1990	12,434	6,801	1,326	915	-	-	-	21,476
1991	13,608	10,112	1,564	1,053	-	-	-	26,337
1992	15,275	11,381	1,640	997	-	-	-	29,293
1993	15,949	11,360	1,352	1,262	-	-	-	29,923
1994	16,051	12,392	1,563	1,652	-	-	-	31,658
1995	16,769	13,960	1,612	1,540	-	-	-	33,881
1996	19,354	15,567	1,677	1,243	-	-	-	37,841
1997	21,718	19,041	1,622	790	-	-	-	43,171
1998	19,053	19,101	1,731	1,113	-	-	-	40,998
1999	19,450	21,476	1,940	1,668	-	-	-	44,534
2000	20,242	26,370	2,486	1,560	-	-	-	50,658
2001	21,673	25,649	2,970	1,687	-	-	-	51,979
2002	22,126	26,101	3,642	1,329	-	-	-	53,198
2003	23,953	27,257	5,316	1,056	-	-	-	57,582
2004	25,298	29,145	6,631	1,329	-	-	-	62,403
2005	24,264	33,913	6,889	1,313	-	-	-	66,379
2006	23,435	35,776	7,299	1,568	-	-	-	68,078
2007	25,576	36,639	8,848	1,510	-	-	-	72,573
2008	24,494	39,289	9,782	1,964	-	-	-	75,529
2009	26,482	35,851	10,623	1,627	-	-	-	74,583
2010	25,008	36,936	14,777	1,577	-	-	-	78,298
2011	26,903	35,740	14,772	1,850	24	-	-	79,289
2012	26,956	38,648	15,882	2,149	115	183	4	83,937

Fuel Input to Power Stations by Fuel Types

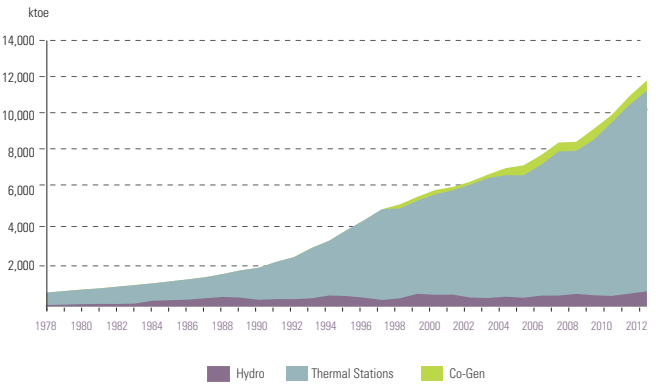


Source: National Energy Balance 2012

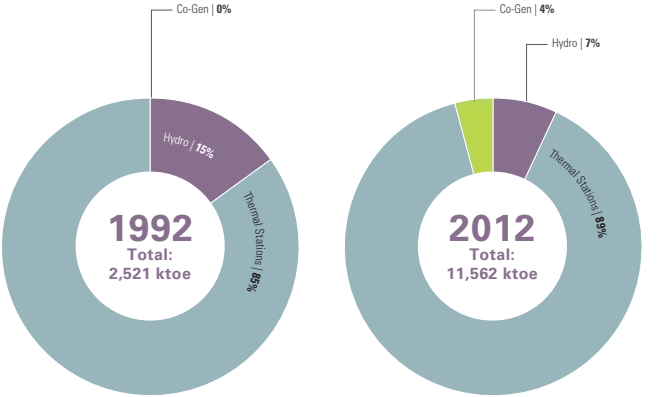


Year	Energy Input in Power Stations in ktoe								
	Natural Gas	Diesel	Fuel Oil	Coal & Coke	Hydropower	Solar	Biomass	Biogas	Total
1978	21	145	1,842	-	244	-	-	-	2,252
1979	24	247	1,930	-	296	-	-	-	2,497
1980	33	287	2,059	-	383	-	-	-	2,762
1981	36	273	2,097	-	403	-	-	-	2,809
1982	35	333	2,358	-	394	-	-	-	3,120
1983	59	461	2,370	-	454	-	-	-	3,344
1984	81	321	2,351	-	913	-	-	-	3,666
1985	539	345	2,174	-	1,019	-	-	-	4,077
1986	703	239	2,213	-	1,070	-	-	-	4,225
1987	818	183	2,086	-	1,212	-	-	-	4,299
1988	990	233	2,051	71	1,288	-	-	-	4,633
1989	1,004	319	1,888	602	1,203	-	-	-	5,016
1990	1,361	116	2,873	813	915	-	-	-	6,078
1991	2,533	164	2,687	963	1,053	-	-	-	7,400
1992	3,144	160	2,352	968	997	-	-	-	7,621
1993	4,374	87	2,388	884	1,262	-	-	-	8,995
1994	5,119	249	1,957	925	1,652	-	-	-	9,902
1995	6,414	265	2,073	957	1,540	-	-	-	11,249
1996	7,489	284	2,354	950	1,243	-	-	-	12,320
1997	7,531	185	2,482	882	790	-	-	-	11,870
1998	8,886	275	2,130	964	1,113	-	-	-	13,368
1999	10,162	172	950	1,332	1,668	-	-	-	14,284
2000	11,580	191	592	1,495	1,612	-	-	-	15,470
2001	11,922	278	730	1,994	1,687	-	-	-	16,611
2002	12,424	476	1,363	2,556	1,329	-	-	-	18,148
2003	10,893	340	289	4,104	1,056	-	-	-	16,682
2004	10,545	272	274	5,327	1,329	-	-	-	17,747
2005	12,271	298	275	5,541	1,313	-	-	-	19,698
2006	12,524	617	171	5,964	1,567	-	-	-	20,843
2007	12,549	314	199	7,486	1,522	-	-	-	22,070
2008	13,651	299	181	8,069	1,964	-	-	-	24,164
2009	13,390	384	205	9,010	1,627	-	-	-	24,616
2010	12,628	415	125	12,951	1,577	-	-	-	27,696
2011	10,977	981	1,103	13,013	1,850	-	-	-	27,924
2012	11,533	811	550	14,138	2,149	1	64	4	29,250

Electricity Generation by Plant Types

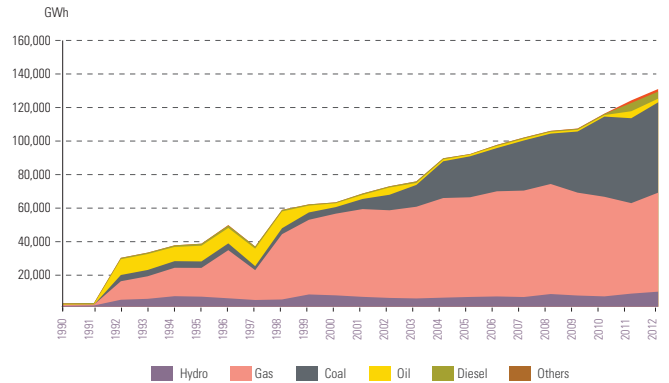


Source: National Energy Balance 2012

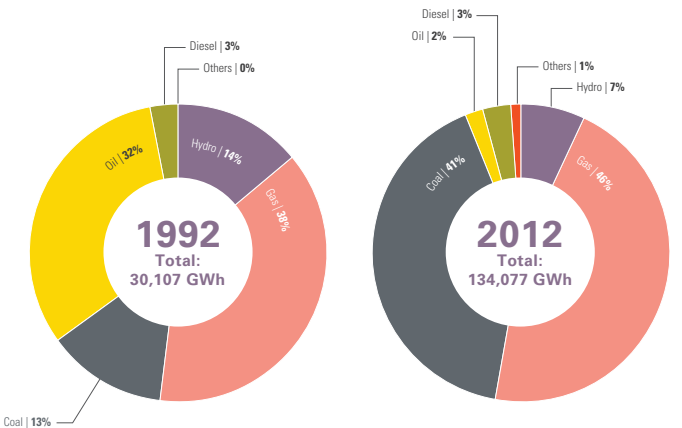


Year	Electricity Generation by Plant Types in ktoe			
	Hydro	Thermal Stations	Co-Gen	Total
1978	77	633	-	710
1979	94	695	-	789
1980	120	744	-	864
1981	133	795	-	928
1982	128	885	-	1,013
1983	149	948	-	1,097
1984	294	888	-	1,182
1985	321	964	-	1,285
1986	351	1,036	-	1,387
1987	423	1,075	-	1,498
1988	488	1,176	-	1,664
1989	451	1,399	-	1,850
1990	343	1,636	-	1,979
1991	379	1,904	-	2,283
1992	375	2,146	-	2,521
1993	419	2,568	-	2,987
1994	561	2,801	-	3,362
1995	535	3,374	-	3,909
1996	446	3,975	-	4,421
1997	333	4,644	-	4,977
1998	417	4,596	207	5,220
1999	647	4,762	200	5,609
2000	599	5,132	224	5,955
2001	607	5,333	172	6,112
2002	456	5,771	157	6,384
2003	435	6,134	179	6,748
2004	501	6,215	359	7,075
2005	446	6,259	509	7,214
2006	554	6,687	499	7,740
2007	558	7,366	461	8,385
2008	642	7,321	460	8,423
2009	574	7,957	560	9,091
2010	540	8,864	387	9,791
2011	656	9,648	442	10,746
2012	779	10,253	530	11,562

Electricity Generation Mix

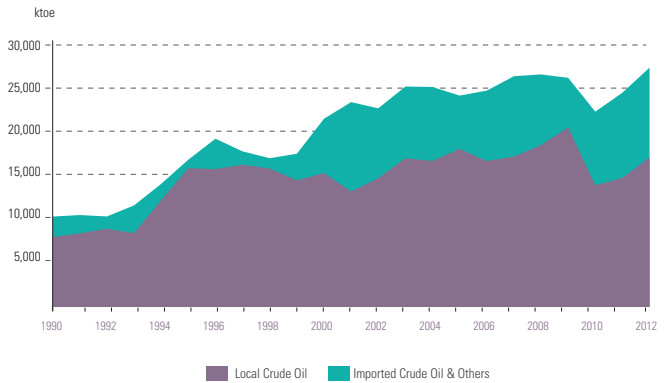


Source: Energy Commission of Malaysia

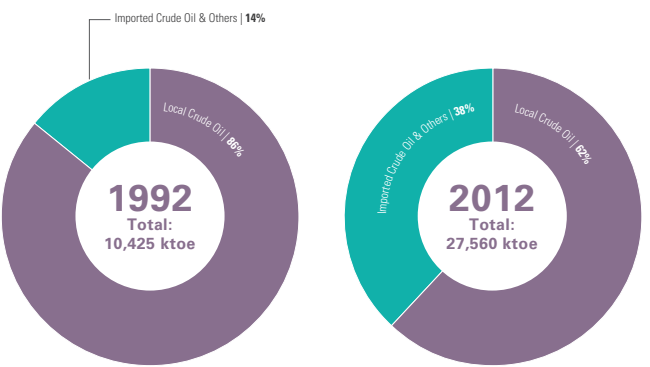


Year	Electricity Generation Mix in GWh						
	Hydro	Gas	Coal	Oil	Diesel	Others	Total
1990	518	623	-	367	585	-	2,093
1991	762	525	-	379	612	-	2,278
1992	4,286	11,398	3,837	9,724	862	-	30,107
1993	4,853	13,905	3,880	9,820	865	-	33,323
1994	6,483	17,491	4,081	8,756	988	-	37,799
1995	6,184	17,726	3,974	9,687	1,249	-	38,820
1996	5,184	29,641	4,177	9,510	1,584	189	50,285
1997	4,134	18,387	2,460	10,784	1,300	-	37,065
1998	4,457	40,223	3,655	10,339	971	-	59,645
1999	7,552	45,988	4,522	4,220	747	-	63,029
2000	6,994	50,314	4,038	2,383	552	-	64,281
2001	6,066	54,066	6,238	2,531	831	-	69,732
2002	5,415	53,979	9,559	4,465	746	-	74,164
2003	5,090	56,478	13,435	1,221	976	-	77,200
2004	5,573	61,363	22,627	1,130	729	-	91,422
2005	6,007	61,396	25,231	1,048	348	-	94,030
2006	6,323	64,768	26,626	1,265	643	50	99,675
2007	5,957	65,568	30,856	1,091	677	63	104,212
2008	7,807	67,779	31,029	1,048	601	66	108,330
2009	6,890	63,370	37,644	1,041	685	132	109,762
2010	6,361	61,342	49,401	933	726	170	118,933
2011	8,060	55,727	52,300	4,299	5,114	1,569	127,069
2012	9,254	60,993	55,621	2,276	4,349	1,585	134,077

Input of Crude Oil in Refineries

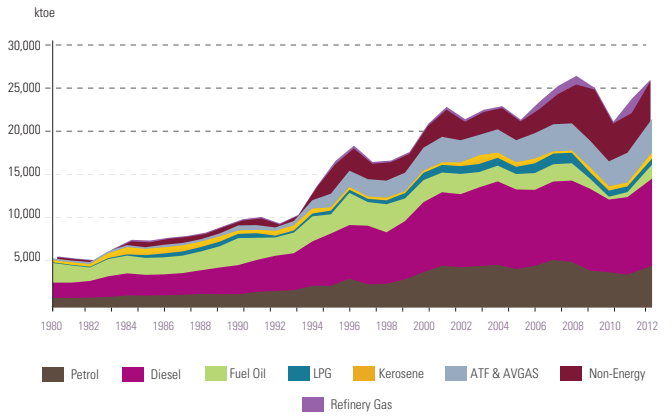


Source: National Energy Balance 2012

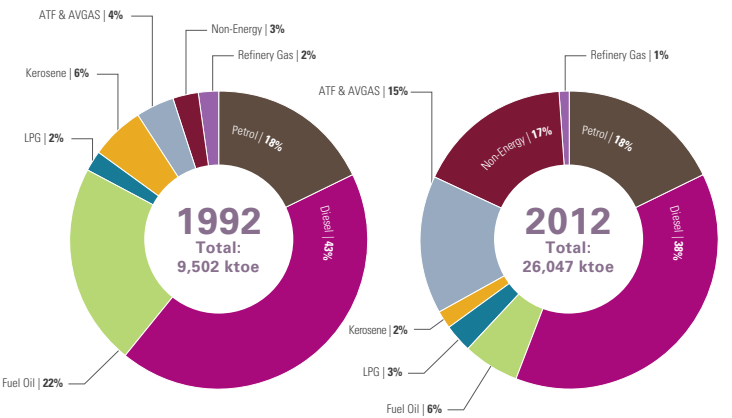


Year	Input of Crude Oil in Refineries in ktoe		
	Local Crude Oil	Imported Crude Oil & Others	Total
1990	8,072	2,342	10,414
1991	8,476	2,113	10,589
1992	9,016	1,409	10,425
1993	8,502	3,195	11,697
1994	12,326	1,853	14,179
1995	15,991	969	16,960
1996	15,879	3,501	19,380
1997	16,382	1,535	17,917
1998	15,942	1,190	17,132
1999	14,595	3,048	17,643
2000	15,421	6,252	21,673
2001	13,299	10,290	23,589
2002	14,838	8,032	22,870
2003	17,127	8,254	25,381
2004	16,810	8,524	25,334
2005	18,216	6,123	24,339
2006	16,797	8,112	24,909
2007	17,320	9,251	26,571
2008	18,638	8,138	26,776
2009	20,685	5,701	26,386
2010	14,003	8,484	22,487
2011	14,874	9,806	24,679
2012	17,213	10,347	27,560

Production of Petroleum Products from Refineries

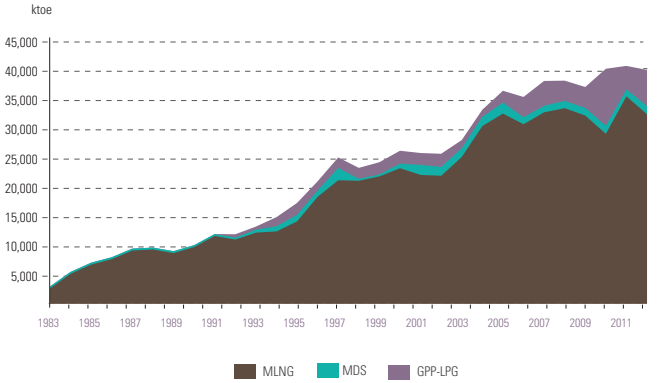


Source: National Energy Balance 2012

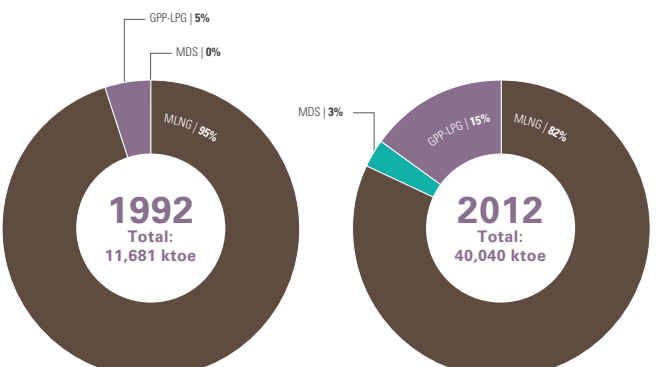


Year	Production of Petroleum Products from Refineries in ktoe								
	Petrol	Diesel	Fuel Oil	LPG	Kerosene	ATF & AV GAS	Non-Energy	Refinery Gas	Total
1980	933	1,748	2,257	83	232	214	136	90	5,693
1981	916	1,765	1,979	75	275	218	139	86	5,453
1982	949	1,921	1,554	86	286	256	144	79	5,275
1983	1,031	2,384	1,986	111	542	259	124	119	6,556
1984	1,205	2,539	2,044	142	812	258	430	178	7,608
1985	1,187	2,387	1,952	315	712	201	567	209	7,530
1986	1,220	2,410	1,962	447	694	314	676	122	7,845
1987	1,283	2,495	2,013	477	682	293	700	117	8,060
1988	1,384	2,722	2,172	504	612	294	598	151	8,437
1989	1,357	3,062	2,446	531	591	357	749	126	9,219
1990	1,347	3,350	3,106	491	360	613	561	151	9,979
1991	1,611	3,681	2,547	526	390	548	772	168	10,243
1992	1,724	4,048	2,110	200	541	412	324	143	9,502
1993	1,816	4,249	2,375	244	576	517	600	106	10,483
1994	2,316	5,108	2,887	319	563	980	1,468	162	13,803
1995	2,320	6,011	2,212	431	360	1,587	3,380	385	16,686
1996	3,134	6,174	3,696	371	292	1,899	2,554	331	18,451
1997	2,491	6,744	2,716	371	265	2,000	1,783	203	16,573
1998	2,545	5,926	3,233	449	285	1,985	2,117	192	16,732
1999	3,056	6,712	2,603	617	210	2,140	2,159	230	17,727
2000	3,893	8,059	2,532	838	239	2,660	2,492	241	20,954
2001	4,623	8,462	2,269	875	283	2,954	3,120	331	22,917
2002	4,460	8,401	2,332	897	414	2,570	2,127	294	21,495
2003	4,584	9,062	1,763	932	983	2,367	2,623	262	22,576
2004	4,724	9,611	1,813	897	591	2,693	2,455	215	22,999
2005	4,245	9,161	1,777	822	521	2,553	2,157	202	21,438
2006	4,607	8,752	1,933	1,118	537	2,938	2,750	849	23,484
2007	5,285	9,033	1,990	1,228	234	3,138	3,461	938	25,307
2008	5,066	9,364	1,994	1,208	245	3,139	4,475	991	26,482
2009	4,052	9,415	1,144	732	565	3,085	5,905	195	25,093
2010	3,874	8,370	327	697	483	2,892	4,357	210	21,210
2011	3,599	8,925	571	665	419	3,457	4,572	1,659	23,867
2012	4,617	10,033	1,608	702	654	3,918	4,318	197	26,047

Conversion in Gas Plants

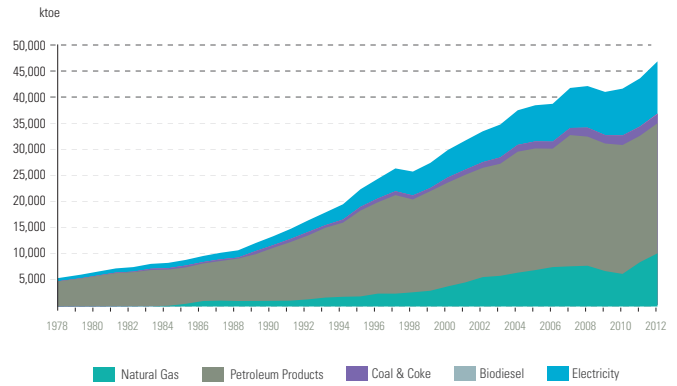


Source: National Energy Balance 2012

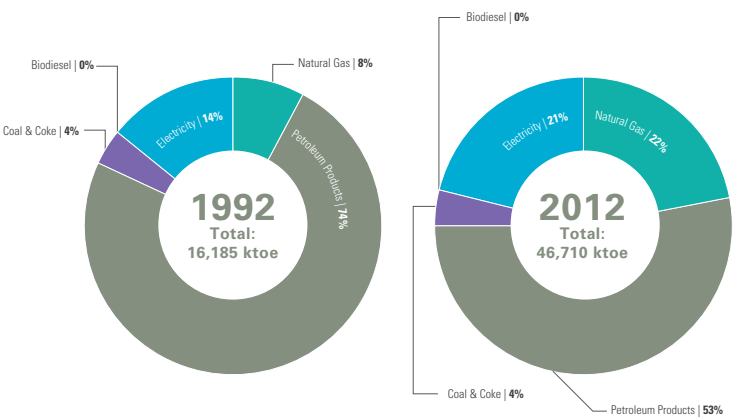


Year	Conversion in Gas Plants in ktoe			
	MLNG	MDS	GPP-LPG	Total
1983	2,672	-	-	2,672
1984	5,188	-	-	5,188
1985	6,778	-	-	6,778
1986	7,723	-	-	7,723
1987	9,208	-	-	9,208
1988	9,382	-	-	9,382
1989	8,764	-	-	8,764
1990	9,797	-	-	9,797
1991	11,715	-	-	11,715
1992	11,098	-	583	11,681
1993	12,285	191	529	13,005
1994	12,502	552	1,580	14,634
1995	14,230	798	2,060	17,088
1996	18,479	747	1,596	20,822
1997	21,329	1,794	1,822	24,945
1998	21,240	-	1,898	23,138
1999	22,000	-	2,116	24,116
2000	23,405	451	2,237	26,093
2001	22,253	1,407	2,044	25,704
2002	22,102	1,188	2,282	25,572
2003	25,344	1,184	1,412	27,940
2004	30,680	1,271	1,225	33,176
2005	32,837	1,567	2,043	36,447
2006	30,996	876	3,506	35,378
2007	33,054	799	4,288	38,141
2008	33,766	920	3,507	38,193
2009	32,497	991	3,610	37,098
2010	29,345	1,057	9,844	40,246
2011	35,815	851	4,071	40,737
2012	32,717	1,089	6,234	40,040

Final Energy Consumption by Type of Fuels

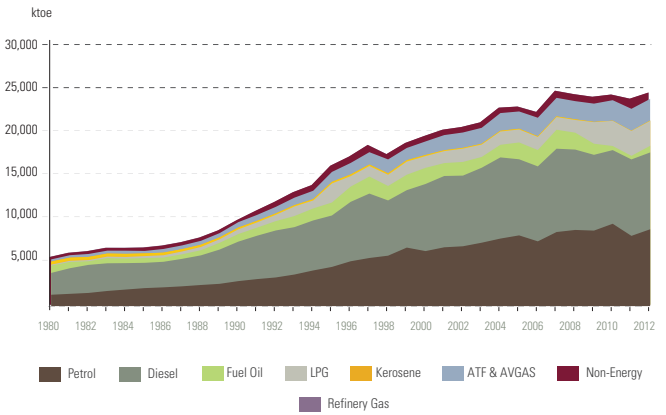


Source: National Energy Balance 2012

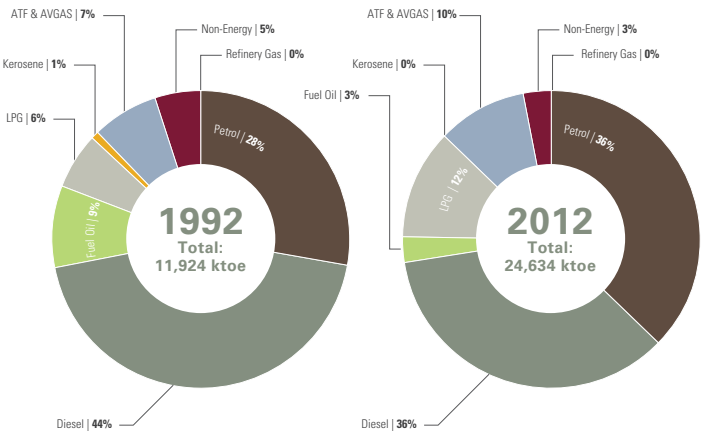


Year	Final Energy Consumption by Type of Fuels in ktoe					
	Natural Gas	Petroleum Products	Coal & Coke	Biodiesel	Electricity	Total
1978	31	4,456	23	-	604	5,114
1979	33	5,032	33	-	684	5,782
1980	35	5,550	53	-	747	6,385
1981	39	6,041	99	-	800	6,979
1982	46	6,228	93	-	866	7,233
1983	45	6,621	249	-	935	7,850
1984	134	6,622	270	-	1,019	8,045
1985	515	6,656	362	-	1,079	8,612
1986	1,056	6,880	268	-	1,164	9,368
1987	1,132	7,271	327	-	1,253	9,983
1988	1,058	7,816	189	-	1,393	10,456
1989	1,070	8,635	595	-	1,548	11,848
1990	1,093	9,825	513	-	1,715	13,146
1991	1,125	10,914	599	-	1,925	14,563
1992	1,368	11,927	672	-	2,218	16,185
1993	1,716	13,075	487	-	2,450	17,728
1994	1,863	13,894	598	-	2,932	19,287
1995	1,935	16,142	712	-	3,375	22,164
1996	2,474	17,203	727	-	3,777	24,181
1997	2,465	18,578	740	-	4,384	26,167
1998	2,726	17,488	767	-	4,577	25,558
1999	3,023	18,782	608	-	4,815	27,228
2000	3,863	19,581	991	-	5,263	29,698
2001	4,621	20,323	977	-	5,594	31,515
2002	5,644	20,638	1,086	-	5,922	33,290
2003	5,886	21,175	1,212	-	6,313	34,586
2004	6,490	22,885	1,305	-	6,642	37,322
2005	6,981	23,012	1,348	-	6,943	38,284
2006	7,562	22,394	1,335	-	7,272	38,563
2007	7,708	24,853	1,361	-	7,683	41,605
2008	7,818	24,452	1,713	-	7,986	41,969
2009	6,800	24,146	1,613	-	8,286	40,845
2010	6,254	24,403	1,826	-	8,993	41,476
2011	8,515	23,923	1,759	24	9,235	43,456
2012	10,206	24,634	1,744	115	10,011	46,710

Final Energy Consumption for Petroleum Products

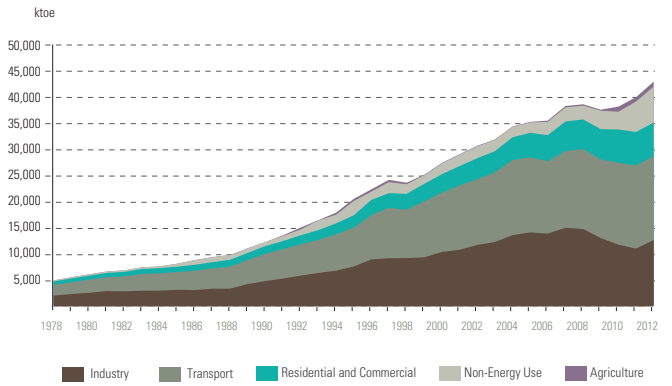


Source: National Energy Balance 2012

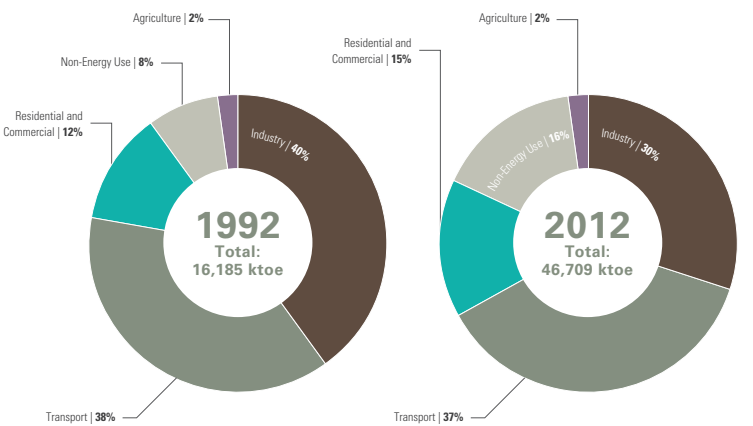


Year	Final Consumption of Petroleum Products in ktoe								
	Petrol	Diesel	Fuel Oil	LPG	Kerosene	ATF & AVGAS	Non-Energy	Refinery Gas	Total
1980	1,317	2,368	846	121	351	255	269	23	5,550
1981	1,423	2,811	734	124	368	285	270	26	6,041
1982	1,529	3,094	422	135	364	346	314	24	6,228
1983	1,756	3,051	604	174	352	338	320	26	6,621
1984	1,925	2,901	528	188	357	371	315	37	6,622
1985	2,088	2,773	554	229	310	288	386	28	6,656
1986	2,178	2,803	489	271	301	429	382	27	6,880
1987	2,297	3,026	529	330	269	435	358	27	7,271
1988	2,451	3,275	598	379	255	459	366	33	7,816
1989	2,585	3,816	785	415	211	499	313	11	8,635
1990	2,901	4,421	883	548	203	630	229	10	9,825
1991	3,135	4,873	938	609	180	690	467	12	10,904
1992	3,326	5,291	1,088	730	160	764	565	-	11,924
1993	3,666	5,339	1,293	1,108	149	875	625	10	13,065
1994	4,139	5,643	1,392	926	152	978	654	10	13,894
1995	4,548	5,810	1,506	2,215	177	1,160	718	8	16,142
1996	5,205	6,735	1,770	1,215	197	1,335	742	3	17,202
1997	5,586	7,314	1,978	1,223	169	1,439	843	3	18,555
1998	5,854	6,252	1,678	1,301	165	1,619	615	4	17,488
1999	6,793	6,506	1,792	1,523	162	1,424	579	3	18,782
2000	6,387	7,627	1,875	1,362	131	1,574	622	3	19,581
2001	6,827	8,116	1,498	1,392	99	1,762	626	4	20,324
2002	6,947	8,041	1,589	1,542	92	1,785	633	6	20,635
2003	7,360	8,540	1,255	1,437	93	1,852	632	7	21,176
2004	7,840	9,262	1,463	1,542	86	2,056	626	11	22,886
2005	8,211	8,672	1,954	1,509	82	2,010	564	10	23,012
2006	7,517	8,540	1,901	1,520	79	2,152	672	12	22,393
2007	8,600	9,512	2,202	1,474	76	2,155	823	9	24,851
2008	8,842	9,167	1,963	1,475	75	2,112	818	-	24,452
2009	8,766	8,634	1,291	2,506	30	2,120	799	-	24,146
2010	9,560	8,388	478	2,920	19	2,380	657	-	24,402
2011	8,155	8,712	414	2,892	19	2,553	1,178	-	23,923
2012	8,919	8,757	768	2,891	38	2,522	739	-	24,634

Final Energy Consumption by Sectors



Source: National Energy Balance 2012



Year	Final Energy Consumption by Sectors in ktoe					
	Industry	Transport	Residential and Commercial	Non-Energy Use	Agriculture	Total
1978	2,273	1,928	712	201	-	5,114
1979	2,599	2,135	794	254	-	5,782
1980	2,870	2,398	826	291	-	6,385
1981	3,221	2,587	884	287	-	6,979
1982	3,165	2,794	942	332	-	7,233
1983	3,301	3,170	1,040	339	-	7,850
1984	3,304	3,300	1,099	342	-	8,045
1985	3,489	3,377	1,123	623	-	8,612
1986	3,430	3,726	1,233	979	-	9,368
1987	3,709	3,929	1,297	1,048	-	9,983
1988	3,722	4,278	1,435	1,021	-	10,456
1989	4,704	4,684	1,495	965	-	11,848
1990	5,300	5,386	1,622	838	-	13,146
1991	5,835	5,806	1,721	1,071	130	14,563
1992	6,455	6,226	1,891	1,222	391	16,185
1993	7,012	6,558	2,069	2,027	62	17,728
1994	7,486	7,262	2,300	1,817	422	19,287
1995	8,341	7,827	2,556	2,994	446	22,164
1996	9,838	8,951	3,162	1,744	486	24,181
1997	10,106	10,201	3,072	2,298	490	26,167
1998	10,121	9,793	3,314	2,023	307	25,558
1999	10,277	11,393	3,653	1,799	106	27,228
2000	11,406	12,071	3,868	2,250	104	29,699
2001	11,852	13,138	4,049	2,378	98	31,515
2002	12,854	13,442	4,387	2,511	96	33,290
2003	13,472	14,271	4,400	2,345	98	34,586
2004	14,913	15,385	4,754	2,183	87	37,322
2005	15,492	15,384	5,134	2,173	101	38,284
2006	15,248	14,825	5,429	2,809	253	38,564
2007	16,454	15,717	6,196	2,958	281	41,606
2008	16,205	16,395	6,205	2,876	287	41,968
2009	14,312	16,119	6,336	3,868	211	40,846
2010	12,928	16,828	6,951	3,696	1,074	41,477
2011	12,100	17,070	6,993	6,377	916	43,456
2012	13,919	17,180	7,064	7,494	1,052	46,709

Commercial Energy Balance for Malaysia 2012 (Thousand Tonnes of Oil Equivalent)

ENERGY SOURCE	NATURAL GAS	LNG	CRUDE OIL (1/)	OTHERS (2/)	TOTAL PETROLEUM PRODUCTS	PETROLEUM PRODUCTS			
						PETROL	DIESEL	FUEL OIL	LPG
PRIMARY SUPPLY									
1. Primary Production	62,581	0	29,115	0	0	0	0	0	0
2. Gas Flaring, Reinjection & Use	-4,884	0	0	0	0	0	0	0	0
3. Imports	7,866	0	9,995	8	12,725	5,918	3,504	794	448
4. Exports	-1,368	-25,547	-11,988	-98	-13,966	-2,078	-5,308	-1,017	-435
5. Bunkers	0	0	0	0	-56	0	-3	-54	0
6. Stock Change	0	0	967	0	282	175	1,506	-0	-10
7. Statistical Discrepancy	0	0	-36	0	0	0	0	0	0
8. Primary Supply	64,195	25,547	28,054	-90	-1,015	4,015	-302	-279	4
TRANSFORMATION									
9. Gas Plants									
9.1 MLNG	-32,717	26,003	0	0	228	0	0	0	228
9.2 MDS	-1,089	0	0	0	486	0	126	0	0
9.3 GPP-LPG (3&4/)	-6,234	0	0	0	2,036	0	0	0	2,035
SUBTOTAL	-40,041	26,003	0	0	2,750	0	126	0	2,263
10. Refineries	0	0	-27,560	90	26,047	4,617	10,033	1,608	702
11. Power Stations & Self-Generation									
11.1 Hydro Stations	0	0	0	0	0	0	0	0	0
11.2 Thermal Stations	-11,533	0	0	0	-1,361	0	-811	-550	0
11.3 Self-Generation (5/)	-1,734	0	0	0	-25	0	-25	0	0
SUBTOTAL	-13,267	0	0	0	-1,385	0	-836	-550	0
12. Losses & Own Use	-678	-457	-494	0	-1,753	0	0	-18	0
13. Statistical Discrepancy	-0	0	0	0	-8	285	-265	7	-76
14. Secondary Supply	-53,988	25,547	-28,054	90	25,649	4,903	9,059	1,047	2,888
FINAL USE									
15. Residential	0	0	0	0	715	0	0	0	703
16. Commercial	23	0	0	0	876	0	225	20	631
17. Industry	4,557	0	0	0	3,109	216	1,991	737	138
18. Transport	292	0	0	0	16,751	8,617	5,610	5	0
19. Agriculture	0	0	0	0	7	0	0	7	0
20. Fishery	0	0	0	0	1,016	86	930	0	0
21. Non-Energy Use	5,336	0	0	0	2,159	0	0	0	1,420
22. Total Final Use	10,206	0	0	0	24,635	8,919	8,757	768	2,891
ELECTRICITY OUTPUT									
Main Activity Producer Gross Electricity Generation - GWh	57,166	0	0	0	5,907	0	3,154	2,752	0
Autoproducer Gross Electricity Generation - GWh	5,533	0	0	0	108	0	108	0	0

1/ Crude production includes Condensates which comprise of Pentane and Heavier Hydrocarbons.
2/ Others refer to Non-Crude Energy Forms (consist of Imported Light Diesel, Slop Reprocess, Crude Residuum & Middle East Residue) which are used as refinery intake.
3/ GPP-LPG extracts Liquid Products i.e Condensates, Ethane, Butane, Propane from Natural Gas. Ethane is not included under LPG production.
4/ Butane and Propane as MTBE Feedstocks are presented as Non-Energy use under LPG column. Ethane is presented under Natural Gas column.
5/ Estimated figures taken from the Energy Commission, Electricity Supply In Malaysia - Performance and Statistical Information 2012.

Note : Total may not necessarily add up due to rounding

KEROSENE	ATF & AV GAS	NON-ENERGY	REFINERY GAS	COAL & COKE	HYDRO POWER	SOLAR	BIOMASS	BIOGAS	BIODIESEL	ELECTRICITY	TOTAL
0	0	0	0	1,860	2,149	0	183	4	253	0	96,145
0	0	0	0	0	0	0	0	0	0	0	-4,884
5	346	1,710	0	14,220	0	0	0	0	0	9	44,823
-703	-1,008	-3,418	0	-232	0	0	0	0	-30	-1	-53,230
0	0	-0	0	0	0	0	0	0	0	0	-56
1	-767	-623	0	-52	0	0	0	0	-108	0	1,088
0	0	0	0	88	0	0	0	0	0	0	51
-696	-1,429	-2,331	0	15,882	2,149	0	183	4	115	7	83,938
0	0	0	0	0	0	0	0	0	0	0	-6,487
37	0	324	0	0	0	0	0	0	0	0	-603
0	0	0	0	0	0	0	0	0	0	0	-4,200
37	0	324	0	0	0	0	0	0	0	0	-11,289
654	3,918	4,318	197	0	0	0	0	0	0	0	-1,422
0	0	0	0	0	-2,149	0	0	0	0	779	-1,370
0	0	0	0	-14,138	0	-1	-64	-4	0	10,253	-16,848
0	0	0	0	0	0	0	-119	0	0	530	-1,348
0	0	0	0	-14,138	-2,149	-1	-183	-4	0	11,562	-19,567
0	0	-1,537	-197	0	0	0	0	0	0	-993	-4,376
43	33	-34	0	0	0	1	-0	-0	0	-565	-572
733	3,949	3,017	0	-14,138	-2,149	-0	-138	-3	0	10,003	-37,131
11	0	0	0	0	0	0	0	0	0	2,126	2,841
0	0	0	0	0	0	0	0	0	0	3,325	4,223
26	0	0	0	1,744	0	0	0	0	0	4,510	13,919
0	2,522	0	0	0	0	0	0	0	115	21	17,180
0	0	0	0	0	0	0	0	0	0	30	36
0	0	0	0	0	0	0	0	0	0	0	1,016
0	0	739	0	0	0	0	0	0	0	0	7,494
38	2,522	739	0	1,744	0	0	0	0	115	10,011	46,711
0	0	0	0	55,788	9,056	7	279	17	0	0	128,220
0	0	0	0	0	0	0	513	0	0	0	6,154

Commercial Energy Balance for Malaysia Q1 2012 (Thousand Tonnes of Oil Equivalent)

ENERGY SOURCE	NATURAL GAS	LNG	CRUDE OIL (1/)	OTHERS (2/)	TOTAL PETROLEUM PRODUCTS	PETROLEUM PRODUCTS			
						PETROL	DIESEL	FUEL OIL	LPG
PRIMARY SUPPLY									
1. Primary Production	17,085	0	7,602	0	0	0	0	0	0
2. Gas Flaring, Reinjection & Use	-1,752	0	0	0	0	0	0	0	0
3. Imports	1,944	0	2,827	8	2,626	1,476	525	94	106
4. Exports	-309	-7,115	-3,354	-17	-3,378	-459	-1,270	-91	-147
5. Bunkers	0	0	0	0	-14	0	-1	-13	0
6. Stock Change	0	0	-290	0	63	-3	460	0	-3
7. Statistical Discrepancy	0	0	189	0	0	0	0	0	0
8. Primary Supply	16,968	-7,115	6,975	-9	-703	1,014	-286	-11	-44
TRANSFORMATION									
9. Gas Plants									
9.1 MLNG	-9,374	7,198	0	0	63	0	0	0	63
9.2 MDS	-226	0	0	0	111	0	23	0	0
9.3 GPP-LPG (3&4/)	-1,445	0	0	0	526	0	0	0	526
SUBTOTAL	-11,046	7,198	0	0	700	0	23	0	588
10. Refineries	0	0	-6,858	9	6,463	1,124	2,462	137	185
11. Power Stations & Self-Generation									
11.1 Hydro Stations	0	0	0	0	0	0	0	0	0
11.2 Thermal Stations	-2,800	0	0	0	-105	0	-78	-27	0
11.3 Self-Generation (5/)	443	0	0	0	-6	0	-6	0	0
SUBTOTAL	-3,243	0	0	0	-111	0	-85	-27	0
12. Losses & Own Use	-183	-83	-117	0	-422	0	0	-4	0
13. Statistical Discrepancy	-0	0	0	0	-71	131	-103	10	0
14. Secondary Supply	-14,472	7,115	-6,975	9	6,557	1,256	2,298	117	773
FINAL USE									
15. Residential	0	0	0	0	182	0	0	0	180
16. Commercial	6	0	0	0	213	0	57	1	156
17. Industry	1,074	0	0	0	620	55	428	101	34
18. Transport	72	0	0	0	4,094	2,195	1,297	2	0
19. Agriculture	0	0	0	0	2	0	0	2	0
20. Fishery	0	0	0	0	249	20	229	0	0
21. Non-Energy Use	1,344	0	0	0	493	0	0	0	360
22. Total Final Use	2,495	0	0	0	5,854	2,270	2,012	106	729
ELECTRICITY OUTPUT									
Main Activity Producer Gross Electricity Generation - GWh	14,174	0	0	0	426	0	258	168	0
Autoproducer Gross Electricity Generation - GWh	1,385	0	0	0	27	0	27	0	0

1/ Crude production includes Condensates which comprise of Pentane and Heavier Hydrocarbons.
2/ Others refer to Non-Crude Energy Forms (consist of Imported Light Diesel, Slop Reprocess, Crude Residuum & Middle East Residue) which are used as refinery intake.
3/ GPP-LPG extracts Liquid Products i.e Condensates, Ethane, Butane, Propane from Natural Gas. Ethane is not included under LPG production.
4/ Butane and Propane as MTBE Feedstocks are presented as Non-Energy use under LPG column. Ethane is presented under Natural Gas column.
5/ Estimated figures taken from the Energy Commission, Electricity Supply In Malaysia - Performance and Statistical Information 2012.

Note : Total may not necessarily add up due to rounding

KEROSENE	ATF & AV GAS	NON-ENERGY	REFINERY GAS	COAL & COKE	HYDRO POWER	SOLAR	BIOMASS	BIOGAS	BIODIESEL	ELECTRICITY	TOTAL
0	0	0	0	535	584	0	47	1	66	0	25,920
0	0	0	0	0	0	0	0	0	0	0	-1,752
1	77	347	0	3,447	0	0	0	0	0	0	10,852
-176	-289	-946	0	-65	0	0	0	0	-17	-1	-14,256
0	0	-0	0	0	0	0	0	0	0	0	-14
-10	-201	-180	0	88	0	0	0	0	-24	0	-163
0	0	0	0	-31	0	0	0	0	0	0	159
-184	-413	-780	0	3,974	584	0	47	1	25	-1	20,746
0	0	0	0	0	0	0	0	0	0	0	-2,113
9	0	79	0	0	0	0	0	0	0	0	-115
0	0	0	0	0	0	0	0	0	0	0	-919
9	0	79	0	0	0	0	0	0	0	0	-3,148
154	1,061	1,292	47	0	0	0	0	0	0	0	-385
0	0	0	0	0	-584	0	0	0	0	221	-363
0	0	0	0	-3,544	0	-0	-16	-1	0	2,441	-4,025
0	0	0	0	0	0	0	-31	0	0	134	-347
0	0	0	0	-3,544	-584	-0	-47	-1	0	2,796	-4,736
0	0	-371	-47	0	0	0	0	0	0	-237	-1,043
25	-47	88	0	0	0	0	0	0	0	-166	-236
187	1,014	913	0	-3,544	-584	-0	-47	-1	0	2,393	-9,500
2	0	0	0	0	0	0	0	0	0	507	688
0	0	0	0	0	0	0	0	0	0	798	1,017
1	0	0	0	430	0	0	0	0	0	1,076	3,200
0	601	0	0	0	0	0	0	0	25	5	4,196
0	0	0	0	0	0	0	0	0	0	7	9
0	0	0	0	0	0	0	0	0	0	0	249
0	0	133	0	0	0	0	0	0	0	0	1,836
3	601	133	0	430	0	0	0	0	25	2,393	11,197
0	0	0	0	13,698	2,567	2	70	4	0	0	30,941
0	0	0	0	0	0	0	131	0	0	0	1,544

Commercial Energy Balance for Malaysia Q2 2012 (Thousand Tonnes of Oil Equivalent)

ENERGY SOURCE	NATURAL GAS	LNG	CRUDE OIL (1/)	OTHERS (2/)	TOTAL PETROLEUM PRODUCTS	PETROLEUM PRODUCTS			
						PETROL	DIESEL	FUEL OIL	LPG
PRIMARY SUPPLY									
1. Primary Production	14,913	0	6,896	0	0	0	0	0	0
2. Gas Flaring, Reinjection & Use	-1,300	0	0	0	0	0	0	0	0
3. Imports	1,834	0	3,012	0	2,421	1,019	837	282	101
4. Exports	-323	-5,703	-3,037	0	-2,579	-6	-1,372	-127	-121
5. Bunkers	0	0	0	0	-10	0	-1	-10	0
6. Stock Change	0	0	213	0	240	58	541	-0	-1
7. Statistical Discrepancy	0	0	-92	0	0	0	0	0	0
8. Primary Supply	15,124	-5,703	6,993	0	73	1,070	5	144	-20
TRANSFORMATION									
9. Gas Plants									
9.1 MLNG	-7,737	5,912	0	0	56	0	0	0	56
9.2 MDS	-310	0	0	0	130	0	28	0	0
9.3 GPP-LPG (3&4/)	-1,189	0	0	0	518	0	0	0	518
SUBTOTAL	-9,236	5,912	0	0	704	0	28	0	574
10. Refineries	0	0	-6,889	0	6,425	1,138	2,503	324	181
11. Power Stations & Self-Generation									
11.1 Hydro Stations	0	0	0	0	0	0	0	0	0
11.2 Thermal Stations	-2,781	0	0	0	-481	0	-253	-228	0
11.3 Self-Generation (5/)	-411	0	0	0	-6	0	-6	0	0
SUBTOTAL	-3,192	0	0	0	-487	0	-259	-228	0
12. Losses & Own Use	-173	-209	-104	0	-457	0	0	-5	0
13. Statistical Discrepancy	-0	0	0	0	-144	12	-92	-34	-28
14. Secondary Supply	-12,602	5,703	-6,993	0	6,041	1,150	2,180	56	726
FINAL USE									
15. Residential	0	0	0	0	174	0	0	0	170
16. Commercial	6	0	0	0	209	0	48	5	156
17. Industry	1,110	0	0	0	770	64	461	193	35
18. Transport	77	0	0	0	4,207	2,135	1,438	1	0
19. Agriculture	0	0	0	0	2	0	0	2	0
20. Fishery	0	0	0	0	260	22	238	0	0
21. Non-Energy Use	1,329	0	0	0	493	0	0	0	345
22. Total Final Use	2,521	0	0	0	6,114	2,221	2,185	200	706
ELECTRICITY OUTPUT									
Main Activity Producer Gross Electricity Generation - GWh	14,174	0	0	0	426	0	258	168	0
Autoproducer Gross Electricity Generation - GWh	1,385	0	0	0	27	0	27	0	0

1/ Crude production includes Condensates which comprise of Pentane and Heavier Hydrocarbons.
2/ Others refer to Non-Crude Energy Forms (consist of Imported Light Diesel, Slop Reprocess, Crude Residuum & Middle East Residue) which are used as refinery intake.
3/ GPP-LPG extracts Liquid Products i.e Condensates, Ethane, Butane, Propane from Natural Gas. Ethane is not included under LPG production.
4/ Butane and Propane as MTBE Feedstocks are presented as Non-Energy use under LPG column. Ethane is presented under Natural Gas column.
5/ Estimated figures taken from the Energy Commission, Electricity Supply In Malaysia - Performance and Statistical Information 2012.

Note : Total may not necessarily add up due to rounding

KEROSENE	ATF & AV GAS	NON-ENERGY	REFINERY GAS	COAL & COKE	HYDRO POWER	SOLAR	BIOMASS	BIOGAS	BIODIESEL	ELECTRICITY	TOTAL
0	0	0	0	457	686	0	43	1	55	0	23,051
0	0	0	0	0	0	0	0	0	0	0	-1,300
1	99	82	0	3,634	0	0	0	0	0	0	10,902
-176	-199	-579	0	-39	0	0	0	0	-2	0	-11,683
0	0	-0	0	0	0	0	0	0	0	0	-10
8	-188	-178	0	-48	0	0	0	0	-24	0	381
0	0	0	0	67	0	0	0	0	0	0	-25
-166	-288	-674	0	4,071	686	0	43	1	29	0	21,316
0	0	0	0	0	0	0	0	0	0	0	-1,770
10	0	93	0	0	0	0	0	0	0	0	-180
0	0	0	0	0	0	0	0	0	0	0	-672
10	0	93	0	0	0	0	0	0	0	0	-2,621
170	931	1,134	45	0	0	0	0	0	0	0	-463
0	0	0	0	0	-686	0	0	0	0	225	-461
0	0	0	0	3,632	0	0	-15	-1	0	2,621	-4,290
0	0	0	0	0	0	0	-28	0	0	130	-315
0	0	0	0	-3,632	-686	0	-43	-1	0	2,976	-5,066
0	0	-407	-45	0	0	0	0	0	0	-309	-1,253
7	-10	3	0	0	0	0	0	-0	0	-120	-264
186	920	822	0	-3,632	-686	0	-43	-1	0	2,546	-9,666
3	0	0	0	0	0	0	0	0	0	540	714
0	0	0	0	0	0	0	0	0	0	847	1,061
17	0	0	0	439	0	0	0	0	0	1,146	3,465
0	633	0	0	0	0	0	0	0	29	5	4,318
0	0	0	0	0	0	0	0	0	0	8	9
0	0	0	0	0	0	0	0	0	0	0	260
0	0	148	0	0	0	0	0	0	0	0	1,823
21	633	148	0	439	0	0	0	0	29	2,546	11,650
0	0	0	0	13,698	2,567	2	70	4	0	0	30,941
0	0	0	0	0	0	0	131	0	0	0	1,544

Commercial Energy Balance for Malaysia Q3 2012 (Thousand Tonnes of Oil Equivalent)

ENERGY SOURCE	NATURAL GAS	LNG	CRUDE OIL (1/)	OTHERS (2/)	TOTAL PETROLEUM PRODUCTS	PETROLEUM PRODUCTS			
						PETROL	DIESEL	FUEL OIL	LPG
PRIMARY SUPPLY									
1. Primary Production	14,579	0	6,951	0	0	0	0	0	0
2. Gas Flaring, Reinjection & Use	-1,008	0	0	0	0	0	0	0	0
3. Imports	2,058	0	2,032	0	3,821	1,657	1,180	209	124
4. Exports	-348	-5,656	-2,610	-31	-3,274	-714	-858	-400	-88
5. Bunkers	0	0	0	0	-11	0	-1	-11	0
6. Stock Change	0	0	393	0	-309	56	-27	0	-2
7. Statistical Discrepancy	0	0	-37	0	0	0	0	0	0
8. Primary Supply	15,280	-5,656	6,729	-31	227	999	294	-202	35
TRANSFORMATION									
9. Gas Plants									
9.1 MLNG	-6,383	5,730	0	0	55	0	0	0	55
9.2 MDS	-284	0	0	0	124	0	37	0	0
9.3 GPP-LPG (3&4/)	-2,489	0	0	0	502	0	0	0	502
SUBTOTAL	-9,157	5,730	0	0	680	0	37	0	556
10. Refineries	0	0	-6,598	31	6,389	1,168	2,409	590	158
11. Power Stations & Self-Generation									
11.1 Hydro Stations	0	0	0	0	0	0	0	0	0
11.2 Thermal Stations	-3,016	0	0	0	-370	0	-201	-169	0
11.3 Self-Generation (5/)	-442	0	0	0	-6	0	-6	0	0
SUBTOTAL	-3,458	0	0	0	-376	0	-207	-169	0
12. Losses & Own Use	-162	-74	-132	0	-446	0	0	-4	0
13. Statistical Discrepancy	-0	-0	0	0	9	70	-89	10	-27
14. Secondary Supply	-12,778	5,656	-6,729	31	6,257	1,238	2,149	427	687
FINAL USE									
15. Residential	0	0	0	0	180	0	0	0	177
16. Commercial	5	0	0	0	221	0	55	10	156
17. Industry	1,192	0	0	0	859	48	558	213	35
18. Transport	71	0	0	0	4,394	2,167	1,598	1	0
19. Agriculture	0	0	0	0	1	0	0	1	0
20. Fishery	0	0	0	0	255	22	233	0	0
21. Non-Energy Use	1,234	0	0	0	574	0	0	0	353
22. Total Final Use	2,502	0	0	0	6,484	2,237	2,443	225	722
ELECTRICITY OUTPUT									
Main Activity Producer Gross Electricity Generation - GWh	15,021	0	0	0	1,557	0	765	791	0
Autoproducer Gross Electricity Generation - GWh	1,363	0	0	0	28	0	28	0	0

1/ Crude production includes Condensates which comprise of Pentane and Heavier Hydrocarbons.
2/ Others refer to Non-Crude Energy Forms (consist of Imported Light Diesel, Slop Reprocess, Crude Residuum & Middle East Residue) which are used as refinery intake.
3/ GPP-LPG extracts Liquid Products i.e Condensates, Ethane, Butane, Propane from Natural Gas. Ethane is not included under LPG production.
4/ Butane and Propane as MTBE Feedstocks are presented as Non-Energy use under LPG column. Ethane is presented under Natural Gas column.
5/ Estimated figures taken from the Energy Commission, Electricity Supply In Malaysia - Performance and Statistical Information 2012.

Note : Total may not necessarily add up due to rounding

KEROSENE	ATF & AV GAS	NON-ENERGY	REFINERY GAS	COAL & COKE	HYDRO POWER	SOLAR	BIOMASS	BIOGAS	BIODIESEL	ELECTRICITY	TOTAL
0	0	0	0	463	396	0	45	1	58	0	22,492
0	0	0	0	0	0	0	0	0	0	0	-1,008
1	60	589	0	3,007	0	0	0	0	0	0	10,918
-176	-221	-817	0	-58	0	0	0	0	-2	-0	-11,979
0	0	-0	0	0	0	0	0	0	0	0	-11
2	-193	-145	0	234	0	0	0	0	-26	0	292
0	0	0	0	76	0	0	0	0	0	0	39
-173	-354	-373	0	3,722	396	0	45	1	30	-0	20,743
0	0	0	0	0	0	0	0	0	0	0	-598
10	0	78	0	0	0	0	0	0	0	0	-160
0	0	0	0	0	0	0	0	0	0	0	-1,988
10	0	78	0	0	0	0	0	0	0	0	-2,746
171	926	914	53	0	0	0	0	0	0	0	-178
0	0	0	0	0	-396	0	0	0	0	155	-241
0	0	0	0	-3,280	0	0	-16	-1	0	2,592	-4,091
0	0	0	0	0	0	0	-29	0	0	130	-347
0	0	0	0	-3,280	-396	-0	-45	-1	0	2,877	-4,679
0	0	-389	-53	0	0	0	0	0	0	-203	-1,017
-0	55	-9	0	0	0	0	-0	0	0	-131	-122
180	982	594	0	-3,280	-396	0	0	0	0	2,543	-8,696
3	0	0	0	0	0	0	0	0	0	552	732
0	0	0	0	0	0	0	0	0	0	847	1,073
5	0	0	0	442	0	0	0	0	0	1,131	3,624
0	628	0	0	0	0	0	0	0	30	6	4,500
0	0	0	0	0	0	0	0	0	0	8	9
0	0	0	0	0	0	0	0	0	0	0	255
0	0	221	0	0	0	0	0	0	0	0	1,809
8	628	221	0	442	0	0	0	0	30	2,543	12,000
0	0	0	0	13,474	1,796	2	70	4	0	0	31,923
0	0	0	0	0	0	0	124	0	0	0	1,515

Commercial Energy Balance for Malaysia Q4 2012 (Thousand Tonnes of Oil Equivalent)

ENERGY SOURCE	NATURAL GAS	LNG	CRUDE OIL (1/)	OTHERS (2/)	TOTAL PETROLEUM PRODUCTS	PETROLEUM PRODUCTS			
						PETROL	DIESEL	FUEL OIL	LPG
PRIMARY SUPPLY									
1. Primary Production	16,004	0	7,666	0	0	0	0	0	0
2. Gas Flaring, Reinjection & Use	-824	0	0	0	0	0	0	0	0
3. Imports	2,030	0	2,124	0	3,857	1,766	962	209	116
4. Exports	-387	-7,073	-2,987	-50	-4,735	-898	-1,808	-400	-79
5. Bunkers	0	0	0	0	-20	0	-1	-20	0
6. Stock Change	0	0	651	0	288	64	532	0	-4
7. Statistical Discrepancy	0	0	-96	0	0	0	0	0	0
8. Primary Supply	16,823	-7,073	7,357	-50	-612	932	-315	-210	33
TRANSFORMATION									
9. Gas Plants									
9.1 MLNG	-9,223	7,163	0	0	55	0	0	0	55
9.2 MDS	-268	0	0	0	121	0	39	0	0
9.3 GPP-LPG (3&4/)	-1,111	0	0	0	490	0	0	0	490
SUBTOTAL	-10,603	7,163	0	0	665	0	39	0	545
10. Refineries	0	0	-7,216	50	6,770	1,188	2,659	557	178
11. Power Stations & Self-Generation									
11.1 Hydro Stations	0	0	0	0	0	0	0	0	0
11.2 Thermal Stations	-2,936	0	0	0	-405	0	-279	-126	0
11.3 Self-Generation (5/)	-438	0	0	0	-6	0	-6	0	0
SUBTOTAL	-3,373	0	0	0	-411	0	-285	-126	0
12. Losses & Own Use	-160	-91	-141	0	-428	0	0	-5	0
13. Statistical Discrepancy	0	0	0	0	198	72	19	21	-21
14. Secondary Supply	-14,136	7,073	-7,357	50	6,795	1,260	2,432	447	701
FINAL USE									
15. Residential	0	0	0	0	179	0	0	0	176
16. Commercial	6	0	0	0	233	0	66	4	163
17. Industry	1,181	0	0	0	860	49	544	229	34
18. Transport	72	0	0	0	4,058	2,121	1,276	1	0
19. Agriculture	0	0	0	0	2	0	0	2	0
20. Fishery	0	0	0	0	252	22	230	0	0
21. Non-Energy Use	1,428	0	0	0	598	0	0	0	361
22. Total Final Use	2,687	0	0	0	6,183	2,191	2,117	237	735
ELECTRICITY OUTPUT									
Main Activity Producer Gross Electricity Generation - GWh	14,448	0	0	0	1,726	0	1,051	675	0
Autoproducer Gross Electricity Generation - GWh	1,419	0	0	0	26	0	26	0	0

1/ Crude production includes Condensates which comprise of Pentane and Heavier Hydrocarbons.
2/ Others refer to Non-Crude Energy Forms (consist of Imported Light Diesel, Slop Reprocess, Crude Residuum & Middle East Residue) which are used as refinery intake.
3/ GPP-LPG extracts Liquid Products i.e Condensates, Ethane, Butane, Propane from Natural Gas. Ethane is not included under LPG production.
4/ Butane and Propane as MTBE Feedstocks are presented as Non-Energy use under LPG column. Ethane is presented under Natural Gas column.
5/ Estimated figures taken from the Energy Commission, Electricity Supply In Malaysia - Performance and Statistical Information 2012.

Note : Total may not necessarily add up due to rounding

KEROSENE	ATF & AV GAS	NON-ENERGY	REFINERY GAS	COAL & COKE	HYDRO POWER	SOLAR	BIOMASS	BIOGAS	BIODIESEL	ELECTRICITY	TOTAL
0	0	0	0	405	483	0	48	1	74	0	24,682
0	0	0	0	0	0	0	0	0	0	0	-824
1	110	692	0	4,132	0	0	0	0	0	9	12,151
-176	-299	-1,076	0	-70	0	0	0	0	-9	-0	-15,312
0	0	-0	0	0	0	0	0	0	0	0	-20
1	-185	-120	0	-326	0	0	0	0	-35	0	578
0	0	0	0	-26	0	0	0	0	0	0	-122
-173	-374	-505	0	4,115	483	0	48	1	31	8	21,133
0	0	0	0	0	0	0	0	0	0	0	-2,005
8	0	74	0	0	0	0	0	0	0	0	-148
0	0	0	0	0	0	0	0	0	0	0	-621
8	0	74	0	0	0	0	0	0	0	0	-2,774
0	999	977	52	0	0	0	0	0	0	0	-396
0	0	0	0	0	-483	0	0	0	0	178	-305
0	0	0	0	-3,682	0	-0	-16	-1	0	2,599	-4,442
0	0	0	0	0	0	0	-31	0	0	136	-339
0	0	0	0	-3,682	-483	-0	-48	-1	0	2,913	-5,086
0	0	-370	-52	0	0	0	0	0	0	-244	-1,063
12	34	61	0	0	0	0	-0	0	0	-148	50
179	1,034	742	0	-3,682	-483	-0	-48	-1	0	2,521	-9,269
3	0	0	0	0	0	0	0	0	0	528	707
0	0	0	0	0	0	0	0	0	0	833	1,072
3	0	0	0	433	0	0	0	0	0	1,156	3,630
0	660	0	0	0	0	0	0	0	31	6	4,166
0	0	0	0	0	0	0	0	0	0	7	9
0	0	0	0	0	0	0	0	0	0	0	252
0	0	237	0	0	0	0	0	0	0	0	2,027
6	660	237	0	433	0	0	0	0	31	2,530	11,864
0	0	0	0	13,955	2,071	2	70	4	0	0	32,277
0	0	0	0	0	0	0	132	0	0	0	1,578

Energy Balance Flow Chart 2012

PRIMARY ENERGY SUPPLY

Oil **32.1%**

Natural Gas **46.0%**

Coal **18.9%**

Hydro **2.9%**

Renewables **0.4%**

TOTAL : 83,938 ktoe

ENERGY TRANSFORMATION

OIL REFINERY **26,047** ktoe

MDS **486** ktoe

MLNG **26,003** ktoe

POWER PLANTS **11,562** ktoe

GPP-LPG **2,036** ktoe

FINAL ENERGY CONSUMPTION

BY SECTOR

Transportation 36.8%

Industry 29.8%

Residential 6.1%

Commercial 9.0%

Agriculture 2.3%

Non-Energy 16.0%

TOTAL : 46,711 ktoe

BY TYPE OF FUEL

Oil 53.0%

Natural Gas 21.8%

Electricity 21.4%

Coal & Coke 3.7%

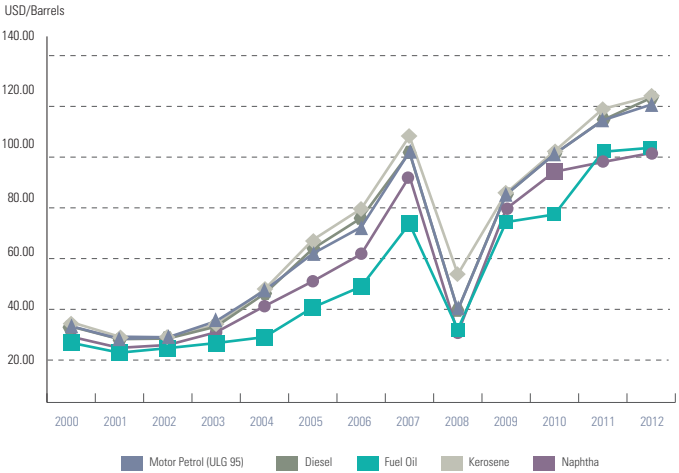
Year	Average Annual Growth Rates (%)			
	GDP at 2005 Prices	Primary Energy Supply	Final Energy Consumption	Electricity Consumption
1990	9.00	8.90	8.70	9.70
1991	9.55	22.65	10.78	12.24
1992	8.88	11.22	11.14	15.22
1993	9.90	2.16	9.53	10.46
1994	9.21	5.80	8.79	19.67
1995	9.83	7.00	14.92	15.11
1996	10.00	11.69	9.10	11.91
1997	7.32	14.09	8.21	16.07
1998	(7.36)	(5.04)	(2.33)	4.40
1999	6.14	8.63	6.53	5.20
2000	8.86	13.87	9.08	9.30
2001	0.52	2.50	6.11	6.29
2002	5.39	2.34	5.63	5.86
2003	5.79	8.21	3.90	6.60
2004	6.78	9.16	7.91	5.21
2005	5.33	5.37	2.58	4.55
2006	5.58	1.22	0.74	4.72
2007	6.30	8.01	7.88	5.65
2008	4.83	5.03	0.87	3.94
2009	(1.51)	(1.91)	(2.68)	3.76
2010	7.42	2.98	1.54	8.53
2011	5.13	3.23	4.77	2.69
2012	5.64	5.88	7.49	8.41

Year	Per Capita			
	GDP at 2005 Prices (RM)	Primary Energy Supply (toe)	Final Energy Consumption (toe)	Electricity Consumption (kWh)
1990	11,990	1.19	0.73	1,101
1991	12,523	1.39	0.77	1,178
1992	13,637	1.54	0.85	1,358
1993	14,588	1.53	0.91	1,460
1994	15,498	1.58	0.96	1,700
1995	16,547	1.64	1.07	1,902
1996	17,790	1.79	1.15	2,080
1997	18,656	2.00	1.21	2,359
1998	16,883	1.85	1.16	2,406
1999	17,500	1.97	1.20	2,472
2000	18,354	2.16	1.26	2,603
2001	17,969	2.15	1.31	2,695
2002	18,475	2.15	1.35	2,783
2003	19,087	2.27	1.37	2,898
2004	19,921	2.43	1.44	2,980
2005	20,530	2.50	1.45	3,048
2006	21,390	2.50	1.44	3,150
2007	22,441	2.66	1.53	3,285
2008	23,222	2.76	1.52	3,370
2009	22,581	2.67	1.46	3,452
2010	23,951	2.72	1.47	3,700
2011	24,560	2.74	1.50	3,706
2012	25,615	2.86	1.59	3,966

Year	Energy Intensity			
	Primary Energy Supply (toe/GDP at 2005 Prices (RM Million))	Final Energy Consumption (toe/GDP at 2005 Prices (RM Million))	Electricity Consumption (toe/GDP at 2005 Prices (RM Million))	Electricity Consumption (GWh/GDP at 2005 Prices (RM Million))
1990	98.92	60.57	7.90	0.092
1991	110.76	61.25	8.10	0.094
1992	113.14	62.52	8.57	0.100
1993	105.18	62.31	8.61	0.100
1994	101.90	62.07	9.44	0.110
1995	99.28	64.95	9.89	0.115
1996	100.80	64.42	10.06	0.117
1997	107.16	64.95	10.88	0.126
1998	109.84	68.48	12.26	0.143
1999	112.42	68.73	12.15	0.141
2000	117.59	68.87	12.20	0.142
2001	119.91	72.70	12.91	0.150
2002	116.44	72.87	12.96	0.151
2003	119.11	71.57	13.06	0.152
2004	121.76	72.32	12.87	0.150
2005	121.81	70.43	12.77	0.148
2006	116.77	67.20	12.67	0.147
2007	118.65	68.20	12.59	0.146
2008	118.88	65.62	12.49	0.145
2009	118.41	64.85	13.15	0.153
2010	113.51	61.30	13.29	0.154
2011	111.46	61.09	12.98	0.151
2012	111.71	62.16	13.32	0.155

Year	Energy Elasticity	
	Final Energy	Electricity
1990	0.97	1.08
1991	1.13	1.28
1992	1.25	1.71
1993	0.96	1.06
1994	0.95	2.14
1995	1.52	1.54
1996	0.91	1.19
1997	1.12	2.19
1998	0.32	(0.60)
1999	1.06	0.85
2000	1.02	1.05
2001	11.81	12.15
2002	1.04	1.09
2003	0.67	1.14
2004	1.17	0.77
2005	0.48	0.85
2006	0.13	0.85
2007	1.25	0.90
2008	0.18	0.82
2009	1.77	(2.48)
2010	0.21	1.15
2011	0.93	0.52
2012	1.33	1.49

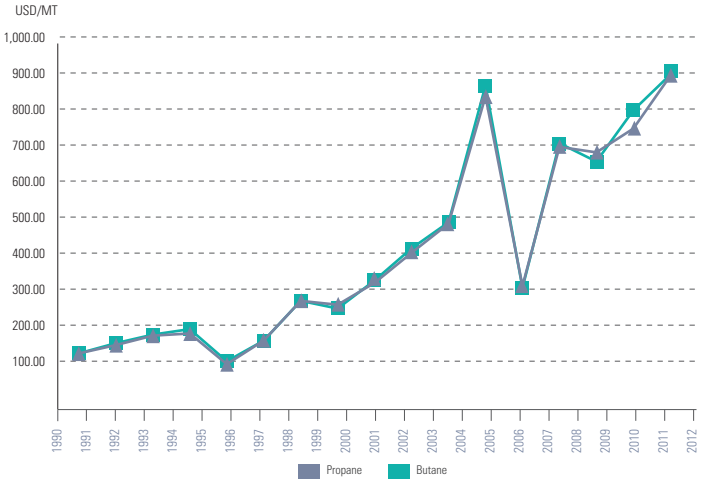
Ex-Singapore Prices of Major Petroleum Products



Unit: USD / Barrels	Motor Petrol (ULG 95)	Diesel	Fuel Oil	Kerosene	Naphtha
2000	32.64	32.48	25.82	34.27	28.32
2001	27.43	27.32	21.78	28.32	23.75
2002	28.04	27.55	23.63	28.08	24.93
2003	34.69	32.46	25.72	33.25	30.14
2004	47.23	45.92	28.15	47.69	40.82
2005	62.38	64.35	40.32	67.99	51.04
2006	73.20	76.93	48.84	80.72	62.13
2007	104.05	103.74	74.60	110.50	93.98
2008	39.25	39.32	31.40	53.90	29.90
2009	86.55	86.60	75.30	87.25	80.72
2010	103.15	103.17	78.40	104.30	95.91
2011	117.00	117.10	104.10	121.64	99.90
2012	123.42	126.15	105.72	126.79	103.57

Source: Platts

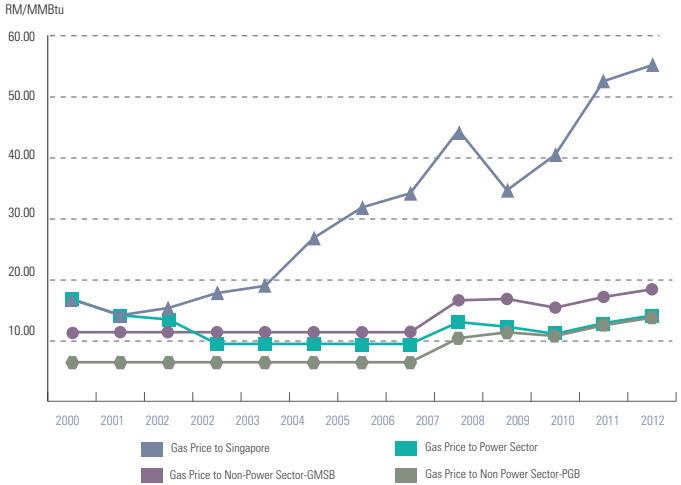
Annual Liquefied Petroleum Gas (LPG) Contract Prices – Arab Gulf



Unit: USD / MT	Propane	Butane
1990	155.96	156.13
1995	178.62	183.82
1996	204.42	207.21
1997	210.35	222.21
1998	126.50	134.55
1999	191.07	190.84
2000	299.29	299.46
2003	288.84	278.46
2004	348.61	355.33
2005	430.79	442.89
2006	510.27	514.00
2007	858.00	887.50
2008	340.00	335.00
2009	720.00	730.00
2010	705.00	680.00
2011	770.00	820.00
2012	914.12	917.45

Source: Platts

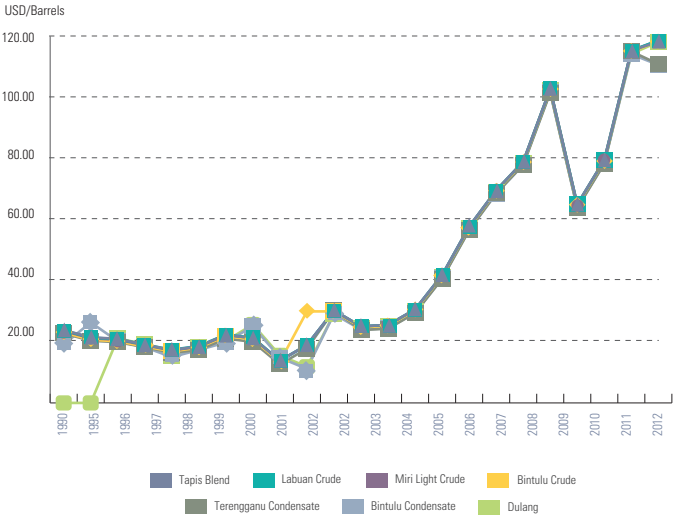
Average Annual Natural Gas Price in Malaysia



Unit: RM / MMBtu	Gas Price to Singapore	Gas Price to Power Sector	Gas Price to Non-Power Sector-GMSB	Gas Price to Non Power Sector-PGB
2000	16.72	6.40	16.72	11.32
2001	14.10	6.40	14.10	11.32
2002	15.30	6.40	13.40	11.32
2003	17.74	6.40	9.40	11.32
2004	18.92	6.40	9.40	11.32
2005	26.76	6.40	9.40	11.32
2006	31.77	6.40	9.40	11.32
2007	34.10	6.40	9.40	11.32
2008	44.41	10.36	12.98	16.55
2009	34.58	11.30	12.21	16.77
2010	40.42	10.70	11.05	15.35
2011	52.47	12.45	12.80	17.10
2012	55.08	13.70	14.05	18.35

Source: Energy Commission

Official Selling Prices of Malaysian Crude Oil



Unit: USD / Barrels	Tapis Blend	Labuan Crude	Miri Light Crude	Bintulu Crude	Terengganu Condensate	Bintulu Condensate	Dulang
1990	23.86	23.76	23.56	23.06	22.76	19.10	-
1991	21.47	21.37	21.17	20.67	20.37	26.35	-
1992	20.98	20.88	20.68	20.18	19.88	20.20	21.15
1993	19.11	19.11	18.91	18.46	18.26	18.25	19.20
1994	17.30	17.40	17.20	16.90	16.45	15.00	15.40
1995	18.53	18.63	18.43	18.06	17.33	17.36	18.16
1996	22.28	22.38	22.18	21.89	21.08	19.79	20.30
1997	21.18	21.33	21.28	20.78	19.98	25.13	25.66
1998	13.81	13.84	13.83	13.48	12.61	14.80	15.57
1999	18.95	18.95	18.95	29.95	17.76	11.14	11.84
2000	30.25	30.25	30.25	29.95	30.29	29.09	29.18
2001	25.06	25.06	25.06	24.78	23.86	23.96	24.68
2002	25.52	25.52	25.52	25.22	24.32	24.42	25.23
2003	30.60	30.60	30.60	30.33	29.40	29.50	29.99
2004	41.84	41.84	41.84	41.54	40.64	40.74	41.17
2005	57.71	57.71	57.71	57.43	56.51	56.61	57.41
2006	69.56	69.56	69.56	69.28	68.66	68.45	68.96
2007	78.96	78.96	78.96	78.66	77.91	77.92	78.59
2008	102.79	102.79	102.79	102.49	101.59	101.69	102.49
2009	64.97	64.97	64.97	64.67	63.77	63.87	64.67
2010	79.51	79.51	79.51	79.21	78.31	78.41	79.21
2011	115.33	115.33	115.33	115.03	115.03	114.13	114.23
2012	118.22	118.66	118.56	118.36	110.92	110.62	118.16

Average Selling Prices of TNB

TNB	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	23.1	27.9	21.6	15.5	n/a	23.5
2001	23.2	27.8	21.4	15.6	n/a	23.5
2002	23.3	27.8	21.4	15.3	n/a	23.5
2003	23.3	27.7	21.2	15.7	n/a	23.5
2004	23.3	27.5	21.5	15.6	n/a	23.5
2005	23.4	27.5	21.2	14.8	n/a	23.5
2006	24.6	30.8	23.8	17.0	30.0	26.1
2007	24.7	30.8	23.8	16.9	30.0	26.1
2008	28.0	39.0	29.4	20.7	38.0	28.8
2009	27.7	37.7	28.8	20.6	37.1	31.5
2010	27.7	37.7	28.4	20.6	37.0	31.3
2011	27.6	38.2	28.9	20.5	37.2	31.7
2012	28.8	40.7	30.9	21.5	39.8	33.7
2013	29.2	40.9	31.0	21.5	39.4	33.9

Average Selling Prices of SESB

SESB	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	21.9	26.8	22.8	29.3	n/a	24.0
2001	22.7	27.0	21.1	30.1	n/a	24.0
2002	22.8	29.3	23.3	30.3	n/a	24.0
2003	22.7	28.8	24.6	30.0	n/a	26.5
2004	22.4	29.0	23.5	29.1	n/a	25.3
2005	21.5	28.9	23.3	29.8	n/a	24.9
2006	21.9	28.2	23.7	30.0	n/a	24.9
2007	22.3	28.8	23.8	29.9	n/a	25.2
2008	22.5	28.7	23.4	47.1	n/a	25.2
2009	22.6	28.5	24.5	30.1	n/a	25.5
2010	22.9	28.8	23.3	n/a	n/a	25.5
2011	24.7	29.1	23.8	28.4	n/a	26.2
2012	25.1	33.0	28.1	18.5	n/a	29.1
2013	25.1	33.0	28.1	18.5	N/A	29.1

Average Selling Prices of SEB

SEB	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	31.8	31.9	19.3	56.2	n/a	27.0
2001	31.8	32.0	18.8	47.1	n/a	27.0
2002	31.6	32.1	19.1	47.1	n/a	27.0
2003	31.8	32.1	19.1	48.5	n/a	26.7
2004	31.1	32.1	19.1	47.1	n/a	26.5
2005	31.2	32.2	19.0	47.1	n/a	26.6
2006	31.2	32.1	19.4	47.1	n/a	27.0
2007	31.2	32.1	23.0	47.1	n/a	28.5
2008	31.2	32.1	24.5	47.1	n/a	29.1
2009	31.2	32.1	23.7	47.1	n/a	28.9
2010	31.2	32.1	24.6	47.1	n/a	29.4
2011	31.2	31.2	24.7	47.1	n/a	29.4
2012	31.2	32.0	24.9	47.0	n/a	29.7
2013	31.3	32.0	25.1	47.1	n/a	29.9

Average Selling Prices of PLN, Indonesia

PLN, Indonesia	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	23.5	29.9	23.9	23.2	n/a	24.6
2004	23.6	29.3	23.7	n/a	n/a	24.6
2005	21.7	27.3	22.1	24.4	n/a	22.9
2006	22.7	30.1	24.8	25.3	n/a	24.9
2007	22.7	28.2	23.2	23.7	n/a	23.4
2008	20.2	28.1	21.8	22.4	n/a	22.4
2009	19.8	28.4	21.4	22.1	n/a	22.2
2010	21.8	28.8	23.3	n/a	n/a	24.4
2011	21.1	32.4	23.7	27.0	n/a	24.3
2012	21.1	32.4	23.7	27.0	n/a	29.7
2013	21.1	32.4	23.7	27.0	n/a	24.3

Average Selling Prices of Taipower, Taiwan

Taipower, Taiwan	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	30.2	34.5	23.4	n/a	n/a	25.8
2001	28.1	30.6	21.1	9.8	n/a	23.8
2002	27.2	27.7	19.3	10.8	n/a	22.7
2003	27.8	28.3	19.1	n/a	n/a	22.9
2004	28.5	29.0	19.7	11.1	n/a	23.4
2005	31.0	30.7	21.3	11.8	n/a	25.4
2006	30.3	29.9	21.0	n/a	n/a	24.8
2007	26.4	27.3	18.8	10.8	n/a	21.6
2008	33.1	33.9	24.0	13.6	n/a	27.6
2009	30.7	36.5	26.5	12.8	n/a	29.2
2010	29.6	35.4	25.4	n/a	n/a	28.0
2011	30.1	35.9	25.7	12.5	n/a	28.4
2012	30.1	35.9	25.7	12.5	n/a	29.7
2013	29.9	35.9	28.2	13.6	n/a	30.2

Average Selling Prices of EGAT, Thailand

EGAT, Thailand	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	25.3	26.6	22.1	n/a	n/a	23.6
2001	24.2	26.7	21.6	n/a	n/a	22.7
2002	24.9	25.8	22.0	n/a	n/a	23.4
2003	25.8	26.9	22.8	n/a	n/a	24.5
2004	27.8	29.0	24.6	n/a	n/a	27.0
2005	28.6	30.7	25.4	n/a	n/a	27.3
2006	32.7	35.4	30.0	n/a	n/a	31.4
2007	32.4	35.0	26.7	n/a	n/a	31.0
2008	31.2	34.9	27.1	n/a	n/a	29.3
2009	34.6	41.9	31.1	n/a	n/a	32.6
2010	34.6	41.9	31.1	n/a	n/a	23.6
2011	n/a	n/a	n/a	n/a	n/a	n/a
2012	37.8	n/a	n/a	n/a	n/a	35.9
2013	39.0	36.0	n/a	n/a	32.8	37.5

Average Selling Prices of CLP, Hong Kong

CLP, Hong Kong	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	44.1	43.1	40.3	37.3	n/a	42.8
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	42.2	47.2	32.7	n/a	n/a	19.3
2003	42.2	47.2	32.7	42.3	n/a	42.9
2004	42.2	47.2	32.7	n/a	n/a	42.9
2005	n/a	n/a	n/a	n/a	n/a	41.3
2006	n/a	n/a	n/a	n/a	n/a	46.6
2007	n/a	n/a	n/a	n/a	n/a	43.6
2008	n/a	n/a	n/a	n/a	n/a	37.6
2009	n/a	n/a	n/a	n/a	n/a	40.5
2010	n/a	n/a	n/a	n/a	n/a	40.5
2011	n/a	n/a	n/a	n/a	n/a	39.7
2012	n/a	n/a	n/a	n/a	n/a	39.3
2013	n/a	n/a	n/a	n/a	n/a	39.3

Average Selling Prices of Meralco, Philippines

Meralco, Philippines	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	40.3	40.1	35.6	n/a	n/a	38.8
2001	41.0	41.1	36.5	n/a	n/a	39.7
2002	39.3	39.9	35.1	38.7	n/a	38.3
2003	41.5	43.9	37.5	33.8	n/a	41.1
2004	41.9	43.1	36.8	35.8	n/a	40.9
2005	53.7	51.8	45.5	54.8	n/a	50.7
2006	62.9	58.0	50.2	69.4	n/a	57.5
2007	64.9	59.9	52.2	n/a	n/a	60.2
2008	67.1	59.3	49.2	n/a	n/a	59.1
2009	65.6	57.9	46.5	n/a	n/a	57.2
2010	65.6	57.9	46.5	n/a	n/a	57.2
2011	n/a	n/a	n/a	n/a	n/a	n/a
2012	81.4	72.0	57.3	8.5	n/a	70.4
2013	81.4	72.0	57.3	8.5	n/a	70.4

Average Selling Prices of Tepco, Japan

Tepco, Japan	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	85.9	71.5	55.5	34.0	n/a	70.4
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	75.7	56.1	56.1	n/a	n/a	64.6
2004	77.3	57.4	57.4	30.0	n/a	65.8
2005	75.0	55.7	55.7	n/a	n/a	64.0
2006	66.9	69.4	69.4	n/a	n/a	67.2
2007	61.1	66.9	66.9	n/a	n/a	61.8
2008	66.1	71.3	71.3	n/a	n/a	66.7
2009	85.6	59.6	59.6	n/a	n/a	68.2
2010	84.8	59.0	59.0	n/a	n/a	67.6
2011	n/a	n/a	n/a	n/a	n/a	n/a
2012	86.6	n/a	n/a	n/a	n/a	87.6
2013	78.9	86.9	n/a	n/a	n/a	79.6

Average Selling Prices of Kepco, Korea

Kepco, Korea	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	32.3	33.9	19.9	22.9	n/a	25.5
2001	27.0	30.6	18.0	20.1	n/a	22.7
2002	27.4	30.3	18.5	20.6	n/a	23.2
2003	28.1	30.3	19.2	21.0	n/a	23.8
2004	30.5	30.6	20.1	21.8	n/a	24.9
2005	33.7	35.2	22.3	24.3	n/a	27.5
2006	37.0	38.9	25.3	29.2	n/a	30.9
2007	37.0	38.9	25.3	29.2	n/a	30.9
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	34.8	31.2	23.3	23.9	12.7	26.4
2010	35.5	31.2	24.7	n/a	n/a	27.3
2011	33.4	28.4	22.7	24.3	12.1	24.9
2012	34.9	31.8	26.3	27.8	12.7	28.1
2013	34.6	31.8	26.3	27.8	12.7	28.0

Average Selling Prices of Singapore

Singapore	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Average (sen/kWh)
2000	32.3	28.2	27.6	n/a	n/a	29.7
2001	37.8	34.9	31.4	n/a	n/a	34.3
2002	32.8	32.8	27.9	n/a	n/a	32.3
2003	34.9	34.0	30.0	34.9	n/a	34.0
2004	36.9	35.7	31.8	n/a	n/a	35.9
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	57.5	52.6	49.8	n/a	n/a	56.9
2011	57.5	52.6	49.8	n/a	n/a	56.9
2012	57.5	52.6	49.8	n/a	n/a	56.9
2013	57.5	52.6	49.8	n/a	n/a	56.9

Number of Consumer by Sectors of TNB, SESB and SEB from 2008 until 2013

		Domestic	Commercial	Industrial	Public Lighting	Mining	Agriculture	Free Units	TOTAL
2008	TNB	5,750,325	1,110,718	25,330	45,037	13	906	n/a	**6,932,329**
	SESB	332,861	62,012	2,799	3,918	-	-	n/a	**401,590**
	SEB	391,875	67,480	900	6,149	-	-	n/a	**466,404**
2009	TNB	5,938,095	1,164,959	25,663	47,715	15	996	n/a	**7,177,443**
	SESB	347,640	65,551	2,870	4,117	-	-	n/a	**420,178**
	SEB	406,119	70,040	905	6,507	-	-	n/a	**483,571**
2010	TNB	6,128,224	1,224,414	25,580	50,122	17	1,080	2,218	**7,431,655**
	SESB	364,376	68,877	2,971	4,302	-	-	n/a	**76,150**
	SEB	424,550	72,921	923	6,811	-	-	n/a	**505,205**
2011	TNB	6,288,281	1,281,108	26,203	53,075	20	1,166	2,264	**7,652,117**
	SESB	384,384	72,288	2,865	4,516	-	-	n/a	**464,053**
	SEB	444,340	76,222	947	7,042	-	-	n/a	**528,551**
2012	TNB	6,456,647	1,334,371	27,599	56,715	22	1,241	2,271	**7,878,866**
	SESB	403,387	75,375	2,903	4,820	-	-	n/a	**486,485**
	SEB	461,422	79,278	970	7,383	-	-	n/a	**549,053**
2013	TNB	6,503,417	1,334,856	27,954	61,121	27	1,494	-	**7,928,869**
	SESB	422,964	79,188	2,937	5,128	-	-	-	**510,217**
	SEB	483,106	82,160	985	7,699	-	-	-	**573,950**

Transmission System Capacity of TNB, SESB and SEB from 2011 until 2013

	2011			2012			2013		
	TNB	**SESB**	**SEB**	**TNB**	**SESB**	**SEB**	**TNB**	**SESB**	**SEB**
TRANSMISSION SYSTEM LINES/CABLES (km)									
500 kV	1,094*	-	-	1,295*	-	-	668[a]	-	-
275 kV	8,425	492	867	8,449	492	1026	8,534	493	1,188
132 kV	11,672	1,780	235	11,640	1,772	386	11,891	1,200	398
66 kV	-	123	-	-	123	-	-	163	-
TRANSMISSION SUBSTATIONS									
Number	399	41	22	25	42	25	404	39	27
Capacity (MVA)	94,325	4,652	5,206	94,265	4,672	5,876	95,960	3,656	6,356
PERFORMANCE									
System Minutes	1.01	40.13	4.69	1.03	67.12	21.35	0.44	26.53	261.09
Number of Incidents of Trippings	305	31	8	276	30	16	10	22	261
Unsupplied Energy (MWh)	261	804	507	271	3,738	421	121	158,796	6,018

*Note: * 426km operated at 275 kV*
[a] Including 627.64 cct-km 500 kV lines energized at 275 kV.

Distribution System Capacity of TNB, SESB and SEB from 2011 untill 2013

	2011			2012			2013		
	TNB	**SESB**	**SEB**	**TNB**	**SESB**	**SEB**	**TNB**	**SESB**	**SEB**
DISTRIBUTION SYSTEM LINES/CABLES (km)									
Overhead Lines	477,191	7,761*	20,254	495,925	8,525*	21,030	487,385	8,904*	22,350
Underground Cables	379,661	1,317*	6,450	423,758	1,136*	6,680	555,272	352,056*	6,969
DISTRIBUTIONS SUBSTATIONS									
Number	65,556	5,878	9,130	67,925	6,365	9,588	68,509	6,619	10,365
Capacity (MVA)	125,222	4,813	3,490	126,969	N/A	3,744	127,217	5,865	4,002

*Note: * Only 33 and 11 kilovolt*

Performance Highlights of TNB, SESB and SEB from 2011 untill 2013

	2011			2012			2013		
	TNB	**SESB**	**SEB**	**TNB**	**SESB**	**SEB**	**TNB**	**SESB**	**SEB**
Maximum Demand (MW)	15,476	830	1,278	15,826	828	1,229	16,562	874	1,466
Total Units Generated (GWh)	24,018	1,524	7,279	26,329	1,293	7,025	24, 914	1,560	6,572
Total Units Sold (GWh)	92,364	4,275	6,486	96,270	4,456	7,587	100,999	4,670	10,420
Sales of Electricity (RM Million)	29,273	1,155	1,673	32,464	1,350	1,862	33,857	1,382	2,266
Installed Generation Capacity (MW)*	7,054	435	1,358	6,986	417	1,352	6,866	575	1,332
Total Number of Employees	26,732[a]	2,613	3,529	28,105[a]	2,679	3,882	34,972[a]	2,788	4,040
Revenue Per Employee (RM Million)	1.1	0.44	0.47	1.16	0.5	0.48	0.97	0.50	0.56
Unit Sold Per Employee (GWh)	3.46	1.64	1.84	3.43	1.66	1.95	2.89	1.68	2.58
Generation Capacity Per Employee (MW)	0.26	0.17	0.38	0.25	0.16	0.35	0.20	0.21	0.33
Total Purchased Units (GWh)	76,887	3,765	759	81,733	3,843	2,712	86,767	3,866	5,414
Total Units Exported (GWh)	73	-	-	13	-	-	17[b]	-	-
Total Units Imported (GWh)	225	-	-	100	-	-	220[b]	-	-

Note: i. * *Including generation capacities of TNB generation Sdn. Bhd. and TNB Hidro Sdn. Bhd.*
ii. GWh *Gigawatt Hours*
iii. MW *Megawatt*
iv. [a] *TNB employees excluding TNB wholly owned subsidiaries and TNB majority owned subsidiaries*
v. [b] *Data obtained from Single Buyer Department of TNB*

Revenue, Asset Size, Employment and Annual Investment for TNB and SESB from 2008 until 2013

		Revenue	Asset Size	Employment	Annual Investment
TNB	2008	23.1bn	48.5bn	24,927[a]	4.4bn
	2009	26.7bn	49.4bn	24,613[a]	3.9bn
	2010	28.4bn	60.0bn	25,571[a]	3.8bn
	2011	30.2bn	60.5bn	26,732[a]	4.6bn
	2012	33.3bn	61.3bn	28,105[a]	4.9bn
	2013	34.8bn	67.7bn	34,972[a]	0.3bn
SESB	2008	0.9bn	2.3bn	2,285	0.3bn
	2009	1.0bn	2.5bn	2,391	0.4bn
	2010	1.1bn	2.6bn	2,588	0.3bn
	2011	1.1bn	4.0bn	2,614	0.3bn
	2012	1.4bn	4.0bn	2,675	0.3bn
	2013	1.4bn	4.1bn	2,759	0.3bn

Note: *i.* [a] *TNB employees excluding TNB wholly owned subsidiaries and TNB majority owned subsidiaries*
ii. *Revenue, Asset Size, and Annual Investment: only for TNB Company*

Number of Supply Interruptions of Peninsular Malaysia, Sabah & Sarawak 2008 until 2013

	TNB	SESB	SEB
2008	103,876	21,911	8,124
2009	126,566	24,969	7,868
2010	110,633	24,169	8,003
2011	90,979	23,397	7,759
2012	84,295	27,409	7,507
2013	79,372	24,849	7,994

Electricity Supply Interruptions per 1,000 Consumers

Peninsular Malaysia	2008	2009	2010	2011	2012	2013
Scheduled Interruptions	0.76	0.86	0.71	0.19	0.11	0.09
Unscheduled Interruptions	15.98	15.01	12.68	10.6	9.45	9.92

Sabah	2008	2009	2010	2011	2012	2013
Scheduled Interruptions	6.27	8.45	6.85	4.17	4.74	3.7
Unscheduled Interruptions	48.52	43.83	48.03	50.42	51.11	45.9

Sarawak	2008	2009	2010	2011	2012	2013
Scheduled Interruptions	3.89	3.78	3.3	3.37	2.79	3.3
Unscheduled Interruptions	13.51	12.49	12.55	11.31	11.57	10.62

System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI)

SAIDI (Minutes Customer/Year)	2008	2009	2010	2011	2012	2013
Peninsular Malaysia	87.3	66.1	96.25	69.11	60.46	60.35
Sabah	1,856	2,868	687	495	557	424
Sarawak	273	216	210	160	140	168

SAIFI (Number of Interruptions/ Customer/Year)	2008	2009	2010	2011	2012	2013
Peninsular Malaysia	0.87	0.76	1.23	0.97	0.81	0.87
Sabah	28.38	36.04	20.1	17.2	14.69	12.25
Sarawak	n/a	2.33	2.22	1.73	1.8	2.08

CAIDI (Minutes/Involved Customer/Year)	2008	2009	2010	2011	2012	2013
Peninsular Malaysia	100.7	87.01	78.3	71.62	74.64	69.37
Sabah	65.39	79.57	36.46	28.72	37.92	34.61
Sarawak	n/a	92.87	94.71	92.37	77.78	80.77

SAIDI (System Average Interruption Duration Index) by State in Peninsular Malaysia

SAIDI (Minutes/Customer/Year) by State	2008	2009	2010	2011	2012	2013
Perak	61.26	67.51	194.71	119.73	83.61	78.95
Kedah	116.55	77.21	127.66	87.18	81.36	74.38
Johor	120.47	79.88	119.65	78.05	61.77	70.84
Pulau Pinang	104.43	111.28	109.62	76.56	73.29	68.89
Kelantan	99.21	81.86	85.01	72.78	72.35	69.61
Selangor	69.97	48.86	79.73	61.34	56.69	54.42
Perlis	56.83	53.25	64.64	37.80	35.24	63.70
WP Kuala Lumpur	67.92	47.24	41.94	33.45	33.69	36.79
WP Putrajaya / Cyberjaya	6.57	0.23	9.08	0.22	8.48	35.85
N.Sembilan	79.36	53.32	81.38	55.94	54.6	0.99
Melaka	98.80	60.69	60.47	43.52	45.64	69.96
Pahang	102.76	61.76	74.35	88.95	62.15	38.11
Terengganu	72.94	49.08	55.57	54.26	50.29	44.64
Peninsular Malaysia	**87.31**	**66.07**	**96.25**	**69.11**	**60.46**	**60.35**

SAIFI (System Average Interruption Frequency Index) by State in Peninsular Malaysia

SAIFI (Number of Interruptions/ Customer/Year) by State	2008	2009	2010	2011	2012	2013
Perak	0.93	0.86	2.35	1.81	0.21	1.10
Kedah	1.09	0.87	1.76	1.32	0.29	1.11
Johor	0.87	0.67	1.57	0.95	0.12	0.94
Pulau Pinang	1.41	1.50	1.46	1.06	0.16	1.00
Kelantan	1.16	1.25	1.75	1.48	0.24	1.26
Selangor	0.65	0.50	0.95	0.86	0.12	0.76
Perlis	0.73	0.68	0.86	0.48	0.05	1.42
WP Kuala Lumpur	0.52	0.52	0.48	0.44	0.03	0.47
WP Putrajaya / Cyberjaya	0.03	0.00	0.04	0.00	0.00	0.37
N.Sembilan	0.64	0.57	0.87	0.64	0.10	0.01
Melaka	1.03	0.86	0.71	0.60	0.15	0.73
Pahang	0.96	0.73	0.90	1.24	0.19	0.56
Terengganu	1.22	0.96	1.22	1.29	0.16	1.03
Peninsular Malaysia	**0.87**	**0.76**	**1.23**	**0.97**	**0.81**	**0.87**

CAIDI (Customer Average Interruption Duration Index) by State in Peninsular Malaysia

CAIDI(Minutes/Involved Customer/Year) by State	2008	2009	2010	2011	2012	2013
Perak	65.57	78.22	82.93	65.39	66.52	71.77
Kedah	106.73	89.14	72.5	55.55	47.45	67.01
Johor	137.88	119.02	76.19	77.25	73.07	75.36
Pulau Pinang	74.06	74.25	75.09	64.43	67.06	68.89
Kelantan	85.7	65.34	48.53	89.94	54.8	55.25
Selangor	108.29	96.95	83.77	63.07	66.77	71.61
Perlis	77.76	78.09	75.49	95.73	72.67	44.86
WP Kuala Lumpur	130.37	91.56	87.3	62.88	98.59	78.28
WP Putrajaya / Cyberjaya	225.55	98.92	211.99	52.00	35.78	96.89
N.Sembilan	123.22	112.06	93.59	79.68	82.21	99.00
Melaka	96.39	70.55	85.14	89.32	73.74	95.84
Pahang	107.4	84.86	82.16	42.69	57.46	68.05
Terengganu	59.97	50.99	45.72	83.62	49.12	43.34
Peninsular Malaysia	**100.70**	**87.01**	**78.25**	**71.62**	**74.64**	**69.37**

The net calorific value (NCV) was chosen as the basis of calculations rather than the gross calorific value (GCV). The Joule was used as the rigorous accounting unit, while the "tonnes oil equivalent" (1 toe= 41.84 Gigajoules) was chosen as the final unit for presentation in the Energy Balance.

Commercial Energy Balance Format

The rows of the Energy Balance tables contain the following items:

Primary Supply	refers to supply of energy that has not undergone the transformations / conversion process within the country.
Primary Production (1)	refers to the quantity of fuels extracted. Data for natural gas excludes the amount of reinjected and flared gas. Gross production of hydro is shown in conventional fuel equivalent input.
Gas Flaring, Reinjection & Use (2)	refers to the quantity of gas flared, reinjected into the gas fields and use for production purpose.
Imports (3) and Exports (4)	refers to the amount of primary and secondary energy obtained from, or supplied to other countries. In the energy balance format, imports always carry a positive and export a negative sign.
Bunkers (5)	refer to the amount of fuels delivered to ocean-going ships of all flags engaged in international traffic.
Stock Change (6)	refers to the difference between the amounts of fuel in stocks at the beginning and end of year and should ideally cover producers, importers and industrial consumers. At this stage, however, only oil companies' stock are taken into account. A negative sign indicates net increase while a positive sign indicates net decrease in stocks.
Total	under primary supply, 'total' is the addition of columns to obtain total availability. Under transformation, 'total' is the addition of columns to obtain transformation and conversion losses.
Gas Plants (9)	shows the input of natural gas into the LNG, MDS and GPP-LPG plants and their respective outputs.
Refineries (10), power stations and Co-generation & Private licensees (11)	shows the input of any energy product (negative sign) for the purpose of converting it to one or more secondary products (positive sign).
Losses and Own Use (12)	refers to losses of electrical energy and natural gas which occur outside the utilities and plants (i.e. distribution losses) and the consumption of energy by utilities and plants for operating their installation (i.e. electricity for operating auxiliary equipment and petroleum products used in the crude distillation process respectively). It does not, however, include conversion loss that is accounted for in the 'total' column.

Secondary Supply (14)	refers to the supply of energy from the transformation process and after deducting the energy sector's own use and losses, including power station use.
Residential and Commercial (15 & 16)	not only refers to energy used within households and commercial establishments but includes government buildings and institutions.
Industry (17)	is a very broad-based sector ranging from manufacturing to mining and construction. Diesel sales through distributors are assumed to be to industrial consumers.
Transport (18)	basically refers to all sales of motor gasoline and diesel from service stations and sales of aviation fuel. It also includes diesel and motor gasoline sold directly to government and military.
Agriculture (19)	covers agriculture and forestry.
Fishery (20)	may involve the capture of wild fish or raising fish through fish farming or aquaculture.
Non-Energy Use (21)	use of products resulting from the transformation process for non-energy purpose (i.e. bitumen/lubricants, asphalt/greases) and use of energy products (such as natural gas) as industrial feedstocks
Final use (22)	refers to the quantity of energy of all kinds delivered to the final user.
Main Activity Producer	plants that are either owned by public or private utilities but for which the main activity is to produce power
Autoproducer	plants which is not to produce power, their main activity is e.g industrial activity

I) Non-commercial energy such as firewood and other biomass fuels have been excluded in the energy balance until more reliable data are made available.

II) The output side of the final user's equipment of device i.e. useful energy will not be dealt with in the balance as it will involve assessing the efficiencies of end - use equipment operating under various different conditions.

Notes of Electricity

Reserve Margin	Total capacity margin is defined as the amount of installed generation available over and above system peak load **Reserve Margin = Installed Capacity – Peak Demand / Peak Demand**
Peak Demand	The maximum power demand registered by a customer or a group of customers or a system in a stated period of time such as a month or a year. The value may be the maximum instantaneous load or more usually, the average load over a designated interval of time, such as half an hour and is normally stated in kilowatts or megawatts.
Installed Capacity	Installed capacity is defined as the maximum possible capacity (nameplate rating) that can be provided by the plant.
Dependable Capacity	The maximum capacity, modified for ambient limitations for a specified period of time, such as a month or a season.
Available Capacity	Available capacity refers to the Latest Tested Net Capacity. It is the dependable capacity, modified for equipment limitation at any time.
Unit Generated (Gross Generation)	The total amount of electric energy produced by generating units and measured at the generating terminal in kilowatt-hours (kWh) or megawatt hours (MWh)
Unit Sent Out From Station(s) (Net Generation)	The amount of gross generation less the electrical energy consumed at the generating station(s) for station service or auxiliaries.

Notes of Electricity

Measured Resources	Refers to coal for which estimates of the rank and quantity have been computed to a high degree of geologic assurance, from sample analyses and measurements from closely spaced and geologically well known sample sites.
Indicated Resources	Refers to coal for which estimates of the rank, quality, and quantity have been computed to a moderate degree of geologic assurance, partly from sample analyses and measurements and partly from reasonable geologic projections.
Inferred Resources	Refers to coal of a low degree of geologic assurance in unexplored extensions of demonstrated resources for which estimates of the quality and size are based on geologic evidence and projection. Quantitative estimates are based on broad knowledge of the geologic character of the bed or region where few measurements or sampling points are available and on assumed continuation from demonstrated coal for which there is geologic evidence.

Conversion Coefficients And Equivalence

COAL AND COKE (TJ/1000 TONNES)[1]			
Hard Coal	29.3076	Lignite/Brown Coal	11.2834
Coke/Oven Coke	26.3768	Peat	9.525
Gas Coke	26.3768	Charcoal [2]	28.8888
Brown Coal Coke	19.6361	Fuelwood	13.4734
Pattern Fuel Briquettes	29.3076	Lignite Briquettes	19.6361

NATURAL GAS PRODUCTS (TJ/1000 TONNES)			
Liquefied Natural Gas (LNG)	45.1923	Natural Gas	1TJ/ million scf 0.9479 mmbtu/GJ
Butane	50.393	Ethane	1,067.82 GJ/mscf
Propane	49.473	Methane	1,131.31 GJ/mscf

ELECTRICITY	
Electricity	3.6 TJ/GWh

PETROLEUM PRODUCTS (TJ/1000 TONNES)			
Crude Petroleum (imported)	42.6133	Gas Oil/Diesel	42.4960
Crude Petroleum (domestic)	43.3000	Residual Fuel Oil	41.4996
Plant Condensate	44.3131	Naphtha	44.1289
Aviation Gasoline (AV GAS)	43.9614	White/Industrial Spirit	43.2078
Liquefied Petroleum Gas (LPG)	45.5440	Lubricants	42.1401
Petrol	43.9614	Bitumen (Asphalt)	41.8000
Natural Gasoline	44.8992	Petroleum Waxes	43.3334
Aviation Turbine Fuel (ATF)	43.1994	Petroleum Coke	36.4000
Kerosene	43.1994	Other Petroleum Products	42.4960

1,000 Tonnes Oil Equivalent (toe) = 41.84 TJ

CRUDE OIL AND PETROLEUM PRODUCTS (BARRELS TO TONNES)	
Product	**Barrels/Tonne**
Crude Oil - Import	7.33
Crude Oil - Local	7.60
Petrol	8.55
Diesel	7.50
Fuel Oil	6.60
Kerosene	7.90
Liquefied Petroleum Gas (LPG)	11.76
Aviation Turbine Fuel (ATF)	7.91
Aviation Gasoline (AV GAS)	9.05
Non-Energy	6.50

Note: [1] Unless otherwise indicated [2] Assuming 9.7 TJ/1000 cubic metre

Definition

The sources of energy covered in the Energy Balances are as below:

Natural Gas	Is a mixture of gaseous hydrocarbons (mainly methane), which occur in either gas fields or in association with crude oil in oil fields.
LNG	Is natural gas that is liquefied for ocean transportation and export
Crude Oil	Is natural product that is extracted from mineral deposits and consists essentially of many different non-aromatic hydrocarbons (paraffinic, cyclonic, etc.)
Aviation Gasoline (AV GAS)	Is a special blended grade of gasoline for use in aircraft engines of the piston type. Distillation range normally falls within 30°C and 200°C.
Liquefied Petroleum Gas (LPG)	Commercial LPG consists essentially of a mixture of propane and butane gases which are held in the liquid state by pressure or refrigeration.
Petrol	Petroleum distillate used as fuel in spark- ignition internal combustion engines. Distillation range is within 30°C and 250°C.
Aviation Turbine Fuel (ATF)	Fuel for use in aviation gas turbines mainly refined from kerosene. Distillation range within 150°C and 250°C.
Kerosene	Is a straight-run fraction from crude oil, with boiling range from150°C to 250°C. Its main uses are for domestic lighting and cooking.
Diesel (or Gas Oil)	Distillation falls within 200°C to 340°C. Diesel fuels for high-speed diesel engines (i.e. automotive) are more critical of fuel quality than diesel for stationary and marine diesel engines. Marine oil usually consists of a blend of diesel oil and some residual (asphaltic) material.
Fuel Oil	Heavy distillates, residues or blends of these, used as fuel for production of heat and power. Fuel oil production at the refinery is essentially a matter of selective blending of available components rather than of special processing. Fuel oil viscosities vary widely depending on the blend of distillates and residues.

Non-Energy Products	Refer mainly to naphtha bitumen and lubricants, which are obtained by the refinery process from petroleum but used for non-energy purposes. Naphtha is a refined or party refined light distillate, which is further, blended into motor gasoline or used as feed-stock in the chemical industry. Bitumen is a viscous liquid or solid, non-volatile and possesses waterproofing and adhesive properties. Lubricating oil is used for lubricating purposes and has distillation range within 380°C to 500°C.
Refinery Gas	The gas released during the distillation of crude oil and comprises methane, ethane, propane and butane. Most refinery gas is retained in the refinery and used as fuel in plant operations.
Coal and Coke	Solid fuels consisting essentially of carbon, hydrogen, oxygen sulphur. Coal in the energy balances is mainly bituminous coal (medium grade in terms of energy content) and some anthracite (high quality hard coal). Coke is obtained from coal by heating at high temperature in the absence of air.
Hydropower	Is the inferred primary energy available for electricity production and is shown in terms of conventional fossil fuel equivalent using the average thermal efficiency of conversion for the year, i.e. the hypothetical amount of fossil fuel, which would be needed to produce the same amount of electricity in existing thermal power plants.
Electricity Production	Production of electricity refers to production from public utilities as well as independent power producers (IPPs) and private installations & co-generation plants which obtain licenses from the Electricity Supply and Market Regulation Department. Figures for 'fuel input' into power stations & co-generation plants were only available for TNB, SEB, SESB, IPPs as well as GDC Sdn Bhd. Estimates were made using average conversion efficiency to obtain the fuel input into private installations.

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