



COMPENDIUM

OF PHILIPPINE ENERGY STATISTICS AND INFORMATION

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The Compendium on Energy Statistics and Information (CESI) for 2021 is a second publication made possible through the efforts of the Energy Policy and Planning Bureau (EPPB) of the Department of Energy (DOE). The Compendium aims to provide the general public with a comprehensive representation of the country's major energy statistics. It also aims to enhance the awareness and appreciation of energy statistics as valuable inputs to policy and decision making. Consistent with good practices in energy statistics, the Compendium is expected to serve as an instrument for the DOE to disseminate energy data and encourage information sharing among users and producers of energy statistics.

The Compendium covers historical data for 1990 to 2021, including projections for energy supply and demand until 2040. Statistical tables from energy surveys and socio-economic variables that impact the energy sector are likewise included.

The Policy Formulation and Research Division (PFRD) of the EPPB is the focal division that handles the preparation of this Compendium, with data inputs from other DOE bureaus.

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1 Supply and Demand of Energy

The starting point in the construction of Energy Balance Table (EBT) is the collection of data by energy commodity, accounting for its supply and demand, using the original unit of measurement for each energy form. These are compiled into a commodity account for each energy resource.

Energy data are reported by various energy stakeholders such as oil companies, power generating companies, transmission and distribution utilities, etc. These data are then compiled by various bureaus/offices in the Department of Energy (DOE), which in turn submit the data to the Policy Formulation & Research Division (PFRD), the EPPB unit that handles the consolidation and generation of the EBT.

- Energy Resources and Development Bureau (ERDB) for production data on coal, crude oil and condensate;
- Natural Gas Office (NGO) for natural gas consumption
- Electric Power Industry Management Bureau (EPIMB) for power statistics;
- Oil Industry Management Bureau (OIMB) for downstream oil industry data; and
- Renewable Energy Management Bureau (REMB) for biofuels production.

Supplemental data are also gathered from the Metro Railway Transit (MRT) and Light Railway Transit (LRT) for electricity transport demand, and the Household Energy Consumption Survey (HECS) for deriving biomass consumption estimates.

Data series for power generation data by grid and source is available for 1998 to most recent year. While for petroleum product imports and exports, disaggregation by country is available starting 1997.

Supply and Demand of Energy

1. Supply and Demand of Coal

Table 1. Coal: Energy Commodity Account

In thousand metric tons (MMT) at 10,000 British Thermal Unit per pound (BTU/lb)

FY	Total Primary Energy Supply					
		Growth Rate (%)	Indigenous Production	Imports	Exports	
1990	2,378		1,183	1,344	-	
1991	2,915	22.6	1,256	1,517	-	
1992	2,565	-12.0	1,536	1,104	-	
1993	2,847	11.0	1,457	1,274	-	
1994	2,897	1.8	1,328	1,113	-	
1995	3,116	7.5	1,216	1,711	-	
1996	4,197	34.7	1,009	2,984	-	
1997	5,189	23.6	971	4,248	-	
1998	5,624	8.4	1,045	4,282	-	
1999	6,416	14.1	1,061	4,858	-	
2000	8,762	36.6	1,220	6,814	-	
2001	8,545	-2.5	1,111	7,601	-	
2002	8,008	-6.3	1,522	5,930	-	
2003	8,153	1.8	1,857	5,935	-	
2004	8,586	5.3	2,484	6,410	-	
2005	10,075	17.3	2,881	6,656	-	
2006	9,547	-5.2	2,305	7,203	-	
2007	10,215	7.0	3,401	7,729	796	
2008	12,043	17.9	3,609	9,078	890	
2009	11,494	-4.6	4,687	7,027	1,986	
2010	13,321	15.9	6,650	10,966	4,083	
2011	14,639	9.9	6,911	10,963	2,726	
2012	15,317	4.6	7,340	11,895	3,161	
2013	18,952	23.7	7,100	14,415	3,388	
2014	20,163	6.4	7,601	15,182	5,745	
2015	22,006	9.1	7,378	17,279	3,094	
2016	24,794	12.7	11,211	20,030	6,809	
2017	29,320	18.3	11,932	22,268	6,149	
2018	30,976	5.7	11,755	26,301	5,035	
2019	33,122	6.9	13,751	27,692	9,980	
2020	33,244	0.4	12,951	29,524	7,525	
2021	34,283	3.1	14,048	31,239	9,298	

		Transformation	Total Final Energy Consumption			
	Change in Stocks	Fuel Input to Power Generation		Growth Rate (%)	Industry	Non-Energy Use
	-149	1,059	996		673	323
	141	1,287	1,242	24.7	938	304
	-75	1,285	1,020	-17.9	759	261
	117	1,430	1,140	11.8	863	277
	456	1,257	1,322	16.0	1,004	318
	189	1,421	1,390	5.1	1,085	305
	204	2,470	1,428	2.8	1,129	299
	-30	3,276	1,601	12.1	1,289	313
	297	4,046	1,364	-14.8	1,149	215
	497	4,883	1,299	-4.8	1,064	235
	728	7,170	1,328	2.2	1,064	264
	-166	6,996	1,314	-1.1	1,078	236
	556	6,525	1,298	-1.2	1,114	184
	361	6,307	1,607	23.8	1,368	239
	-308	6,587	1,699	5.7	1,398	300
	537	7,832	2,002	17.8	1,761	241
	39	7,037	2,226	11.2	1,943	283
	-119	7,347	2,522	13.3	2,175	346
	246	8,447	3,307	31.2	3,019	288
	1,766	8,416	2,784	-15.8	2,490	294
	-212	9,643	3,488	25.3	3,299	189
	-509	10,961	3,483	-0.1	3,289	194
	-757	11,937	3,166	-9.1	2,951	214
	825	14,791	3,945	24.6	3,730	216
	3,125	15,587	4,284	8.6	3,991	292
	444	17,554	4,202	-1.9	3,952	250
	362	19,386	5,072	20.7	4,736	336
	1,268	23,327	5,699	12.4	5,405	294
	-2,044	26,101	4,568	-19.8	4,261	307
	1,658	28,654	4,201	-8.0	3,934	267
	-1,706	29,755	3,087	-26.5	2,685	402
	-1,706	31,738	3,694	19.7	3,291	403

1. Supply and Demand of Coal

Table 2. Coal Supply: Indigenous Production, by Source/Area
In thousand metric tons (MMT) at 10,000 British Thermal Unit per pound (BTU/lb)

FY	Indigenous Production					
		Growth Rate (%)	Semirara	Cebu	Albay	
1990	1,183		498	189	46	
1991	1,256	6.2	533	194	55	
1992	1,536	22.3	716	214	27	
1993	1,457	-5.2	710	196	4	
1994	1,328	-8.9	650	115	1	
1995	1,216	-8.4	776	126	6	
1996	1,009	-17.0	688	89	9	
1997	971	-3.8	726	70	5	
1998	1,045	7.6	864	64	4	
1999	1,061	1.5	952	24	5	
2000	1,220	15.0	1,175	20	4	
2001	1,111	-9.0	1,071	25	2	
2002	1,522	37.0	1,364	23	7	
2003	1,857	22.0	1,673	32	5	
2004	2,484	33.8	2,290	23	11	
2005	2,881	16.0	2,626	45	19	
2006	2,305	-20.0	2,064	40	24	
2007	3,401	47.6	3,148	17	26	
2008	3,609	6.1	3,124	35	51	
2009	4,687	29.9	4,362	27	49	
2010	6,650	41.9	6,318	67	31	
2011	6,911	3.9	6,471	83	17	
2012	7,340	6.2	6,911	60	18	
2013	7,100	-3.3	6,813	66	23	
2014	7,601	7.1	7,345	44	21	
2015	7,378	-2.9	7,168	29	28	
2016	11,211	52.0	11,084	35	16	
2017	11,932	6.4	11,839	13	12	
2018	11,755	-1.5	11,654	7	13	
2019	13,751	17.0	13,670	6	9	
2020	12,951	-5.8	12,880	2	13	
2021	14,048	8.5	13,957	1	8	

*includes Mindoro, Quezon, Samar and Masbate

	Negros	Surigao del Sur	Zamboanga del Sur	Small-scale Mines	Other Areas*
	11	116	284	-	39
	5	178	260	9	23
	3	303	221	6	46
	6	216	229	7	89
	3	245	212	6	96
	3	146	101	-	59
	9	133	61	-	21
	4	166	-	-	-
	-	112	1	-	-
	8	66	7	-	-
	8	5	-	8	-
	7	-	1	5	-
	7	-	113	9	-
	1	-	134	11	-
	-	2	148	10	-
	-	30	151	9	-
	4	39	122	12	-
	1	10	121	79	-
	1	207	71	119	-
	-	105	34	110	-
	1	3	81	148	-
	2	23	180	134	-
	0	21	193	138	-
	-	52	30	116	-
	-	50	15	127	-
	-	28	5	119	-
	-	21	0	54	-
	0	23	-	44	-
	0	26	-	55	-
	1	-	-	65	-
	0	-	-	57	-
	0	-	-	82	-

1. Supply and Demand of Coal

Table 3. Coal Supply: Importation, by Country of Source and Exports, by Country of Destination
In thousand metric tons (MMT) at 10,000 British Thermal Unit per pound (BTU/lb)

FY	Total Imports							
		Growth Rate(%)	Country of Source					
			Indonesia	Australia	China	Vietnam	Others*	
1990	1,344		253	521	351	203	16	
1991	1,517	12.9	580	37	412	399	89	
1992	1,104	-27.3	433	27	304	247	94	
1993	1,274	15.4	550	28	337	354	6	
1994	1,113	-12.6	504	17	251	263	78	
1995	1,711	53.7	771	17	328	290	305	
1996	2,984	74.4	1,340	86	972	426	161	
1997	4,248	42.4	2,504	1,283	257	179	25	
1998	4,282	0.8	2,312	1,229	604	137	-	
1999	4,858	13.5	2,184	2,016	528	130	-	
2000	6,814	40.2	2,875	1,666	2,027	246	-	
2001	7,601	11.6	3,117	1,066	3,135	283	-	
2002	5,930	-22.0	2,186	549	2,955	240	-	
2003	5,935	0.1	2,357	-	3,180	398	-	
2004	6,410	8.0	2,622	325	3,034	365	65	
2005	6,656	3.8	4,048	520	1,724	365	-	
2006	7,203	8.2	5,151	715	880	457	-	
2007	7,729	7.3	5,566	650	1,040	473	-	
2008	9,078	17.5	7,125	330	1,170	393	60	
2009	7,027	-22.6	6,381	-	527	118	-	
2010	10,966	56.1	10,602	65	18	278	3	
2011	10,963	0.0	10,894	-	-	68	-	
2012	11,895	8.5	11,700	195	-	0	-	
2013	14,415	21.2	13,964	201	-	249	-	
2014	15,182	5.3	14,975	-	-	191	15	
2015	17,279	13.8	16,673	306	-	168	132	
2016	20,030	15.9	17,988	1,310	-	270	462	
2017	22,268	11.2	19,663	1,401	-	219	984	
2018	26,301	18.1	23,285	1,249	96	303	1,368	
2019	27,692	5.3	26,305	711	1	182	494	
2020	29,524	6.6	28,604	538	-	103	279	
2021	31,239	5.8	30,514	242	0	297	186	

*Includes Russia, USA, Taiwan, South Korea and South Africa

**includes Japan, Korea, Cambodia, Papua New Guinea, Vietnam

Total Exports								
		Growth Rate (%)	Country of Destination					
			China	Hongkong	India	Thailand	Taiwan	Others**
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	796		413	78	305	-	-	-
	890	11.9	519	50	321	-	-	-
	1,986	123.2	491	49	757	649	26	15
	4,083	105.6	3,104	104	308	482	19	66
	2,726	-33.2	2,671	-	-	55	-	-
	3,161	16.0	2,931	-	57	163	11	-
	3,388	7.2	2,975	-	-	217	196	-
	5,745	69.6	4,613	269	55	307	78	423
	3,094	-46.2	2,750	-	-	321	-	23
	6,809	120.1	6,540	-	47	222	-	-
	6,149	-9.7	5,697	-	158	104	189	-
	5,035	-18.1	4,926	-	55	55	-	-
	9,980	98.2	9,629	-	54	228	69	-
	7,525	-24.6	7,247	-	50	116	0	112
	9,298	23.6	8,809	-	-	-	0	489

1. Supply and Demand of Coal

Table 4. Coal Consumption: By Major Type of User

In thousand metric tons (MMT) at 10,000 British Thermal Unit per pound (BTU/lb)

FY	Total Consumption							
		Growth Rate (%)	Fuel Input to Power Generation	Cement	Industry	Food, beverages and tobacco	Textile and leather	
1990	2,378		1,059	866	130	46	-	
1991	2,833	19.1	1,287	1,092	150	77	-	
1992	2,565	-9.5	1,285	886	134	67	-	
1993	2,847	11.0	1,430	1,029	112	62	-	
1994	2,897	1.8	1,257	1,280	43	6	-	
1995	3,116	7.5	1,421	1,342	47	6	-	
1996	4,197	34.7	2,470	1,391	37	-	-	
1997	5,189	23.6	3,276	1,554	47	2	-	
1998	5,624	8.4	4,046	1,338	26	-	-	
1999	6,416	14.1	4,883	1,266	33	-	-	
2000	8,762	36.6	7,170	1,299	28	-	-	
2001	8,545	-2.5	6,996	1,272	42	-	-	
2002	8,008	-6.3	6,525	1,245	53	-	-	
2003	8,153	1.8	6,307	1,560	46	-	-	
2004	8,586	5.3	6,587	1,667	32	-	-	
2005	10,075	17.3	7,832	1,925	77	11	-	
2006	9,547	-5.2	7,037	2,148	78	14	-	
2007	10,215	7.0	7,347	2,240	282	42	-	
2008	12,043	17.9	8,447	3,012	295	60	-	
2009	11,494	-4.6	8,416	2,450	334	58	-	
2010	13,321	15.9	9,643	3,118	370	73	-	
2011	14,639	9.9	10,961	3,127	357	69	-	
2012	15,317	4.6	11,937	2,799	366	70	-	
2013	18,952	23.7	14,791	3,156	790	142	201	
2014	20,163	6.4	15,587	3,203	1,080	286	215	
2015	22,006	9.1	17,554	3,348	854	232	17	
2016	24,794	12.7	19,386	3,893	1,179	528	15	
2017	29,320	18.3	23,327	4,423	1,276	597	17	
2018	30,976	5.7	26,101	2,848	1,720	264	16	
2019	33,122	6.9	28,654	2,754	1,447	382	38	
2020	33,244	0.4	29,755	1,312	1,775	292	15	
2021	35,834	7.8	31,738	1,697	1,997	350	23	

*non-energy use as raw materials

						Non-Energy Use*
	Pulp, paper and print	Chemical and petrochemical	Non-Metallic Minerals	Iron and Steel	Not Elsewhere Classified	
	-	72	-	12	-	323
	-	60	-	13	-	304
	-	55	-	12	-	261
	-	32	-	17	-	277
	-	20	-	17	-	318
	-	24	-	17	-	305
	-	23	-	14	-	299
	-	29	-	17	-	313
	-	11	-	14	-	215
	-	17	-	16	-	235
	-	13	-	15	-	264
	-	26	-	15	-	236
	-	32	-	16	5	184
	-	31	-	16	-	239
	-	24	-	8	-	300
	12	47	-	7	0	241
	12	46	-	6	0	283
	112	43	-	85	0	346
	107	31	-	96	0	288
	100	31	-	144	0	294
	99	35	-	162	2	189
	99	35	-	153	0	194
	103	35	-	158	0	214
	128	5	-	306	8	216
	155	17	-	377	31	292
	141	20	8	412	25	250
	161	22	8	432	13	336
	190	27	6	405	35	294
	914	36	9	399	81	307
	290	33	10	208	487	267
	250	74	10	704	429	402
	289	84	16	718	518	403

Supply and Demand of Energy

2. Supply and Demand of Oil

Table 1. Oil: Energy Commodity Account
in thousand barrels (MB)

FY	Total Primary Energy Supply							Transformation		
		Growth Rate (%)	Indigenous Production	Imports	Exports (-)	International (-)		Change in Stocks	Fuel Input to Power Generation (-)	Energy Sector Own Use and Loss (-)
						Marine Bunkers	Aviation Bunkers			
1990	72,174		1,727	83,045	(5,232)	(455)	(2,862)	(4,050)	(17,903)	(3,071)
1991	80,818	12.0	1,091	88,326	(6,681)	(259)	(2,921)	1,262	(24,366)	(2,839)
1992	96,900	19.9	3,263	104,802	(5,285)	(453)	(3,445)	(1,982)	(26,288)	(3,300)
1993	86,811	-10.4	3,321	95,449	(6,455)	(417)	(3,607)	(1,481)	(27,130)	(3,300)
1994	108,129	24.6	1,669	115,136	(4,958)	(657)	(3,551)	489	(29,063)	(3,262)
1995	123,092	13.8	952	134,694	(7,044)	(782)	(3,302)	(1,426)	(30,379)	(3,522)
1996	125,371	1.9	329	139,237	(10,512)	(1,169)	(3,968)	1,454	(29,008)	(4,077)
1997	132,291	5.5	298	147,305	(10,624)	(1,054)	(5,099)	1,465	(33,232)	(3,929)
1998	131,757	-0.4	288	142,599	(6,990)	(1,251)	(3,372)	483	(30,449)	(4,245)
1999	125,451	-4.8	313	136,244	(8,326)	(1,737)	(3,857)	2,813	(20,615)	(4,738)
2000	120,716	-3.8	416	138,710	(13,650)	(1,512)	(4,031)	783	(14,648)	(5,742)
2001	115,867	-4.0	779	135,877	(10,769)	(1,561)	(4,547)	(3,913)	(17,227)	(4,778)
2002	114,545	-1.1	5,350	128,038	(14,808)	(1,608)	(4,651)	2,224	(11,345)	(3,414)
2003	111,907	-2.3	5,013	128,354	(16,704)	(1,369)	(4,903)	1,516	(11,240)	(3,825)
2004	107,545	-3.9	4,543	126,017	(11,534)	(942)	(5,401)	(5,139)	(13,415)	(3,292)
2005	104,349	-3.0	5,785	118,716	(15,367)	(814)	(6,022)	2,050	(9,775)	(3,366)
2006	98,084	-6.0	5,305	119,143	(18,445)	(893)	(6,363)	(662)	(6,781)	(2,449)
2007	99,768	1.7	5,937	119,897	(18,635)	(1,607)	(7,724)	1,901	(6,764)	(2,951)
2008	98,430	-1.3	6,571	117,374	(18,377)	(1,593)	(7,505)	1,961	(7,107)	(2,307)
2009	97,256	-1.2	8,377	107,905	(11,656)	(1,385)	(7,686)	1,702	(8,287)	(2,068)
2010	104,007	6.9	7,905	121,206	(14,634)	(1,284)	(7,787)	(1,400)	(10,413)	(2,295)
2011	98,316	-5.5	7,398	116,127	(15,753)	(1,482)	(8,431)	456	(5,597)	(1,913)
2012	104,256	6.0	6,232	118,342	(10,803)	(1,262)	(8,519)	266	(6,817)	(2,098)
2013	105,865	1.5	5,968	118,703	(10,270)	(1,138)	(8,641)	1,243	(7,571)	(1,665)
2014	110,246	4.1	7,251	134,520	(12,162)	(631)	(8,190)	(10,544)	(9,710)	(2,071)
2015	131,096	18.9	6,156	155,845	(16,411)	(192)	(9,572)	(4,731)	(9,930)	(1,726)
2016	142,009	8.3	6,150	164,745	(15,748)	(348)	(10,202)	(2,588)	(8,761)	(903)
2017	151,329	6.6	5,500	174,931	(16,361)	(672)	(12,441)	372	(6,905)	(1,211)
2018	154,060	1.8	5,325	183,233	(17,933)	(583)	(12,793)	(3,188)	(5,230)	(597)
2019	147,905	-4.0	4,782	169,602	(12,448)	(381)	(12,741)	(909)	(5,660)	(1,670)
2020	129,427	-12.5	4,170	135,778	(13,283)	(707)	(4,465)	7,936	(3,660)	(931)
2021	139,221	7.6	3,569	147,261	(8,053)	(508)	(4,212)	1,165	(2,893)	(291)

	Total Final Energy Consumption							
		Growth Rate (%)	Transport	Industry	Household	Services	Agriculture	Non-Energy Use
	61,543		35,702	15,742	7,129	961	372	1,638
	53,557	-13.0	33,632	10,011	7,094	1,057	337	1,426
	61,805	15.4	38,944	11,867	7,995	1,194	307	1,497
	70,921	14.8	43,928	14,889	8,874	1,341	301	1,587
	71,702	1.1	46,212	12,466	9,715	1,501	265	1,543
	88,887	24.0	54,407	18,891	11,359	1,792	285	2,152
	94,262	6.0	61,492	17,243	12,274	1,896	297	1,060
	101,719	7.9	61,491	20,497	13,122	2,478	2,852	1,279
	102,588	0.9	63,085	18,996	13,545	3,443	2,542	977
	103,444	0.8	62,659	18,454	14,624	4,289	2,443	976
	100,287	-3.1	63,240	14,166	13,895	4,848	2,120	2,018
	97,314	-3.0	62,689	13,144	13,122	5,708	1,986	665
	99,118	1.9	64,992	12,016	13,244	5,801	2,149	916
	98,374	-0.8	63,732	13,788	12,123	5,523	2,298	910
	98,659	0.3	65,880	12,364	12,922	4,752	2,142	598
	92,433	-6.3	62,792	12,103	10,722	4,285	2,122	410
	86,893	-6.0	58,947	11,267	9,810	4,481	1,878	510
	88,195	1.5	60,974	10,981	9,551	4,512	1,534	644
	84,149	-4.6	56,840	11,266	9,247	4,325	1,877	593
	88,566	5.2	59,816	9,969	9,757	6,730	1,519	776
	90,330	2.0	60,290	10,234	9,712	7,636	1,601	858
	89,243	-1.2	59,682	9,839	9,605	7,907	1,380	830
	91,529	2.6	62,165	9,556	9,461	7,797	1,350	1,198
	96,656	5.6	65,004	9,628	9,233	9,045	1,401	2,345
	102,159	5.7	67,677	9,137	9,074	11,490	1,280	3,501
	119,193	16.7	78,066	10,436	10,301	10,581	1,442	8,368
	131,338	10.2	84,501	10,949	11,938	13,297	1,699	8,954
	141,339	7.6	87,383	10,911	12,342	17,145	2,161	11,397
	144,862	2.5	90,527	11,289	13,373	18,160	1,550	9,964
	147,322	1.7	93,994	10,621	14,014	19,134	1,709	7,851
	128,336	-12.9	72,545	11,882	13,272	19,837	1,572	9,228
	141,352	10.1	81,218	12,016	13,583	21,331	1,817	11,387

2. Supply and Demand of Oil

Table 2. Oil Supply: Crude Oil Indigenous Production, by Source
In thousand barrels (MB)

FY	Indigenous Production					
		Growth Rate (%)	Nido	Cadlao	Matinloc	
1990	1,727		206	451	298	
1991	1,091	-36.8	155	338	226	
1992	3,263	199.1	104	-	-	
1993	3,321	1.8	182	-	-	
1994	1,669	-49.7	147	-	-	
1995	952	-43.0	204	-	46	
1996	329	-65.5	214	-	110	
1997	298	-9.3	152	-	146	
1998	288	-3.2	90	-	154	
1999	313	8.7	39	-	239	
2000	416	32.9	185	-	215	
2001	475	14.0	149	-	160	
2002	2,020	325.5	148	-	109	
2003	149	-92.6	80	-	68	
2004	139	-6.8	75	-	63	
2005	208	50.5	121	-	88	
2006	181	-12.9	120	-	62	
2007	184	1.5	100	-	84	
2008	965	423.6	88	-	46	
2009	2,920	202.7	83	-	68	
2010	3,010	3.1	87	-	70	
2011	2,326	-22.7	75	-	51	
2012	1,638	-29.6	74	-	71	
2013	1,884	15.0	84	-	66	
2014	3,079	63.4	79	-	70	
2015	2,410	-21.7	71	-	71	
2016	2,014	-16.4	54	-	73	
2017	1,587	-21.2	56	-	67	
2018	1,264	-20.4	52	-	43	
2019	776	-38.6	21	0	2	
2020	700	-9.8	-	0	0	
2021	632	-9.7	-	0	0	

by Source								Malampaya Condensate
	Tara	North Matinloc	Galoc	West Linapacan	Malampaya Oil	Tindalo	Alegria	
	3	769	-	-	-	-		-
	-	372	-	-	-	-	-	-
	-	-	-	3,159	-	-	-	-
	-	-	-	3,139	-	-	-	-
	-	-	-	1,522	-	-	-	-
	-	-	-	703	-	-	-	-
	-	-	-	5	-	-	-	-
	-	-	-	-	-	-	-	-
	-	45	-	-	-	-	-	-
	-	35	-	-	-	-	-	-
	-	16	-	-	-	-	-	-
	-	0	-	-	166	-	-	304
	-	-	-	-	1,763	-	-	3,329
	-	-	-	-	-	-	-	4,864
	-	-	-	-	-	-	-	4,404
	-	-	-	-	-	-	-	5,576
	-	-	-	-	-	-	-	5,123
	-	-	-	-	-	-	-	5,753
	-	-	831	-	-	-	-	5,606
	-	33	2,736	-	-	-	-	5,457
	-	19	2,684	-	-	152	-	4,895
	-	16	2,183	-	-	-	-	5,072
	-	11	1,483	-	-	-	-	4,594
	-	10	1,723	-	-	-	-	4,084
	-	9	2,921	-	-	-	-	4,173
	-	8	2,260	-	-	-	-	3,746
	-	9	1,878	-	-	-	-	4,136
	-	2	1,461	-	-	-	-	3,914
	-	-	1,167	-	-	-	2	4,061
	-	-	744	-	-	-	9	4,006
	-	-	695	-	-	-	5	3,469
	0	0	630	-	-	-	2	2,936

2. Supply and Demand of Oil

Table 3. Oil Supply: Refinery Production, by Product

In thousand barrels (MB)

Product	1990	1991	1992	1993	1994	1995	1996	
Gasoline	14,261	11,867	13,489	12,962	12,287	16,220	17,476	
Diesel Oil	23,728	24,152	26,620	25,213	26,373	34,652	38,318	
Kerosene	4,060	3,299	4,282	4,270	3,916	4,524	4,639	
Fuel Oil	26,400	24,136	27,573	28,254	29,546	43,477	46,318	
LPG	2,703	2,777	2,913	2,608	2,806	4,391	4,822	
Aviation Fuels	3,421	3,453	4,067	4,559	4,352	4,902	6,237	
Naphtha	1,977	3,381	3,200	3,264	4,364	5,619	6,036	
Other Products	868	1,111	722	1,050	866	546	584	
Asphalts	300	333	266	235	227	297	281	
Hydro/Solvents	568	778	456	815	639	249	303	
Mixed Xylene	-	-	-	-	-	-	-	
Basestocks	-	-	-	-	-	-	-	
Secondary Products	-	-	-	-	-	-	-	
Waxes	-	-	-	-	-	-	-	
Sulphur	-	-	-	-	-	-	-	
Others	-	-	-	-	-	-	-	
Total Marketable Products	77,418	74,176	82,866	82,180	84,510	114,331	124,430	
Add:								
In-Process and Intermediate	573	469	403	72	0	0	0	
Refinery Fuel (RF) & Loss (L)	3,071	2,839	3,300	3,300	3,262	3,522	4,077	
Total Output	81,062	77,484	86,569	85,552	87,772	117,853	128,507	
Thousand Barrels/Calendar Day (MBCD)	222	212	237	234	240	323	352	
RF & L as % of Total Output	3.8	3.7	3.8	3.9	3.7	3.0	3.2	

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	18,759	19,063	20,301	17,306	17,734	16,736	15,727	12,760	14,058	13,491
	40,173	36,960	36,510	34,942	33,872	29,758	28,731	21,719	24,843	26,942
	4,502	4,182	4,576	4,191	3,625	3,227	2,802	1,776	1,674	1,319
	49,124	43,488	39,813	36,639	32,241	26,104	25,970	23,419	23,170	20,981
	5,294	4,977	5,712	4,712	5,544	5,019	4,604	3,064	3,817	3,864
	6,419	4,535	5,272	5,318	4,825	5,050	5,024	4,584	5,576	5,867
	5,666	5,111	4,238	6,463	6,080	4,158	4,496	1,800	1,032	1,124
	546	2,433	1,887	1,702	1,387	888	887	956	1,099	1,220
	283	1,090	877	454	651	199	-1	2	0	0
	263	181	199	151	135	115	157	102	99	78
	-	0	14	324	209	541	731	852	979	1,085
	-	846	617	338	747	148	-	-	-	-
	-	279	112	386	-337	-110	-	-	-	-
	-	37	68	48	-18	-5	-	-	-	-
	-	-	-	-	-	-	-	-	20.40	57.00
	-	-	-	-	-	-	-	-	-	-
	130,483	120,749	118,309	111,273	105,308	90,941	88,242	70,077	75,269	74,808
	0	0	0	0	4,402	84	466	-3	621	-97
	3,929	4,245	4,738	5,742	4,778	3,414	3,825	3,292	3,366	2,449
	134,412	124,993	123,047	117,014	114,488	94,439	92,532	73,366	79,256	77,160
	368	342	337	321	314	259	254	201	217	211
	2.9	3.4	3.9	4.9	4.2	3.6	4.1	4.5	4.2	3.2

(Continuation)

2. Supply and Demand of Oil**Table 3. Oil Supply: Refinery Production, by Product***In thousand barrels (MB)*

Product	2007	2008	2009	2010	2011	2012	
Gasoline	12,492	11,988	9,153	11,427	12,819	12,006	
Diesel Oil	26,458	23,871	17,541	22,957	25,204	22,631	
Kerosene	1,287	1,030	1,002	1,087	780	717	
Fuel Oil	21,226	15,975	10,776	12,900	13,202	11,477	
LPG	2,951	3,556	3,286	4,210	4,495	4,083	
Aviation Fuels	5,990	5,566	5,248	6,103	6,087	5,387	
Naphtha	528	1,085	2,409	1,492	1,379	1,183	
Other Products	1,197	1,797	2,226	3,438	3,409	2,810	
Asphalts	0	-	-	-	-	-	
Hydro/Solvents	74	38	30	27	-3	11	
Mixed Xylene	1,061	1,112	816	1,108	1,057	938	
Basestocks	-	-	-	-	-	-	
Secondary Products	-	-	-	-	-	-	
Waxes	-	-	-	-	-	-	
Sulphur	62.06	57.43	135	152	211	137	
Others	-	589.10	1,245	2,151	2,144	1,724	
Total Marketable Products	72,128	64,868	51,640	63,614	67,375	60,293	
Add:							
In-Process and Intermediate	-97	-	-	-	-	-	
Refinery Fuel (RF) & Loss (L)	2,951	2,307	2,068	2,295	1,913	2,098	
Total Output	74,982	67,175	53,708	65,909	69,288	62,391	
Thousand Barrels/Calendar Day (MBCD)	205	184	148	182	191	172	
RF & L as % of Total Output	3.9	3.4	4.3	4.1	3.6	4.1	

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	10,670	11,074	17,089	18,942	18,557	20,989	14,562	8,068	7,177
	21,332	22,111	28,974	29,137	27,762	33,181	23,333	14,901	12,412
	675	461	472	523	410	364	254	183	168
	10,624	11,364	6,332	5,170	6,467	4,881	4,644	2,356	196
	3,654	3,427	5,293	5,353	5,196	5,924	3,331	1,772	1,750
	5,001	5,970	7,191	7,922	7,097	8,080	6,290	2,667	2,100
	2,083	2,127	2,677	2,235	1,744	2,109	1,403	747	-
	2,007	2,766	7,722	8,832	8,748	10,431	5,683	3,920	4,986
	-	-	-	-	-	94.36	281	18	-
	12	0	0	-6	0	0	-	-	-
	638	841	974	1,007	959	1,018	589	464	628
	-	-	-	-	-	-			
	-	-	-	-	-	-			
	-	-	-	-	-	-			
	89	296	3,582	3,959	3,687	4,613	2,499	2,010	2,183
	1,268	1,629	3,166	3,872	4,103	4,705	2,314	1,428	2,175
	56,047	59,301	75,751	78,113	75,981	85,958	59,500	34,614	28,789
	-	-	-	-	-	-	-	-	-
	1,665	2,071	1,726	903	1,211	597	1,670	931	291
	57,712	61,372	77,478	79,016	77,192	86,555	61,170	35,545	29,080
	159	170	213	216	211	237	168	97	80
	3.7	4.4	2.7	1.8	2.1	1.2	2.7	3.2	1.0

2. Supply and Demand of Oil

Table 4. Oil Supply: Crude Oil Importation, by Country of Source

In thousand barrels (MB)

FY	Total Imports	Growth Rate (%)	Middle East			
				Saudi Arabia	Iran	
1990	73,351		58,784	25,659	5,331	
1991	76,088	3.7	59,993	34,768	11,208	
1992	89,151	17.2	71,721	44,724	10,797	
1993	72,129	-19.1	59,082	36,414	7,288	
1994	84,662	17.4	74,189	51,856	4,904	
1995	118,050	39.4	109,726	80,620	9,070	
1996	126,688	7.3	117,715	75,474	16,794	
1997	128,940	1.8	120,235	47,330	41,615	
1998	116,597	-9.6	110,282	40,394	36,727	
1999	117,592	0.9	110,811	41,553	35,320	
2000	113,633	-3.4	107,650	37,609	27,391	
2001	111,455	-1.9	105,007	35,610	28,859	
2002	93,871	-15.8	88,658	38,235	19,432	
2003	91,309	-2.7	84,384	41,881	21,918	
2004	73,066	-20.0	68,792	37,165	25,144	
2005	77,637	6.3	72,295	43,841	20,004	
2006	78,097	0.6	74,266	45,074	18,700	
2007	74,185	-5.0	67,356	46,872	1,455	
2008	69,067	-6.9	61,572	46,603	1,915	
2009	50,061	-27.5	42,243	22,578	-	
2010	66,599	33.0	54,232	30,359	819	
2011	69,456	4.3	52,955	30,795	5,874	
2012	63,562	-8.5	51,032	29,784	-	
2013	56,186	-11.6	42,727	23,500	-	
2014	64,862	15.4	49,086	37,103	-	
2015	77,911	20.1	67,133	34,427	-	
2016	78,637	0.9	68,537	28,438	-	
2017	77,516	-1.4	69,345	27,097	-	
2018	85,660	10.5	74,555	28,880	-	
2019	60,666	-29.2	41,521	15,498	-	
2020	32,942	-45.7	24,040	15,044	-	
2021	29,689	-9.9	28,411	19,059	-	

*Includes Australia, Nigeria, Gabon, UK and Mexico

	Iraq	Kuwait	Oman	Qatar	UAE	Yemen
	3,843	-	1,030	4,009	18,910	-
	-	-	-	3,998	10,019	-
	-	-	-	2,686	13,514	-
	-	-	-	999	14,381	-
	-	-	3,023	314	14,092	-
	-	-	6,303	-	13,733	-
	-	-	12,083	1,169	12,194	-
	774	-	14,480	3,538	12,499	-
	2,744	-	17,991	1,986	10,440	-
	1,817	-	9,540	3,381	19,200	-
	-	-	6,585	3,255	32,810	-
	-	-	10,472	7,466	21,853	748
	-	-	6,328	6,637	15,416	2,611
	-	-	-	4,181	13,997	2,407
	396	-	-	5,563	525	-
	-	-	-	5,536	2,914	-
	-	-	-	2,568	7,924	-
	-	-	-	4,374	14,655	-
	-	-	-	-	13,054	-
	99	-	1,050	8,372	10,144	-
	-	-	693	4,273	18,088	-
	-	-	6	1,551	14,730	-
	-	-	-	5,018	16,230	-
	-	-	-	8,459	9,717	1,050
	-	-	-	5,579	6,403	-
	-	16,877	-	7,464	8,365	-
	-	26,448	524	2,618	10,507	-
	-	24,475	1,225	2,999	13,549	-
	-	22,589	1,091	4,235	17,759	-
	-	15,925	961	-	9,136	-
	-	7,991	-	498	506	-
	630	-	3,002	952	4,769	-

(Continuation)

2. Supply and Demand of Oil

Table 4. Oil Supply: Crude Oil Importation, by Country of Source

In thousand barrels (MB)

FY	Total Imports						
	ASEAN						
		Brunei	Indonesia	Malaysia	Singapore	Vietnam	
1990	12,673	4,491	708	7,474	-	-	
1991	13,709	4,737	1,447	7,525	-	-	
1992	16,172	4,288	2,236	9,648	-	-	
1993	12,288	2,613	2,542	7,133	-	-	
1994	10,473	1,934	2,742	5,797	-	-	
1995	5,925	759	2,399	2,767	-	-	
1996	4,839	-	1,363	3,476	-	-	
1997	6,871	-	2,452	4,419	-	-	
1998	5,395	-	1,014	4,381	-	-	
1999	4,694	-	420	4,274	-	-	
2000	4,705	-	641	4,064	-	-	
2001	4,157	-	1,456	2,701	-	-	
2002	5,213	835	410	3,968	-	-	
2003	5,627	-	978	4,650	-	-	
2004	3,675	-	278	3,397	-	-	
2005	5,052	-	-	5,052	-	-	
2006	3,644	-	-	3,644	-	-	
2007	3,679	-	-	3,577	102	-	
2008	5,688	1,414	22	4,222	30	-	
2009	4,669	299	230	4,090	49	-	
2010	7,160	296	-	6,864	-	-	
2011	2,183	-	-	2,102	81	-	
2012	3,022	344	191	2,410	-	77	
2013	1,785	600	162	1,023	-	-	
2014	4,430	600	-	3,583	-	248	
2015	6,009	-	-	5,747	-	261	
2016	4,845	288	396	4,160	-	-	
2017	1,497	581	-	916		-	
2018	3,787	300	221	3,215	50	-	
2019	5,838	1,484	-	4,085	269	-	
2020	709	-	-	629	80	-	
2021	575	575	-	-	-	-	

	Other Asia						Others*
		Russia	Korea	China	Taiwan	Japan	
	1,464	-	311	1,154			430
	2,386	-	170	2,216			-
	1,258	-	-	1,258			-
	759	-	-	759			-
	-	-	-	-			-
	-	-	-	-			2,399
	3,186	-	-	3,186			948
	891	-	-	891			942
	-	-	-	-			920
	-	-	-	-			2,087
	-	-	-	-			1,278
	-	-	-	-			2,290
	-	-	-	-			-
	1,297	1,297	-	-			-
	599	599	-	-			-
	-	-	-	-			289
	-	-	-	-			187
	-	-	-	-			3,150
	180	180	-	-			1,628
	2,782	2,782	-	-			367
	5,207	5,207	-	-			-
	14,318	14,318	-	-			-
	9,508	9,508	-	-			-
	11,673	10,255	1,419	-			-
	11,346	11,346	-	-			-
	4,769	4,769	-	-			-
	5,256	5,256	-	-			-
	5,629	5,106	150	-	315	58	1,045
	6,969	6,380	31	-	559	-	349
	9,010	8,681	88	-	241	-	4,298
	5,142	5,061	-	-	80	-	3,052
	702	702	-	-	-	-	-

2. Supply and Demand of Oil

Table 5a. Oil Supply: Petroleum Product Importation, by Product Type
In thousand barrels (MB)

FY	Total Product Imports							
		Growth Rate (%)	Gasoline	Diesel	Fuel Oil	Kerosene	Aviation Fuel	
1990	9,850		51	2,377	4,927	-	337	
1991	13,245	34.5	-	4,815	4,663	598	40	
1992	15,694	18.5	-	6,423	6,629	-	23	
1993	23,320	48.6	1,006	15,762	1,928	107	17	
1994	30,474	30.7	3,043	14,672	7,403	657	260	
1995	16,669	-45.3	1,823	6,653	4,159	219	31	
1996	13,272	-20.4	2,268	3,313	2,778	4	192	
1997	19,120	44.1	2,529	4,475	4,283	767	670	
1998	26,451	38.3	3,800	7,113	6,778	738	736	
1999	18,899	-28.6	2,127	4,404	3,945	621	911	
2000	25,980	37.5	5,084	7,426	2,880	372	1,257	
2001	24,433	-6.0	5,231	8,986	1,398	374	1,907	
2002	34,396	40.8	6,418	14,049	3,922	476	1,375	
2003	37,045	7.7	8,842	13,919	2,729	787	1,800	
2004	52,951	42.9	11,908	20,446	6,780	1,198	2,864	
2005	41,079	-22.4	9,930	16,248	4,128	743	2,065	
2006	41,046	-0.1	9,500	16,208	4,668	619	2,317	
2007	45,712	11.4	11,418	16,444	4,755	409	3,010	
2008	48,307	5.7	10,794	18,065	7,107	301	3,310	
2009	57,843	19.7	13,111	23,836	5,534	483	3,998	
2010	54,607	-5.6	12,575	22,368	5,660	289	3,547	
2011	46,671	-14.5	11,248	18,672	2,287	247	4,838	
2012	54,780	17.4	12,378	24,941	1,876	228	5,928	
2013	62,517	14.1	14,599	26,464	2,685	1,490	6,449	
2014	69,658	11.4	14,828	30,343	4,901	430	6,579	
2015	77,934	11.9	15,148	28,375	10,129	199	5,722	
2016	86,108	10.5	15,705	35,345	7,162	252	6,837	
2017	97,415	13.1	17,162	40,105	6,921	317	8,928	
2018	97,573	0.2	19,004	38,784	5,244	265	9,331	
2019	108,936	11.6	18,726	49,462	5,061	134	11,708	
2020	103,108	-5.4	25,038	41,977	6,481	304	3,408	
2021	117,572	14.0	24,927	50,655	7,097	398	3,331	

	LPG	Naphtha	Other Products				
				Reformate	Asphalt	Condensate	Others
	1,904	-	254	-	-	-	254
	2,028	-	1,101	-	-	-	1,101
	2,576	-	43	-	-	-	43
	4,399	-	101	-	-	-	101
	4,315	-	123	-	-	-	123
	3,635	-	149	-	-	-	149
	3,912	-	806	-	-	-	806
	5,137	33	1,227	688	-	-	538
	6,187	-	1,100	368	-	-	732
	6,473	-	417	189	46	-	182
	7,552	-	1,410	820	45	-	545
	6,507	-	30	-	19	-	11
	7,288	-	869	228	397	-	243
	7,995	233	741	-	413	-	328
	8,657	-	1,099	-	452	-	647
	7,582	-	383	-	282	-	101
	7,214	-	520	-	442	-	78
	8,889	-	787	-	498	259	30
	8,064	-	667	-	541	-	126
	9,621	-	1,260	-	559	477	224
	8,758	-	1,411	-	432	979	-
	8,599	-	781	-	496	285	-
	8,218	-	1,211	-	951	260	-
	9,074	-	1,756	-	741	1,015	-
	9,299	1,187	2,092	-	1,524	567	-
	9,691	6,678	1,992	-	389	1,603	-
	11,613	7,700	1,494	-	914	580	-
	13,910	8,914	1,159	-	879	280	-
	15,224	8,233	1,488	-	1,231	254	3
	15,957	5,889	1,999	-	790	559	651
	17,109	7,482	1,309	-	549	325	436
	19,723	8,812	2,629	-	646	1,844	140

2. Supply and Demand of Oil

Table 5b. Oil Supply: Petroleum Product Importation, by Country of Source
In thousand barrels (MB)

FY	Total Product Imports									
		Growth Rate (%)	Middle East							
				Bahrain	Iran	Iraq	KSA	Kuwait	Oman	
1997	19,120		525	-	-		525	-	-	
1998	26,451	38.3	110	-	-		1	-	-	
1999	18,899	-28.6	2	-	-		2	-	-	
2000	25,980	37.5	1,115	-	-		805	310	-	
2001	24,433	-6.0	723	-	2		335	386	-	
2002	34,396	40.8	419	-	97		301	-	-	
2003	37,045	7.7	2,069	-	238		1,428	84	-	
2004	52,951	42.9	2,215	-	169		629	329	-	
2005	41,079	-22.4	1,338	-	-		377	158	-	
2006	41,046	-0.1	1,575	-	116		484	286	-	
2007	45,712	11.4	1,560	-	504		111	-	-	
2008	48,307	5.7	1,329	-	586		74	-	29	
2009	57,843	19.7	3,378	-	1,258		251	260	-	
2010	54,607	-5.6	2,257	-	643		86	250	-	
2011	46,671	-14.5	3,177	113	-		429	361	-	
2012	54,780	17.4	1,597	319	0		251	340	-	
2013	62,517	14.1	2,449	86	-		843	504	251	
2014	69,658	11.4	1,966	-	-		551	406	-	
2015	77,934	11.9	1,678	-	-		1,085	228	135	
2016	86,108	10.5	6,280	-	1		1,402	692	-	
2017	97,415	13.1	5,272	-	3		1,081	1,150	90	
2018	97,573	0.2	11,521	-	1	163	1,204	443	3	
2019	108,936	11.6	8,436	-	5		1,242	1,323	176	
2020	103,108	-5.4	8,492	-	-		1,407	1,384	-	
2021	117,572	14.0	7,695	4	-	-	2,438	1,001	-	

				ASEAN					
	Qatar	UAE	Yemen		Brunei	Indonesia	Malaysia	Philippines	Singapore
	-	-	-	13,773	-	-	179	8,066	5,294
	-	109	-	19,603	-	67	171	10,809	8,316
	-	-	-	17,214	-	237	683	11,065	4,945
	-	-	-	19,915	-	352	2,521	9,434	6,749
	-	-	-	16,134	-	440	3,288	7,510	3,675
	-	-	20	23,271	-	1,375	3,352	7,414	10,050
	-	269	50	19,350	-	1,007	2,578	5,232	9,548
	70	1,018	-	26,324	-	920	3,631	3,698	16,127
	140	664	-	21,435	-	638	2,672	3,772	13,220
	-	690	-	24,564	-	258	3,540	4,335	14,781
	340	606	-	23,349	-	684	3,978	4,600	13,472
	365	275	-	23,132	-	98	4,261	4,541	13,267
	1,108	501	-	23,518	-	662	3,288	5,621	12,894
	619	659	-	31,933	-	484	2,185	5,609	18,137
	1,454	821	-	17,729	-	915	1,145	3,720	8,717
	48	639	-	14,275	-	548	884	3,025	6,011
	276	489	-	17,312	-	97	1,835	4,427	7,547
	450	559	-	16,523	-	697	1,758	805	9,982
	-	231	-	19,979	-	228	7,523	-	10,323
	1,490	2,695	-	19,556	-	1,610	4,572	-	12,147
	1,263	1,684	-	19,732	-	1,186	7,557	-	10,273
	1,265	8,442	-	18,321	-	539	7,661	-	7,910
	657	5,033	-	24,697	222	590	9,161	-	12,551
	1,868	3,833	-	34,651	4,293	1,738	9,338	-	18,188
	1,202	3,049	-	43,833	5,660	-	13,429	-	20,361

(Continuation)

2. Supply and Demand of Oil

Table 5b. Oil Supply: Petroleum Product Importation, by Country of Source
In thousand barrels (MB)

FY	Total Product Imports							
	ASEAN		Other Asia					
	Thailand	Vietnam		Bangladesh	China	Hong Kong	India	
1997	235	-	4,580	-	528	-	-	
1998	240	-	6,706	-	272	-	-	
1999	285	-	1,529	-	209	208	-	
2000	859	-	4,008	-	20	-	-	
2001	1,221	-	7,367	-	1,830	-	-	
2002	1,080	-	9,790	-	2,272	-	103	
2003	985	-	15,207	-	3,897	132	184	
2004	1,946	-	24,164	-	2,058	24	129	
2005	934	199	18,097	-	1,777	-	11	
2006	1,650	-	13,725	-	2,087	182	-	
2007	615	-	19,035	-	1,367	-	-	
2008	923	42	21,493	-	1,553	-	255	
2009	874	178	29,737	229	3,958	182	-	
2010	5,269	250	19,919	601	3,076	-	583	
2011	3,174	58	25,686	-	6,422	80	-	
2012	3,767	41	38,613	-	5,561	266	-	
2013	3,148	258	42,531	-	8,117	64	31	
2014	2,473	808	50,335	-	10,504	1	1,064	
2015	1,272	633	53,160	-	10,938	-	3,258	
2016	36	1,192	58,342	-	24,997	51	2,763	
2017	377	340	67,305	-	32,460	158	4,686	
2018	930	1,281	64,491	-	29,421	-	2,682	
2019	266	1,907	73,156		45,472	0	3,219	
2020	409	685	55,327		32,247	20	4,409	
2021	3,647	736	61,344	-	35,279	0	4,950	

*Includes Australia, Nigeria, Gabon, UK and Mexico

							Others*
	Japan	Russia	Korea	Taiwan	Pakistan	Sri Lanka	
	1,259	603	1,692	499	-		243
	491	-	5,928	14	-		32
	236	-	801	75	-		155
	767	342	2,574	304	-		942
	524	-	3,874	1,139	-		210
	-	-	5,301	2,115	-		916
	456	-	5,793	4,746	-		419
	2,068	-	7,983	11,903	-		249
	38	-	4,159	12,112	-		208
	16	-	3,954	7,487	-		1,181
	677	-	5,500	11,491	-		1,768
	1,333	-	8,384	9,968	-		2,353
	3,976	-	9,621	11,772	-		1,210
	1,292	-	5,744	8,623	-		498
	1,018	-	8,124	10,042	-		79
	687	-	13,893	18,206	-		295
	299	-	14,875	19,145	-		224
	368	-	21,229	16,993	177		834
	1,824	605	17,886	17,674	975		3,117
	4,701	-	16,233	9,204	393		1,930
	4,261	-	22,521	2,216	1,002		5,106
	2,673	-	28,083	1,028	333	271	3,240
	1,373		22,701	391			2,646
	518	512	16,045	1,575			4,638
	2,323		15,267	3,525			4,701

2. Supply and Demand of Oil

Table 6a. Oil Supply: Oil Exportation, by Type
In thousand barrels (MB)

FY	Total Oil Export				Petroleum Product**							
		Growth Rate (%)	Crude Oil*	Malampaya Condensate		Gasoline	Diesel	Fuel Oil	Kerosene	Aviation Fuel	LPG	
1990	5,232		-	-	5,232	1,686	-	1,025	-	233	-	
1991	6,681	27.7	-	-	6,681	1,659	-	671	-	-	-	
1992	5,285	-20.9	-	-	5,285	110	-	365	-	-	-	
1993	6,389	20.9	-	-	6,389	41	-	901	-	-	1,294	
1994	4,958	-22.4	-	-	4,958	195	-	330	-	-	-	
1995	7,044	42.1	-	-	7,044	-	1,359	381	40	230	21	
1996	10,512	49.2	-	-	10,512	-	1,639	2,879	-	357	-	
1997	10,624	1.1	-	-	10,624	-	180	3,879	542	-	-	
1998	6,990	-34.2	-	-	6,990	-	228	1,247	-	-	-	
1999	8,326	19.1	-	-	8,326	-	654	2,946	-	-	-	
2000	13,650	64.0	-	-	13,650	71	644	6,304	-	42	68	
2001	11,074	-18.9	-	304	10,769	10	398	3,478	3	-	169	
2002	18,313	65.4	-	3,329	14,984	-	1,101	5,611	-	40	538	
2003	21,317	16.4	-	4,864	16,453	61	979	4,972	-	-	93	
2004	16,002	-24.9	-	4,404	11,597	-	759	3,105	-	-	-	
2005	21,056	31.6	-	5,576	15,479	-	1,225	6,106	-	-	43	
2006	23,627	12.2	-	5,123	18,503	-	2,302	8,094	-	-	-	
2007	24,426	3.4	-	5,753	18,673	-	527	9,744	-	273	29	
2008	23,943	-2.0	504	5,606	17,833	303	706	7,593	-	78	103	
2009	17,123	-28.5	888	5,457	10,779	172	246	1,768	-	-	-	
2010	19,538	14.1	2,612	4,895	12,031	-	130	1,585	99	-	15	
2011	20,989	7.4	2,447	5,072	13,470	-	258	3,516	50	-	66	
2012	15,390	-26.7	1,401	4,594	9,395	-	370	1,339	-	-	1	
2013	14,091	-8.4	1,388	4,084	8,619	-	-	1,578	-	-	1	
2014	16,567	17.6	2,833	4,173	9,561	-	-	1,610	-	-	2	
2015	20,175	21.8	2,441	3,746	13,988	1,680	-	2,955	-	-	59	
2016	19,712	-2.3	1,804	4,136	13,772	1,817	-	1,584	-	-	39	
2017	19,953	1.2	1,409	3,914	14,631	600	-	2,863	-	-	66	
2018	21,879	9.7	1,066	4,061	16,752	1,704	892	1,716	-	-	6	
2019	16,676	-23.8	994	4,006	11,676	310	540	1,897	-	-	57	
2020	13,905	-16.6	2,530	3,469	7,905	842	1,095	1,671	-	114	0	
2021	10,548	-24.1	632	2,936	6,980	843	-	-	-	-	-	

*Crude Oil Export Data from ERDB

**Petroleum Products Export from OIMB

	Naphtha	Other Petroleum Product								
			Reformate	Asphalt	Condensate	Mixed Xylene	Toluene	Propylene	Benzene	Others
	2,288	-	-	-	-	-	-	-	-	-
	4,343	8	-	-	-	-	-	-	-	8
	3,328	1,482	1,297	-	-	-	-	-	-	185
	3,642	511	445	-	-	-	-	-	-	66
	4,433	-	-	-	-	-	-	-	-	-
	4,860	153	153	-	-	-	-	-	-	-
	5,407	230	230	-	-	-	-	-	-	-
	5,341	682	152	529	-	-	-	-	-	-
	5,012	504	27	477	-	-	-	-	-	-
	4,029	696	278	418	-	-	-	-	-	-
	5,132	1,390	1,134	9	-	247	-	-	-	-
	5,800	911	258	155	304	194	-	-	-	-
	3,736	3,958	-	-	3,505	453	-	-	-	-
	4,213	6,136	887	123	4,613	513	-	-	-	-
	2,245	5,488	339	1	4,468	680	-	-	-	-
	769	7,336	726	-	5,689	922	-	-	-	-
	1,502	6,606	372	-	5,181	1,024	-	-	-	28
	631	7,468	755	-	5,791	922	-	-	-	-
	1,132	7,919	859	-	5,566	976	-	494	-	24
	1,020	7,572	448	-	5,467	731	163	706	57	-
	2,209	7,994	194	-	4,904	955	626	1,088	226	-
	1,761	7,819	270	-	5,236	896	502	706	210	-
	1,595	6,089	120	-	4,587	887	331	19	145	-
	2,262	4,779	82	-	3,821	446	257	21	151	-
	1,794	6,156	59	-	4,405	695	359	194	172	271
	1,870	7,424	-	-	3,765	756	371	1,019	214	1,299
	1,624	8,708	154	-	3,964	703	425	1,491	168	1,803
	1,344	9,757	130		3,592	740	402	1,745	193	2,954
	1,680	10,754	282	312	3,946	715	480	1,841	172	3,006
	1,001	7,871	85	166	4,228	415	125	558	83	2,210
	799	3,384	260	-	622	259	152	939	43	1,109
	-	6,137	-	-	2,495	507	293	1,757	195	889

2. Supply and Demand of Oil

Table 6b. Oil Supply: Petroleum Product Exportation, by Country of Destination
In thousand barrels (MB)

FY	Total Petroleum Product Exports									
		Growth Rate (%)	Middle East			ASEAN				
				UAE	Iraq		Bangladesh	Brunei	Cambodia	
1997	10,624		-	-		2,755		24	1	
1998	6,990	-34.2	-	-		895		13	1	
1999	8,326	19.1	-	-		2,615		9	1	
2000	13,650	64.0	-	-		7,928		-	1	
2001	10,769	-21.1	-	-		2,617		-	-	
2002	14,984	39.1	-	-		6,604		-	-	
2003	16,453	9.8	-	-		7,045		-	-	
2004	11,597	-29.5	-	-		4,245		-	-	
2005	15,479	33.5	-	-		7,759		44	-	
2006	18,503	19.5	-	-		11,298		-	-	
2007	18,673	0.9	-	-		10,532		-	-	
2008	17,833	-4.5	-	-		11,075		-	-	
2009	10,779	-39.6	-	-		5,897		-	-	
2010	12,031	11.6	6	6		4,034		-	-	
2011	13,470	12.0	9	9		5,574		-	-	
2012	9,395	-30.3	-	-		2,870		-	-	
2013	8,619	-8.3	-	-		4,000		-	-	
2014	9,561	10.9	-	-		5,916		-	-	
2015	13,988	46.3	-	-		6,691		-	-	
2016	13,772	-1.5	-	-		6,027		-	-	
2017	14,631	6.2	122	122		7,561	36	-	-	
2018	16,752	14.5	-	-		9,552	-	-	-	
2019	11,676	-30.3	-	-		8,572	-	-	-	
2020	7,905	-32.3	-	-		5,911	-	-	-	
2021	6,980	-11.7	298	-	298	3,729		324		

	Indonesia	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
	1,258	52	-	273	427	204	515
	-	40	-	747	27	-	67
	-	104	-	156	1,858	226	261
	303	176	-	211	6,966	93	179
	-	93	-	-	2,471	-	53
	-	509	-	-	5,084	245	766
	255	181	-	134	5,665	-	810
	-	228	-	-	2,951	374	692
	32	218	-	-	7,088	377	-
	-	336	-	-	8,479	2,483	-
	185	40	-	-	7,179	3,128	-
	133	448	19	-	9,533	941	-
	230	320	-	-	3,117	1,957	274
	-	188	-	-	3,255	591	-
	36	516	-	-	4,030	991	-
	19	667	-	-	1,737	446	-
	433	944	-	-	2,279	344	-
	21	679	-	-	3,704	1,513	-
	98	2,416	-	-	3,066	919	192
	67	1,259	-	-	2,711	1,683	308
	119	2,131	-	-	2,849	2,333	93
	252	1,319	-	-	4,812	3,025	144
	19	1,786			4,602	1,818	347
		2,571			2,753	476	111
	95	627			640	1,902	141

(Continuation)

2. Supply and Demand of Oil

Table 6b. Oil Supply: Petroleum Product Exportation, by Country of Destination
In thousand barrels (MB)

FY	Total Product Exports					
	Other Asia	China	Hong Kong	India	Japan	
1997	7,864	3,026	450	-	3,768	
1998	6,083	779	463	9	2,926	
1999	5,701	1,152	1,273	2	2,267	
2000	5,722	888	429	-	3,885	
2001	7,847	1,623	549	-	3,864	
2002	7,552	3,823	919	-	1,656	
2003	6,128	1,723	311	-	2,134	
2004	4,808	2,767	158	-	1,351	
2005	3,710	2,143	136	-	336	
2006	3,237	2,154	80	-	228	
2007	3,467	1,888	802	-	-	
2008	5,015	1,143	240	8	169	
2009	4,881	1,244	296	-	-	
2010	7,991	1,137	-	32	456	
2011	7,888	970	396	141	101	
2012	6,524	315	678	-	-	
2013	4,619	473	629	-	78	
2014	3,643	717	-	-	-	
2015	6,433	1,441	-	-	-	
2016	7,727	1,897	-	-	20	
2017	6,899	2,670	-	-	62	
2018	7,040	3,986	-	-	60	
2019	3,037	1,802	-	-	-	
2020	1,994	903	306	36	130	
2021	2,876	1,259	-	146	-	

*Includes Australia, Belgium, Guam, Saipan and USA

	South Korea	Taiwan	Pakistan	Others*
	595	24	-	5
	1,907	-	-	12
	1,007	-	-	10
	457	64	-	-
	1,172	639	-	305
	823	331	-	828
	1,222	738	-	3,280
	436	96	-	2,545
	41	1,027	28	4,010
	-	774	-	3,968
	344	433	-	4,674
	1,321	2,134	-	1,743
	1,423	1,919	-	-
	4,691	1,675	-	-
	4,416	1,852	11	-
	4,284	1,249	-	1
	2,806	632	-	1
	2,284	643	-	2
	3,453	1,539	-	864
	3,385	2,424	-	18
	2,645	1,523	-	48
	1,911	1,083	-	160
	907	327	-	67
	21	598	-	0
	789	682	-	77

2. Supply and Demand of Oil

Table 7. Oil Consumption: By Sector
In thousand barrels (MB)

FY	Total Consumption						
		Growth Rate (%)	Transport	Rail	Road	Water	
1990	82,763		39,018	15	30,516	4,468	
1991	81,103	-2.0	36,812	14	29,336	3,541	
1992	91,990	13.4	42,842	14	33,683	4,670	
1993	102,075	11.0	47,952	14	37,606	5,650	
1994	104,973	2.8	50,419	14	39,386	5,982	
1995	123,350	17.5	58,492	13	45,234	8,297	
1996	128,407	4.1	66,628	13	49,950	10,443	
1997	141,103	9.9	67,643	16	50,712	9,186	
1998	137,660	-2.4	67,708	16	51,236	11,065	
1999	129,653	-5.8	68,252	17	52,377	9,954	
2000	120,478	-7.1	68,747	9	52,496	9,522	
2001	120,648	0.1	68,797	6	52,718	9,296	
2002	116,722	-3.3	71,251	2	55,321	9,368	
2003	115,886	-0.7	70,004	2	55,165	8,086	
2004	118,418	2.2	72,224	5	56,941	7,903	
2005	109,060	-7.9	69,644	39	54,492	7,208	
2006	100,950	-7.4	66,223	3	51,041	6,915	
2007	104,755	3.8	70,711	3	53,484	8,338	
2008	101,199	-3.4	66,691	1	51,215	6,592	
2009	107,299	6.0	70,052	1	54,727	5,836	
2010	111,809	4.2	71,115	18	55,061	6,390	
2011	106,857	-4.4	71,532	35	54,269	6,383	
2012	110,991	3.9	74,568	52	57,158	5,925	
2013	117,489	5.9	77,985	69	60,094	5,772	
2014	124,503	6.0	79,996	86	61,470	5,978	
2015	143,226	15.0	91,891	13	70,959	7,833	
2016	155,414	8.5	99,456	14	77,873	6,690	
2017	166,539	7.2	105,255	16	80,960	7,805	
2018	168,805	1.4	108,811	13	84,246	7,162	
2019	171,817	1.8	112,365	11	87,593	7,086	
2020	142,017	-17.3	82,106	11	69,740	6,167	
2021	154,422	8.7	90,861	13	78,315	6,791	

Industry						
	Air		Food, beverages and tobacco	Textile and leather	Wood and wood products	Pulp, paper and print
	4,019	15,742	3,095	801	410	945
	3,920	10,011	2,489	729	324	775
	4,475	11,867	3,181	930	315	1,058
	4,682	14,889	3,909	1,137	294	1,198
	5,038	12,466	3,537	916	287	1,023
	4,948	18,891	4,498	1,228	278	1,640
	6,223	17,243	4,797	1,254	161	1,046
	7,729	20,497	4,442	1,275	110	774
	5,391	18,996	5,629	1,486	103	1,184
	5,905	18,454	4,467	1,298	118	1,351
	6,719	14,208	3,726	1,134	106	1,358
	6,777	13,144	3,673	1,037	92	1,107
	6,560	12,016	3,778	868	95	1,132
	6,751	13,788	4,114	847	92	1,212
	7,375	12,364	3,714	890	79	1,211
	7,905	12,103	3,744	873	63	1,178
	8,264	11,267	3,476	588	53	483
	8,886	11,016	3,308	339	103	232
	8,883	11,305	3,586	158	78	120
	9,487	10,041	3,238	135	78	131
	9,647	10,310	3,340	132	79	164
	10,845	9,886	3,112	95	76	111
	11,432	9,648	2,714	98	67	91
	12,049	9,727	2,445	74	76	76
	12,463	9,224	2,078	73	72	61
	13,086	10,528	1,919	100	121	44
	14,879	11,046	2,427	75	113	41
	16,474	11,022	1,570	84	106	34
	17,390	11,392	2,460	45	123	62
	17,674	10,732	2,126	42	120	52
	6,188	11,982	2,148	9	135	48
	5,741	12,134	2,440	8	99	76

(Continuation)

2. Supply and Demand of Oil

Table 7. Oil Consumption: By Sector
In thousand barrels (MB)

FY	Total Consumption					
	Industry					
	Chemical and petrochemical	Non-metallic minerals	Iron and steel	Machinery	Not elsewhere specified	
1990	4,999	1,669	970	-	162.7	
1991	1,891	933	788	-	118.7	
1992	1,357	1,719	962	-	155.7	
1993	2,533	1,982	1,339	-	213.1	
1994	1,720	2,132	1,025	-	177.5	
1995	4,274	2,957	1,498	-	172.0	
1996	3,068	2,897	1,700	-	184.2	
1997	6,432	2,886	1,828	161	531.8	
1998	2,254	3,935	1,820	226	387.1	
1999	4,109	2,787	1,826	175	329.1	
2000	1,790	2,125	1,899	83	238.0	
2001	1,733	1,920	1,724	145	222.5	
2002	1,214	1,576	1,545	256	96.5	
2003	1,452	2,272	1,763	681	101.6	
2004	1,245	1,719	1,338	804	123.3	
2005	1,183	1,604	1,290	946	120.7	
2006	1,370	1,640	1,566	928	76.1	
2007	1,320	1,837	1,641	811	120.2	
2008	1,321	1,663	1,893	1,022	126.7	
2009	1,438	1,247	1,055	954	110.4	
2010	1,224	1,564	799	887	323.6	
2011	1,080	1,308	671	802	345.7	
2012	917	1,283	638	736	473.5	
2013	856	1,322	694	749	538.9	
2014	1,196	1,088	736	805	186.6	
2015	1,431	1,493	846	1,138	184.1	
2016	1,387	1,505	817	1,253	222.5	
2017	1,617	1,642	878	1,301	127.6	
2018	1,083	1,670	991	1,113	449.8	
2019	983	1,277	1,001	1,026	355.0	
2020	1,436	1,717	883	548	535.2	
2021	792	1,581	1,210	521	479.1	

*non-energy use as raw materials

						Fuel Input to Power Generation
		Households	Services	Agriculture	Non-Energy Use*	
	Mining and Construction					
	2,691	7,129	961	373	1,638	17,903
	1,963	7,094	1,057	337	1,426	24,366
	2,190	7,995	1,194	307	1,497	26,288
	2,286	8,874	1,341	301	1,587	27,130
	1,650	9,715	1,501	265	1,543	29,063
	2,346	11,359	1,792	285	2,152	30,379
	2,136	12,274	1,896	297	1,060	29,008
	2,055	13,122	2,478	2,852	1,279	33,232
	1,972	13,545	3,443	2,542	977	30,449
	1,993	14,624	4,289	2,443	976	20,615
	1,751	13,884	4,852	2,121	2,018	14,648
	1,491	13,122	5,708	1,986	665	17,227
	1,455	13,244	5,801	2,149	916	11,345
	1,252	12,123	5,523	2,298	910	11,240
	1,241	12,922	4,752	2,142	598	13,415
	1,101	10,722	4,285	2,122	410	9,775
	1,088	9,810	4,481	1,878	510	6,781
	1,304	9,551	4,521	1,541	644	6,772
	1,337	9,247	4,348	1,892	593	7,123
	1,655	9,757	6,798	1,548	776	8,327
	1,797	9,712	7,720	1,631	858	10,463
	2,286	9,605	8,005	1,390	830	5,608
	2,630	9,461	7,894	1,376	1,198	6,847
	2,896	9,233	9,163	1,429	2,345	7,608
	2,929	9,074	11,641	1,306	3,501	9,762
	3,252	10,301	10,692	1,471	8,368	9,976
	3,207	11,938	13,456	1,731	8,954	8,833
	3,662	12,342	17,357	2,202	11,397	6,965
	3,395	13,373	18,393	1,579	9,964	5,292
	3,751	14,014	19,386	1,741	7,851	5,728
	4,522	13,272	20,121	1,602	9,228	3,704
	4,927	13,583	21,638	1,851	11,387	2,969

2. Supply and Demand of Oil

Table 8. Oil Consumption: By Sector and by Product

In thousand barrels (MB)

Sector/Product	1990	1991	1992	1993	1994	1995	1996	1997	
Industry	15,742	10,011	11,867	14,889	12,466	18,891	17,243	20,497	
Kerosene	168	207	212	224	228	223	247	323	
LPG	57	60	68	74	77	78	106	127	
Diesel	2,857	2,538	2,937	3,372	2,957	3,282	3,094	3,441	
Fuel Oil	12,661	7,206	8,650	11,220	9,203	15,307	13,796	16,605	
Biodiesel	-	-	-	-	-	-	-	-	
Manufacturing	13,052	8,048	9,677	12,603	10,816	16,545	15,108	18,441	
Kerosene	162	201	206	211	217	215	238	302	
LPG	56	59	67	73	77	78	103	119	
Diesel	1,839	1,623	1,944	2,375	2,100	1,903	1,644	1,861	
Fuel Oil	10,995	6,165	7,460	9,945	8,421	14,349	13,124	16,159	
Biodiesel	-	-	-	-	-	-	-	-	
Mining	2,303	1,538	1,665	1,667	1,053	1,364	1,074	808	
Kerosene	2	2	1	0.8	0	0	0	0	
LPG	1	1	1	0.4	-	-	3	5	
Diesel	683	559	535	513	351	560	549	460	
Fuel Oil	1,617	977	1,128	1,153	702	803	522	342	
Biodiesel	-	-	-	-	-	-	-	-	
Construction	388	425	525	618	597	982	1,061	1,248	
Kerosene	3.5	4.8	4.0	12	10.9	8.3	9.5	21	
LPG	-	0.1	0.1	1	(0.0)	0.2	0.4	3	
Diesel	336	356	459	484	506	819	902	1,120	
Fuel Oil	48	64	62	121	80	154	150	104	
Biodiesel	-	-	-	-	-	-	-	-	

*2004-2006 Bioethanol and Biodiesel data were from biomass division

(Continuation)

2. Supply and Demand of Oil

Table 8. Oil Consumption: By Sector and by Product

In thousand barrels (MB)

Sector/Product	2007	2008	2009	2010	2011	2012	2013	
Industry	11,016	11,305	10,041	10,310	9,886	9,648	9,727	
Kerosene	131	63	158	151	155	138	120	
LPG	886	965	825	700	1,147	1,169	1,203	
Diesel	3,453	4,198	3,535	3,727	4,274	4,461	4,863	
Fuel Oil	6,511	6,039	5,451	5,655	4,263	3,789	3,442	
Biodiesel	35	40	72	76	48	91	99	
Manufacturing	9,712	9,969	8,386	8,513	7,600	7,018	6,831	
Kerosene	131	43	157	151	154	137	117	
LPG	885	965	825	698	1,145	1,166	1,201	
Diesel	2,332	2,990	2,286	2,214	2,259	2,136	2,258	
Fuel Oil	6,338	5,943	5,071	5,405	4,019	3,537	3,211	
Biodiesel	26	28	46	45	24	42	44	
Mining	386	544	766	1,171	1,548	1,872	2,110	
Kerosene	0	0	0	0	0	0	0	
LPG	0	0	0	-	0	0	-	
Diesel	334	522	617	927	1,363	1,652	1,879	
Fuel Oil	47	17	137	226	167	185	192	
Biodiesel	5	5	13	19	19	34	40	
Construction	918	793	888	625	738	758	786	
Kerosene	0	20	0	0	1	1	3	
LPG	0	-	0	2	2	3	3	
Diesel	787	686	632	587	652	673	726	
Fuel Oil	127	79	243	25	78	68	39	
Biodiesel	5	8	13	12	5	14	15	

	2014	2015	2016	2017	2018	2019	2020	2021
	9,224	10,528	11,046	11,022	11,392	10,732	11,982	12,134
	126	139	148	170	16	15	131	157
	1,387	1,528	1,412	924	2,129	1,872	1,934	2,165
	3,975	4,357	4,869	5,570	5,144	5,598	6,163	6,593
	3,649	4,413	4,520	4,247	4,000	3,136	3,653	3,100
	86	92	97	111	103	112	101	118
	6,294	7,276	7,839	7,359	7,997	6,982	7,460	7,207
	126	138	148	160	15	15	131	157
	1,328	1,460	1,347	841	1,918	1,686	1,834	2,068
	1,452	1,655	2,173	2,559	2,316	2,520	2,168	2,196
	3,355	3,986	4,129	3,751	3,702	2,711	3,284	2,741
	34	36	43	49	46	50	44	45
	2,109	2,224	1,697	1,906	1,611	1,839	2,792	2,464
	0	-	-	-	0	0	-	-
	-	-	-	-	-	-	-	-
	1,806	1,807	1,334	1,453	1,311	1,427	2,421	2,100
	265	378	336	423	273	383	347	337
	38	38	27	30	26	28	24	27
	820	1,028	1,511	1,757	1,784	1,912	1,730	2,463
	0.1	0.2	0.1	10.7	0.2	0.1	0.1	0
	59	68	65	83	211	186	101	97
	718	894	1,362	1,558	1,517	1,651	1,574	2,297
	29	48	55	73	25	42	23	22
	14	18	27	32	30	33	32	47

(Continuation)

2. Supply and Demand of Oil

Table 8. Oil Consumption: By Sector and by Product

In thousand barrels (MB)

Sector/Product	1990	1991	1992	1993	1994	1995	1996	1997	
Transport	39,018	36,812	42,842	47,952	50,419	58,492	66,628	67,643	
Gasoline	12,836	11,061	12,378	13,823	15,058	17,726	19,917	21,562	
Diesel	19,387	19,973	23,308	26,023	26,662	30,367	33,453	33,325	
Fuel Oil	2,776	1,857	2,680	3,424	3,662	5,451	7,036	5,026	
Jet Fuel	3,983	3,892	4,447	4,656	4,985	4,914	6,188	7,694	
Aviation Gas	36	28	28	26	52	34	35	35	
LPG	-	-	-	-	-	-	-	-	
Bioethanol	-	-	-	-	-	-	-	-	
Biodiesel	-	-	-	-	-	-	-	-	
Road	30,516	29,336	33,683	37,606	39,386	45,234	49,950	50,712	
Gasoline	12,477	10,736	12,018	13,436	14,651	17,275	19,444	21,045	
Diesel	18,040	18,600	21,664	24,170	24,735	27,959	30,506	29,667	
LPG	-	-	-	-	-	-	-	-	
Bioethanol	-	-	-	-	-	-	-	-	
Biodiesel	-	-	-	-	-	-	-	-	
Rail	15	14	14	14	14	13	13	16	
Diesel	15	14	14	14	14	13	13	16	
Biodiesel	-	-	-	-	-	-	-	-	
Water ^{1/}	4,468	3,541	4,670	5,650	5,982	8,297	10,443	9,186	
Gasoline	360	325	359	386	407	451	473	517	
Diesel	1,333	1,359	1,630	1,839	1,914	2,395	2,934	3,642	
Fuel Oil	2,776	1,857	2,680	3,424	3,662	5,451	7,036	5,026	
Biodiesel	-	-	-	-	-	-	-	-	
Air ^{2/}	4,019	3,920	4,475	4,682	5,038	4,948	6,223	7,729	
Jet Fuel	3,983	3,892	4,447	4,656	4,985	4,914	6,188	7,694	
Aviation Gas	36	28	28	26	52	34	35	35	

*2004-2006 Bioethanol and Biodiesel data were from biomass division

^{1/} includes international marine bunkers

^{2/} includes international aviation bunkers

	1998	1999	2000	2001	2002	2003	2004*	2005*	2006*
	67,708	68,252	68,783	68,797	71,251	70,004	72,224	69,644	66,223
	22,627	23,312	22,810	23,083	24,087	24,559	24,816	24,128	22,528
	32,645	33,464	33,943	33,937	35,117	34,693	35,793	33,722	31,574
	7,045	5,572	5,311	4,999	5,485	3,988	4,235	3,859	3,793
	5,357	5,869	6,690	6,750	6,535	6,726	7,349	7,879	8,237
	35	36	28	26	24	25	26	26	27
	-	-	0	1	2	12	4	13	44
	-	-	-	-	-	-	-	16	16
	-	-	-	-	-	0	1	1	4
	51,236	52,377	52,496	52,718	55,321	55,165	56,941	54,492	51,041
	22,048	22,681	22,172	22,423	23,410	23,878	24,169	23,560	22,022
	29,189	29,696	30,324	30,294	31,908	31,275	32,767	30,903	28,956
	-	-	0	1	2	12	4	13	44
	-	-	-	-	-	-	-	16	16
	-	-	-	-	-	0	1	1	4
	16	17	9	6	2	2	5	39	3
	16	17	9	6	2	2	5	39	3
	-	-	-	-	-	-	-	-	-
	11,065	9,954	9,559	9,296	9,368	8,086	7,903	7,208	6,915
	579	631	638	660	677	681	647	568	507
	3,441	3,750	3,610	3,637	3,207	3,416	3,020	2,780	2,615
	7,045	5,572	5,311	4,999	5,485	3,988	4,235	3,859	3,793
	-	-	-	-	-	-	-	-	-
	5,391	5,905	6,718	6,777	6,560	6,751	7,375	7,905	8,264
	5,357	5,869	6,690	6,750	6,535	6,726	7,349	7,879	8,237
	35	36	28	26	24	25	26	26	27

(Continuation)

2. Supply and Demand of Oil

Table 8. Oil Consumption: By Sector and by Product

In thousand barrels (MB)

Sector/Product	2007	2008	2009	2010	2011	2012	2013	
Transport	70,711	66,691	70,052	71,115	71,532	74,568	77,985	
Gasoline	22,981	21,606	23,262	23,484	23,152	23,882	24,940	
Diesel	32,516	31,175	32,504	32,423	32,099	33,794	34,715	
Fuel Oil	5,436	3,539	2,726	3,008	3,003	2,418	2,458	
Jet Fuel	8,855	8,850	9,456	9,617	10,824	11,373	12,015	
Aviation Gas	31	33	31	30	21	59	34	
LPG	486	736	907	800	495	420	621	
Bioethanol	223	441	507	1,099	1,216	1,935	2,496	
Biodiesel	183	311	659	656	721	686	705	
Road	53,484	51,215	54,727	55,061	54,269	57,158	60,094	
Gasoline	22,481	21,183	22,867	23,092	22,770	23,510	24,799	
Diesel	30,111	28,567	29,814	29,444	29,080	30,642	31,507	
LPG	486	736	907	800	495	420	621	
Bioethanol	223	441	507	1,099	1,216	1,935	2,496	
Biodiesel	183	288	632	627	707	651	671	
Rail	3	1	1	18	35	52	69	
Diesel	3	1	1	18	34	51	67	
Biodiesel	0	0	0	0	0	1	2	
Water ^{1/}	8,338	6,592	5,836	6,390	6,383	5,925	5,772	
Gasoline	500	423	395	392	382	372	141	
Diesel	2,402	2,606	2,688	2,960	2,984	3,101	3,141	
Fuel Oil	5,436	3,539	2,726	3,008	3,003	2,418	2,458	
Biodiesel	0	23	27	29	14	34	33	
Air ^{2/}	8,886	8,883	9,487	9,647	10,845	11,432	12,049	
Jet Fuel	8,855	8,850	9,456	9,617	10,824	11,373	12,015	
Aviation Gas	31	33	31	30	21	59	34	

^{1/} includes international marine bunkers

^{2/} includes international aviation bunkers

	2014	2015	2016	2017	2018	2019	2020	2021
	79,996	91,891	99,456	105,255	108,811	112,365	82,106	90,861
	25,795	29,601	32,568	35,411	36,516	39,504	33,609	38,224
	36,097	43,435	45,749	46,067	48,043	48,205	36,625	40,363
	1,690	1,386	1,707	2,431	1,845	1,637	1,248	1,581
	12,423	13,038	14,837	16,403	17,349	17,631	6,165	5,716
	39	48	42	71	41	43	23	25
	453	321	146	112	108	95	48	30
	2,765	3,168	3,477	3,818	3,936	4,276	3,643	4,147
	734	893	929	942	972	974	745	775
	61,470	70,959	77,873	80,960	84,246	87,593	69,740	78,315
	24,493	28,309	31,247	34,066	35,154	38,106	32,492	37,015
	33,055	38,341	42,114	42,069	44,119	44,189	32,861	36,397
	453	321	146	112	108	95	48	30
	2,765	3,168	3,477	3,818	3,936	4,276	3,643	4,147
	704	819	889	895	928	926	696	725
	86	13	14	16	13	11	11	13
	84	13	14	16	13	11	11	13
	2	0	0	0	0	0	0	0
	5,978	7,833	6,690	7,805	7,162	7,086	6,167	6,791
	1,303	1,292	1,321	1,346	1,362	1,398	1,117	1,209
	2,958	5,081	3,622	3,983	3,912	4,004	3,753	3,952
	1,690	1,386	1,707	2,431	1,845	1,637	1,248	1,581
	28	74	40	46	43	47	49	50
	12,463	13,086	14,879	16,474	17,390	17,674	6,188	5,741
	12,423	13,038	14,837	16,403	17,349	17,631	6,165	5,716
	39	48	42	71	41	43	23	25

(Continuation)

2. Supply and Demand of Oil

Table 8. Oil Consumption: By Sector and by Product

In thousand barrels (MB)

Sector/Product	1990	1991	1992	1993	1994	1995	1996	1997	
Households	7,129	7,094	7,995	8,874	9,715	11,359	12,274	13,122	
LPG	3,620	3,745	4,314	4,886	5,687	7,245	7,968	8,418	
Kerosene	3,509	3,349	3,681	3,988	4,028	4,114	4,306	4,704	
Services	961	1,057	1,194	1,341	1,501	1,792	1,896	2,478	
LPG	532	558	625	702	791	1,012	1,045	1,382	
Diesel	-	-	-	-	-	-	-	506	
Fuel Oil	429	499	569	640	710	781	851	591	
Biodiesel	-	-	-	-	-	-	-	-	
Agriculture	372	337	307	301	265	285	297	2,852	
Gasoline	19	16	18	25	17	13	16	16	
Kerosene	27	23	23	27	27	24	24	26	
Diesel	225	197	173	152	135	121	109	2,481	
Fuel Oil	101	102	94	96	86	127	148	329	
Biodiesel	-	-	-	-	-	-	-	-	
Power Generation	17,903	24,366	26,288	27,130	29,063	30,379	29,008	33,232	
Diesel	3,279	6,165	7,253	11,316	7,851	4,831	3,735	4,346	
Fuel Oil	14,625	18,200	19,035	15,815	21,212	25,548	25,273	28,885	
Biodiesel	-	-	-	-	-	-	-	-	
Non-Energy Use	1,638	1,426	1,497	1,587	1,543	2,152	1,060	1,279	
Total	82,763	81,103	91,990	102,075	104,973	123,350	128,407	141,103	
Gasoline	12,855	11,077	12,396	13,848	15,075	17,739	19,933	21,578	
Diesel	25,748	28,873	33,671	40,863	37,605	38,601	40,391	44,099	
LPG	4,208	4,363	5,006	5,662	6,555	8,335	9,119	9,927	
Kerosene	3,704	3,580	3,916	4,239	4,283	4,361	4,577	5,054	
Jet Fuel	3,983	3,892	4,447	4,656	4,985	4,914	6,188	7,694	
Aviation Gas	36	28	28	26	52	34	35	35	
Fuel Oil	30,591	27,863	31,029	31,194	34,873	47,214	47,104	51,437	
Bioethanol	-	-	-	-	-	-	-	-	
Biodiesel	-	-	-	-	-	-	-	-	
Others**	1,638	1,426	1,497	1,587	1,543	2,152	1,060	1,279	

*2004-2006 Bioethanol and Biodiesel data were from biomass division

** includes asphalts, solvents, naphtha/reformate, condensate

	1998	1999	2000	2001	2002	2003	2004*	2005*	2006*
	13,545	14,624	13,895	13,122	13,244	12,123	12,922	10,722	9,810
	8,828	9,777	9,659	9,407	9,856	9,113	10,199	8,704	8,211
	4,717	4,846	4,236	3,715	3,389	3,010	2,723	2,019	1,599
	3,443	4,289	4,848	5,708	5,801	5,523	4,752	4,285	4,481
	1,760	2,025	2,070	2,104	2,298	2,439	2,204	2,066	1,887
	749	1,186	1,547	2,224	1,793	1,575	1,232	924	1,256
	934	1,078	1,231	1,380	1,710	1,509	1,316	1,294	1,339
	-	-	-	-	-	-	-	-	-
	2,542	2,443	2,120	1,986	2,149	2,298	2,142	2,122	1,878
	14	21	14	12	15	14	14	11	15
	21	27	13	16	22	16	14	7	3
	2,285	2,230	1,947	1,785	1,950	2,035	1,891	1,953	1,744
	222	164	146	172	161	233	223	151	116
	-	-	-	-	-	-	-	-	-
	30,449	20,615	14,648	17,227	11,345	11,240	13,415	9,775	6,781
	4,011	1,440	1,054	1,660	1,544	1,098	1,469	1,204	1,011
	26,438	19,175	13,594	15,567	9,801	10,142	11,946	8,571	5,770
	-	-	-	-	-	-	-	-	-
	977	976	2,018	665	916	910	598	410	510
	137,660	129,653	120,478	120,648	116,722	115,886	118,418	109,060	100,950
	22,641	23,333	22,825	23,095	24,102	24,573	24,829	24,139	22,544
	42,993	42,109	42,014	43,119	43,933	43,172	43,915	41,276	39,058
	10,690	11,904	12,288	12,214	12,730	13,145	12,754	11,534	10,931
	5,007	5,178	4,569	4,014	3,669	3,330	2,980	2,246	1,747
	5,357	5,869	6,690	6,750	6,535	6,726	7,349	7,879	8,237
	35	36	28	26	24	25	26	26	27
	49,960	40,248	30,047	30,764	24,812	24,005	25,967	21,534	17,876
	-	-	-	-	-	-	-	16	16
	-	-	-	-	-	0	1	1	4
	977	976	2,018	665	916	910	598	410	510

(Continuation)

2. Supply and Demand of Oil

Table 8. Oil Consumption: By Sector and by Product

In thousand barrels (MB)

Sector/Product	2007	2008	2009	2010	2011	2012	2013	
Households	9,551	9,247	9,757	9,712	9,605	9,461	9,233	
LPG	8,118	8,048	8,667	8,710	8,726	8,637	8,413	
Kerosene	1,433	1,199	1,090	1,001	880	825	820	
Services	4,521	4,348	6,798	7,720	8,005	7,894	9,163	
LPG	2,144	1,760	2,157	2,335	2,256	2,209	2,477	
Diesel	1,337	1,389	3,370	4,075	4,646	4,693	5,764	
Fuel Oil	1,030	1,176	1,202	1,226	1,005	896	804	
Biodiesel	9	22	68	83	97	96	118	
Agriculture	1,541	1,892	1,548	1,631	1,390	1,376	1,429	
Gasoline	18	14	31	62	33	56	17	
Kerosene	9	3	4	7	6	9	7	
Diesel	1,389	1,758	1,427	1,486	1,300	1,253	1,349	
Fuel Oil	118	103	57	47	41	32	27	
Biodiesel	7	14	29	30	10	26	28	
Power Generation	6,772	7,123	8,327	10,463	5,608	6,847	7,608	
Diesel	1,565	1,729	1,935	2,447	1,342	1,431	1,827	
Fuel Oil	5,200	5,378	6,352	7,966	4,256	5,386	5,744	
Biodiesel	8	15	40	50	11	29	37	
Non-Energy Use	644	593	776	858	830	1,198	2,345	
Total	104,755	101,199	107,299	111,809	106,857	110,991	117,489	
Gasoline	22,999	21,620	23,293	23,545	23,185	23,938	24,957	
Diesel	40,260	40,249	42,770	44,158	43,660	45,632	48,518	
LPG	11,634	11,510	12,557	12,546	12,624	12,434	12,714	
Kerosene	1,573	1,265	1,252	1,159	1,041	971	947	
Jet Fuel	8,855	8,850	9,456	9,617	10,824	11,373	12,015	
Aviation Gas	31	33	31	30	21	59	34	
Fuel Oil	18,294	16,235	15,789	17,901	12,568	12,521	12,475	
Bioethanol	223	441	507	1,099	1,216	1,935	2,496	
Biodiesel	242	403	868	896	887	929	987	
Others**	644	593	776	858	830	1,198	2,345	

** includes asphalts, solvents, naphtha/reformate, condensate

	2014	2015	2016	2017	2018	2019	2020	2021
	9,074	10,301	11,938	12,342	13,373	14,014	13,272	13,583
	8,343	9,632	11,314	11,749	12,754	13,445	12,870	13,178
	731	669	624	593	620	569	402	405
	11,641	10,692	13,456	17,357	18,393	19,386	20,121	21,638
	2,890	3,360	4,054	5,767	5,495	5,370	5,028	5,208
	7,819	6,262	7,853	10,368	11,641	12,668	13,934	15,052
	780	959	1,390	1,011	1,025	1,095	874	1,071
	151	111	158	212	233	253	284	307
	1,306	1,471	1,731	2,202	1,579	1,741	1,602	1,851
	37	66	61	98	58	74	80	126
	3	3	5	3	3	3	4	4
	1,227	1,355	1,577	2,008	1,484	1,615	1,473	1,676
	13	18	56	52	5	17	15	12
	26	29	32	41	30	32	30	34
	9,762	9,976	8,833	6,965	5,292	5,728	3,704	2,969
	2,477	2,137	3,573	2,926	2,770	3,015	2,149	1,610
	7,233	7,793	5,188	3,979	2,460	2,646	1,512	1,282
	52	45	72	60	62	67	44	76
	3,501	8,368	8,954	11,397	9,964	7,851	9,228	11,387
	124,503	143,226	155,414	166,539	168,805	171,817	142,017	154,422
	25,833	29,667	32,630	35,509	36,574	39,578	33,688	38,349
	51,595	57,545	63,622	66,939	69,082	71,101	60,345	65,294
	13,073	14,842	16,926	18,552	20,486	20,782	19,881	20,582
	860	811	777	767	638	587	537	565
	12,423	13,038	14,837	16,403	17,349	17,631	6,165	5,716
	39	48	42	71	41	43	23	25
	13,364	14,568	12,862	11,719	9,335	8,530	7,303	7,047
	2,765	3,168	3,477	3,818	3,936	4,276	3,643	4,147
	1,049	1,171	1,289	1,364	1,400	1,437	1,204	1,310
	3,501	8,368	8,954	11,397	9,964	7,851	9,228	11,387

Supply and Demand of Energy

3. Supply and Demand of Natural Gas

Table 1. Natural Gas: Energy Commodity Account
in million standard cubic feet (MMSCF)

FY	Total Primary Energy Supply						
		Growth Rate (%)	Indigenous Production	Libertad	San Antonio	Malampaya Gas	
1990	-		-	-	-	-	
1991	-		-	-	-	-	
1992	-		-	-	-	-	
1993	-		-	-	-	-	
1994	195		195	-	195	-	
1995	188	-3.3	188	-	188	-	
1996	318	68.7	318	-	318	-	
1997	193	-39.2	193	-	193	-	
1998	329	70.1	329	-	329	-	
1999	253	-23.0	253	-	253	-	
2000	376	48.4	376	-	376	-	
2001	4,951	1,217.2	4,951	-	112	4,840	
2002	62,205	1,156.3	62,205	-	83	62,122	
2003	94,807	52.4	94,807	-	277	94,530	
2004	87,557	-7.6	87,557	-	285	87,272	
2005	115,966	32.4	115,966	-	94	115,873	
2006	108,606	-6.3	108,606	-	328	108,279	
2007	130,211	19.9	130,211	-	325	129,886	
2008	137,072	5.3	137,072	-	187	136,886	
2009	138,030	0.7	138,030	-	-	138,030	
2010	130,008	-5.8	130,008	-	-	130,008	
2011	140,368	8.0	140,368	-	-	140,368	
2012	134,563	-4.1	134,563	72	-	134,491	
2013	123,944	-7.9	123,944	79	-	123,866	
2014	130,351	5.2	130,351	35	-	130,316	
2015	122,541	-6.0	122,541	15	-	122,527	
2016	140,398	14.6	140,398	-	-	140,398	
2017	138,497	-1.4	138,497	-	-	138,497	
2018	154,622	11.6	154,622	-	-	154,622	
2019	155,690	0.7	155,690	-	-	155,690	
2020	141,191	-9.3	141,191	-	-	141,191	
2021	121,089	-14.2	121,089	-	-	121,089	

	Transformation		Total Final Energy Consumption			
	Fuel Input to Power Generation (-)	Energy Sector Own Use and Loss (-)		Growth Rate (%)	Industry	Transport
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	195	-	-	-	-	-
	188	-	-	-	-	-
	318	-	-	-	-	-
	193	-	-	-	-	-
	329	-	-	-	-	-
	253	-	-	-	-	-
	376	-	-	-	-	-
	4,881	71	-	-	-	-
	53,193	9,011	0	0.0	-	0.00013
	82,062	12,745	0	-35.7	-	0.00008
	79,163	8,394	0	133.3	-	0.00019
	109,918	5,529	520	272,489,176.2	520	0.00022
	102,363	4,006	2,237	330.3	2,237	-
	125,848	1,070	3,293	47.2	3,293	-
	132,224	1,836	3,012	-8.5	2,996	16
	132,962	2,057	3,011	0.0	2,993	18
	124,442	2,575	2,992	-0.6	2,976	16
	133,226	3,807	3,334	11.5	3,288	46
	127,616	4,423	2,524	-24.3	2,473	51
	116,549	4,695	2,700	7.0	2,665	35
	122,305	4,741	3,305	22.4	3,302	4
	115,788	4,616	2,138	-35.3	2,138	-
	132,350	5,266	2,782	30.2	2,782	-
	132,256	3,986	2,255	-19.0	2,255	-
	142,723	9,349	2,550	13.1	2,550	-
	146,365	6,684	2,642	3.6	2,642	-
	132,009	7,585	1,597	-39.5	1,597	-
	115,856	5,218	15	-99.1	15	-

Supply and Demand of Energy

4. Supply and Demand of Renewable Energy

Table 1. Renewable Supply, by Source
in thousand tons of oil equivalent (kTOE)

FY	Total Supply		Growth Rate (%)	Geothermal	Hydro	Solar	Wind	
1990	14,780			4,700	1,509	-	-	
1991	14,423	-2.4		4,951	1,281	-	-	
1992	13,988	-3.0		4,901	1,105	-	-	
1993	13,897	-0.6		4,873	1,252	-	-	
1994	14,458	4.0		5,434	1,459	-	-	
1995	14,185	-1.9		5,275	1,551	-	-	
1996	14,529	2.4		5,618	1,750	-	-	
1997	14,698	1.2		6,223	1,511	-	-	
1998	15,699	6.8		7,664	1,266	-	-	
1999	17,637	12.3		9,109	1,952	-	-	
2000	18,321	3.9		9,997	1,941	-	-	
2001	16,939	-7.5		8,979	1,768	-	-	
2002	16,559	-2.2		8,807	1,751	-	-	
2003	16,218	-2.1		8,446	1,959	-	-	
2004	16,605	2.4		8,841	2,139	-	-	
2005	16,401	-1.2		8,515	2,088	0.1	1.5	
2006	17,447	6.4		8,999	2,474	0.1	4.6	
2007	17,112	-1.9		8,783	2,132	0.1	5.0	
2008	18,083	5.7		9,220	2,450	0.1	5.3	
2009	17,973	-0.6		8,877	2,437	0.1	5.5	
2010	17,379	-3.3		8,538	1,943	0.1	5.3	
2011	18,068	4.0		8,549	2,414	0.1	7.6	
2012	18,700	3.5		8,813	2,552	0.1	6.5	
2013	18,345	-1.9		8,258	2,494	0.1	5.6	
2014	18,891	3.0		8,863	2,275	1.4	13.1	
2015	19,594	3.7		9,496	2,157	11.9	64.4	
2016	19,687	0.5		9,519	2,019	94.3	83.9	
2017	19,588	-0.5		8,831	2,393	103.3	94.0	
2018	19,772	0.9		8,973	2,336	107.4	99.1	
2019	19,690	-0.4		9,192	1,998	107.1	89.6	
2020	19,290	-2.0		9,249	1,790	118.0	88.3	
2021	19,857	2.9		9,184	2,287	126.4	109.2	

* includes ricehull, municipal, agriculture and animal wastes

	Biomass					Biodiesel	Bioethanol
		Fuelwood	Bagasse	Charcoal	Others*		
	8,571	6,067	369	969	1,166	-	-
	8,191	5,864	209	892	1,227	-	-
	7,981	5,661	217	814	1,289	-	-
	7,772	5,458	226	736	1,352	-	-
	7,565	5,255	235	659	1,416	-	-
	7,358	5,052	245	581	1,481	-	-
	7,161	4,914	254	591	1,402	-	-
	6,965	4,776	265	601	1,323	-	-
	6,769	4,638	275	611	1,246	-	-
	6,576	4,500	286	621	1,169	-	-
	6,383	4,362	298	631	1,093	-	-
	6,192	4,224	309	641	1,017	-	-
	6,002	4,087	322	651	942	-	-
	5,813	3,949	335	661	868	0.01	-
	5,625	3,811	348	671	795	0.1	-
	5,796	3,898	362	712	824	0.1	1
	5,968	3,985	377	753	854	0.5	1
	6,141	4,071	392	794	884	40	11
	6,315	4,158	407	835	916	54	38
	6,496	4,245	424	876	952	112	46
	6,679	4,331	445	917	985	101	113
	6,874	4,419	477	958	1,019	101	123
	7,035	4,483	515	1,005	1,032	113	180
	7,237	4,575	533	1,058	1,071	125	225
	7,356	4,623	540	1,107	1,086	134	249
	7,431	4,596	627	1,138	1,069	164	270
	7,494	4,472	780	1,193	1,049	178	298
	7,651	4,465	899	1,236	1,052	167	350
	7,725	4,458	942	1,281	1,043	168	364
	7,736	4,454	919	1,329	1,034	178	389
	7,563	4,421	877	1,364	901	131	349
	7,611	4,439	851	1,420	901	157	383

4. Supply and Demand of Renewable Energy

Table 2. Biomass Consumption: By Sector
in thousand tons of oil equivalent (kTOE)

FY	Total Consumption										
	Growth Rate (%)	Industry									
		Food, beverages and tobacco	Sugar		Not elsewhere specified						
			Fuelwood	Others*	Bagasse	Others*					
1990	8,571		516	309	121	189	201	201	6	6	
1991	8,191	-4.4	533	319	122	196	209	209	6	6	
1992	7,981	-2.6	552	328	124	204	217	217	6	6	
1993	7,772	-2.6	571	338	126	212	226	226	6	6	
1994	7,565	-2.7	590	349	128	221	235	235	6	6	
1995	7,358	-2.7	611	359	130	230	245	245	7	7	
1996	7,161	-2.7	632	371	132	239	254	254	7	7	
1997	6,965	-2.7	654	382	134	248	265	265	7	7	
1998	6,769	-2.8	677	394	136	258	275	275	8	8	
1999	6,576	-2.9	700	406	138	269	286	286	8	8	
2000	6,383	-2.9	725	419	140	279	298	298	8	8	
2001	6,192	-3.0	750	432	142	291	309	309	9	9	
2002	6,002	-3.1	777	446	144	302	322	322	9	9	
2003	5,813	-3.1	804	460	146	314	335	335	9	9	
2004	5,625	-3.2	833	475	148	327	348	348	10	10	
2005	5,796	3.0	863	491	151	340	362	362	10	10	
2006	5,968	3.0	893	506	153	353	377	377	10	10	
2007	6,141	2.9	925	523	155	368	392	392	11	11	
2008	6,315	2.8	958	540	158	382	407	407	11	11	
2009	6,496	2.9	993	557	160	398	424	424	12	12	
2010	6,679	2.8	1,028	576	162	413	440	440	12	12	
2011	6,874	2.9	1,047	586	164	422	449	449	12	12	
2012	7,035	2.3	1,067	596	166	430	458	458	13	13	
2013	7,237	2.9	1,099	612	168	445	474	474	13	13	
2014	7,356	1.7	1,131	629	170	459	489	489	13	13	
2015	7,431	1.0	1,152	640	172	468	499	499	14	14	
2016	7,494	0.9	1,164	646	173	473	504	504	14	14	
2017	7,651	2.1	1,181	656	176	480	511	511	14	14	
2018	7,725	1.0	1,199	666	179	487	519	519	14	14	
2019	7,736	0.1	1,207	670	180	490	522	522	14	14	
2020	7,563	-2.2	905	503	135	368	392	392	11	11	
2021	7,611	0.6	923	512	137	376	400	400	11	11	

* includes ricehull, municipal, agriwaste and animal wastes

** municipal wastes

Total Consumption includes fuel input to Power Generation

	Households				Services				Fuel Input to Power Generation**
		Fuelwood	Charcoal	Others*		Fuelwood	Charcoal	Others*	
	7,586	5,821	859	906	301	125	110	65	168
	7,361	5,615	779	966	297	127	112	58	-
	7,135	5,409	700	1,026	294	128	114	52	-
	6,910	5,203	621	1,087	292	129	116	47	-
	6,684	4,996	541	1,147	290	130	118	42	-
	6,459	4,790	462	1,207	289	132	120	38	-
	6,241	4,649	470	1,122	288	133	121	34	-
	6,023	4,508	477	1,038	288	134	123	30	-
	5,805	4,366	485	953	288	136	125	27	-
	5,587	4,225	493	868	289	137	127	24	-
	5,369	4,084	501	783	290	138	129	22	-
	5,150	3,943	509	699	291	140	132	19	-
	4,932	3,801	517	614	292	141	134	17	-
	4,714	3,660	525	529	294	143	136	16	-
	4,496	3,519	533	445	296	144	138	14	-
	4,635	3,602	571	462	298	146	140	12	-
	4,774	3,685	610	479	301	147	142	11	-
	4,913	3,767	649	496	303	148	145	10	-
	5,051	3,850	688	513	306	150	147	9	-
	5,190	3,933	727	530	309	151	149	8	4
	5,329	4,016	765	547	313	153	152	8	9
	5,468	4,099	804	565	318	156	154	8	41
	5,577	4,158	848	571	323	159	157	8	68
	5,733	4,246	899	589	327	161	159	7	77
	5,823	4,290	946	588	332	164	162	7	70
	5,802	4,259	973	570	337	166	164	6	140
	5,709	4,131	1,027	551	340	168	166	6	282
	5,731	4,119	1,067	545	345	170	168	7	394
	5,746	4,107	1,110	529	350	173	171	7	430
	5,772	4,100	1,157	515	353	174	172	7	404
	5,842	4,121	1,209	512	325	165	155	5	491
	5,904	4,136	1,263	506	330	167	157	5	454

4. Supply and Demand of Renewable Energy

Table 3. Biofuels Consumption: By Sector
in thousand tons of oil equivalent (kTOE)

FY	Total Consumption					Transport
		Growth Rate (%)	Biodiesel	Bioethanol		
1990	-	-	-	-	-	-
1991	-	-	-	-	-	-
1992	-	-	-	-	-	-
1993	-	-	-	-	-	-
1994	-	-	-	-	-	-
1995	-	-	-	-	-	-
1996	-	-	-	-	-	-
1997	-	-	-	-	-	-
1998	-	-	-	-	-	-
1999	-	-	-	-	-	-
2000	-	-	-	-	-	-
2001	-	-	-	-	-	-
2002	-	-	-	-	-	-
2003	0.0		0.0	-	0.0	
2004	0.1	1,019.7	0.1	-	0.1	
2005	1.5	1,742.4	0.1	1.4	1.5	
2006	1.9	29.3	0.5	1.4	1.9	
2007	50.3	2,480.7	30.5	19.8	43.6	
2008	89.7	78.2	50.5	39.2	79.7	
2009	152.9	70.4	107.8	45.0	130.8	
2010	207.8	36.0	110.2	97.6	183.1	
2011	222.2	6.9	114.1	108.1	202.0	
2012	289.1	30.1	117.1	171.9	261.3	
2013	345.5	19.5	123.7	221.8	313.6	
2014	375.6	8.7	129.8	245.7	341.3	
2015	428.1	14.0	146.6	281.5	397.8	
2016	467.4	9.2	158.5	308.9	430.0	
2017	509.2	8.9	169.9	339.3	461.9	
2018	524.0	2.9	174.2	349.8	476.4	
2019	558.4	6.6	178.4	379.9	506.8	
2020	474.8	(15.0)	151.1	323.8	420.8	
2021	529.3	11.5	160.7	368.5	469.4	

	Rail		Road			Water	
		Biodiesel		Biodiesel	Ethanol		Biodiesel
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	0.0	0.0	-	-	-
	-	-	0.1	0.1	-	-	-
	-	-	1.5	0.1	1.4	-	-
	-	-	1.9	0.5	1.4	-	-
	0.0	0.0	43.6	23.8	19.8	0.0	0.0
	0.0	0.0	76.7	37.6	39.2	3.0	3.0
	0.0	0.0	127.3	82.3	45.0	3.5	3.5
	0.0	0.0	179.3	81.6	97.6	3.8	3.8
	0.0	0.0	200.1	92.0	108.1	1.8	1.8
	0.2	0.2	256.7	84.8	171.9	4.4	4.4
	0.2	0.2	309.1	87.3	221.8	4.3	4.3
	0.2	0.2	337.5	91.7	245.7	3.6	3.6
	0.0	0.0	388.2	106.7	281.5	9.6	9.6
	0.0	0.0	424.8	115.8	308.9	5.2	5.2
	0.0	0.0	455.8	116.6	339.3	6.0	6.0
	0.0	0.0	470.7	120.9	349.8	5.7	5.7
	0.0	0.0	500.6	120.7	379.9	6.1	6.1
	0.0	0.0	414.4	90.6	323.8	6.4	6.4
	0.0	0.0	462.9	94.4	368.5	6.5	6.5

(Continuation)

4. Supply and Demand of Renewable Energy

Table 3. Biofuels Consumption: By Sector
in thousand tons of oil equivalent (kTOE)

FY	Total Consumption								
	Industry								
		Biodiesel							
		Food, beverages and tobacco	Textile and leather	Wood and wood products	Pulp, paper and print	Chemical and petrochemical	Non-metallic minerals	Iron and steel	
1990	-	-	-	-	-	-	-	-	
1991	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	
2000	-	-	-	-	-	-	-	-	
2001	-	-	-	-	-	-	-	-	
2002	-	-	-	-	-	-	-	-	
2003	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	
2006	-	-	-	-	-	-	-	-	
2007	4.6	1.2	0.0	0.1	0.0	0.5	0.2	0.7	
2008	5.2	1.2	0.0	0.0	0.0	0.4	0.3	0.8	
2009	9.4	2.0	0.0	0.1	0.1	0.9	0.7	0.8	
2010	9.9	2.0	0.0	0.1	0.1	1.1	1.0	0.3	
2011	6.2	0.8	0.0	0.7	0.0	0.5	0.4	0.1	
2012	11.9	1.7	0.0	0.1	0.1	1.0	1.1	0.2	
2013	12.9	1.6	0.0	0.1	0.1	1.0	1.2	0.3	
2014	11.2	1.3	0.0	0.0	0.0	0.8	1.1	0.3	
2015	12.0	1.4	0.0	0.1	0.0	0.8	0.9	0.3	
2016	12.7	1.9	0.0	0.1	0.0	0.9	1.0	0.3	
2017	14.4	1.7	0.0	0.1	0.0	0.9	1.1	0.6	
2018	13.4	2.1	0.0	0.1	0.0	0.7	1.0	0.4	
2019	14.5	2.3	0.0	0.1	0.0	0.8	1.0	0.4	
2020	13.1	1.9	0.0	0.1	0.0	0.9	1.4	0.2	
2021	15.4	2.3	0.0	0.0	0.1	0.8	1.4	0.3	

				Services		Agriculture		Fuel Input to Power Generation**
				Biodiesel		Biodiesel		
	Machinery	Not elsewhere specified					Mining and Construction	
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	0.6	0.0	1.3	1.2	1.2	0.9	0.9	1.0
	0.7	0.0	1.6	2.9	2.9	1.9	1.9	2.0
	1.3	0.1	3.3	8.9	8.9	3.8	3.8	5.2
	1.3	0.0	4.0	10.8	10.8	4.0	4.0	6.5
	0.4	0.1	3.1	12.7	12.7	1.4	1.4	1.4
	1.0	0.3	6.4	12.5	12.5	3.3	3.3	3.8
	1.1	0.5	7.2	15.3	15.3	3.6	3.6	4.9
	0.9	0.0	6.9	19.6	19.6	3.4	3.4	6.8
	1.1	0.0	7.3	14.5	14.5	3.8	3.8	5.9
	1.3	0.0	7.1	20.6	20.6	4.1	4.1	9.4
	1.9	0.0	8.0	27.6	27.6	5.3	5.3	7.8
	1.7	0.1	7.4	30.4	30.4	3.9	3.9	8.1
	1.8	0.1	8.0	32.9	32.9	4.2	4.2	8.7
	1.0	0.2	7.3	37.0	37.0	3.9	3.9	5.7
	0.9	0.2	9.6	40.0	40.0	4.5	4.5	9.9

Supply and Demand of Energy

5. Supply and Demand of Electricity

Table 1. Power Generation, by Source
in gigawatt-hour (GWh)

FY	Total Generation								
		Growth Rate (%)	Coal	Natural Gas	Oil-Based				
						Oil-Thermal	Diesel	Gas Turbines	
1990	26,327		1,934	-	12,434	11,427	1,007		
1991	25,649	-2.6	1,942	-	12,804	9,910	874	2,020	
1992	25,870	0.9	1,791	-	13,939	10,057	1,181	2,701	
1993	26,579	2.7	2,015	-	13,867	7,341	2,074	4,452	
1994	30,459	14.6	1,348	-	16,929	7,582	4,440	4,907	
1995	33,554	10.2	2,109	-	19,078	7,904	7,044	4,130	
1996	36,707	9.4	4,855	-	18,288	8,083	6,855	3,350	
1997	39,797	8.4	7,363	12	19,116	8,670	6,736	3,709	
1998	41,579	4.5	9,388	20	18,174	7,207	7,153	622	
1999	41,432	-0.4	11,183	16	11,799	5,392	4,326	2,080	
2000	45,290	9.3	16,663	17	9,185	2,560	5,028	1,597	
2001	47,040	3.9	18,789	848	9,858	3,528	4,464	64	
2002	48,467	3.0	16,128	8,771	6,293	947	4,561	785	
2003	52,941	9.2	14,939	13,139	7,170	1,180	5,509	42	
2004	55,958	5.7	16,194	12,384	8,504	1,431	6,253	82	
2005	56,568	1.1	15,257	16,861	6,141	309	5,717	25	
2006	56,784	0.4	15,294	16,366	4,665	274	4,152	0	
2007	59,612	5.0	16,837	18,789	5,148	324	4,162	9	
2008	60,821	2.0	15,749	19,576	4,868	658	3,660	36	
2009	61,934	1.8	16,476	19,887	5,381	909	3,771	62	
2010	67,742	9.4	23,301	19,518	7,101	1,364	4,532	3	
2011	69,176	2.1	25,342	20,591	3,398	512	2,762	-	
2012	72,922	5.4	28,265	19,642	4,254	695	3,332	-	
2013	75,266	3.2	32,081	18,791	4,491	438	3,805	-	
2014	77,261	2.7	33,054	18,690	5,708	463	4,730	-	
2015	82,413	6.7	36,686	18,878	5,886	80	5,521	10	
2016	90,798	10.2	43,303	19,854	5,661	245	4,722	0	
2017	94,370	3.9	46,847	20,547	3,787	282	3,100	-	
2018	99,765	5.7	51,932	21,334	3,173	145	2,505	-	
2019	106,041	6.3	57,890	22,354	3,752	184	2,815	26	
2020	101,756	-4.0	58,176	19,497	2,474	1	1,967	11	
2021	106,115	4.3	62,052	18,675	1,616	1	1,171	28	

* includes bagasse, municipal waste

Note: 2021 Self-sufficiency is from grid only as per EPIMB

		Renewable					
	Combined Cycle		Hydro	Geothermal	Solar	Wind	Biomass*
	-	11,959	6,062	5,466	-	-	-
	-	10,903	5,145	5,758	-	-	-
	-	10,140	4,440	5,700	-	-	-
	-	10,697	5,030	5,667	-	-	-
	-	12,182	5,862	6,320	-	-	-
	-	12,367	6,232	6,135	-	-	-
	-	13,564	7,030	6,534	-	-	-
	-	13,306	6,069	7,237	-	-	-
	3,192	13,997	5,084	8,914	-	-	-
	-	18,434	7,840	10,594	-	-	-
	-	19,425	7,799	11,626	-	-	-
	1,801	17,546	7,104	10,442	-	-	-
	-	17,275	7,033	10,242	-	-	-
	439	17,692	7,870	9,822	-	-	-
	738	18,875	8,593	10,282	-	-	-
	91	18,308	8,387	9,902	1.5	17	-
	239	20,459	9,939	10,465	1.5	53	-
	653	18,837	8,563	10,215	1.3	58	-
	513	20,628	9,843	10,723	1.3	61	-
	639	20,191	9,788	10,324	1.3	64	14
	1,202	17,822	7,803	9,929	1.3	62	27
	124	19,845	9,698	9,942	1.2	88	115
	227	20,762	10,252	10,250	1.3	75	183
	247	19,903	10,019	9,605	1.4	66	212
	515	19,810	9,137	10,308	17	152	196
	276	20,963	8,665	11,044	139	748	367
	694	21,979	8,111	11,070	1,097	975	726
	405	23,189	9,611	10,270	1,201	1,094	1,013
	522	23,326	9,384	10,435	1,249	1,153	1,105
	728	22,044	8,025	10,691	1,246	1,042	1,040
	495	21,609	7,192	10,757	1,373	1,026	1,261
	417	23,771	9,185	10,681	1,470	1,270	1,165

(Continuation)

5. Supply and Demand of Electricity

Table 1. Power Generation, by Source
in gigawatt-hour (GWh)

FY	Shares to Total Generation (%)							
	Coal	Natural Gas	Oil-Based	Oil-Thermal	Diesel	Gas Turbines	Combined Cycle	
1990	7.3	-	47.2	43.4	3.8		-	
1991	7.6	-	49.9	38.6	3.4	7.9	-	
1992	6.9	-	53.9	38.9	4.6	10.4	-	
1993	7.6	-	52.2	27.6	7.8	16.8	-	
1994	4.4	-	55.6	24.9	14.6	16.1	-	
1995	6.3	-	56.9	23.6	21.0	12.3	-	
1996	13.2	-	49.8	22.0	18.7	9.1	-	
1997	18.5	0.0	48.0	21.8	16.9	9.3	-	
1998	22.6	0.0	43.7	17.3	17.2	1.5	7.7	
1999	27.0	0.0	28.5	13.0	10.4	5.0	-	
2000	36.8	0.0	20.3	5.7	11.1	3.5	-	
2001	39.9	1.8	21.0	7.5	9.5	0.1	3.8	
2002	33.3	18.1	13.0	2.0	9.4	1.6	-	
2003	28.2	24.8	13.5	2.2	10.4	0.1	0.8	
2004	28.9	22.1	15.2	2.6	11.2	0.1	1.3	
2005	27.0	29.8	10.9	0.5	10.1	0.0	0.2	
2006	26.9	28.8	8.2	0.5	7.3	0.0	0.4	
2007	28.2	31.5	8.6	0.5	7.0	0.0	1.1	
2008	25.9	32.2	8.0	1.1	6.0	0.1	0.8	
2009	26.6	32.1	8.7	1.5	6.1	0.1	1.0	
2010	34.4	28.8	10.5	2.0	6.7	0.0	1.8	
2011	36.6	29.8	4.9	0.7	4.0	-	0.2	
2012	38.8	26.9	5.8	1.0	4.6	-	0.3	
2013	42.6	25.0	6.0	0.6	5.1	-	0.3	
2014	42.8	24.2	7.4	0.6	6.1	-	0.7	
2015	44.5	22.9	7.1	0.1	6.7	0.0	0.3	
2016	47.7	21.9	6.2	0.3	5.2	0.0	0.8	
2017	49.6	21.8	4.0	0.3	3.3	-	0.4	
2018	52.1	21.4	3.2	0.1	2.5	-	0.5	
2019	54.6	21.1	3.5	0.2	2.7	0.0	0.7	
2020	57.2	19.2	2.4	0.0	1.9	0.0	0.5	
2021	58.5	17.6	1.5	0.0	1.1	0.0	0.4	

* includes bagasse, municipal waste

Note: 2021 Self-sufficiency is from grid only as per EPIMB

							Self-Sufficiency (%)
	Renewable						
		Hydro	Geothermal	Solar	Wind	Biomass*	
	45.4	23.0	20.8	-	-	-	
	42.5	20.1	22.4	-	-	-	
	39.2	17.2	22.0	-	-	-	
	40.2	18.9	21.3	-	-	-	
	40.0	19.2	20.7	-	-	-	
	36.9	18.6	18.3	-	-	-	
	37.0	19.2	17.8	-	-	-	
	33.4	15.3	18.2	-	-	-	
	33.7	12.2	21.4	-	-	-	
	44.5	18.9	25.6	-	-	-	
	42.9	17.2	25.7	-	-	-	
	37.3	15.1	22.2	-	-	-	41.4
	35.6	14.5	21.1	-	-	-	55.5
	33.4	14.9	18.6	-	-	-	59.8
	33.7	15.4	18.4	-	-	-	57.9
	32.4	14.8	17.5	0.0	0.0	-	63.8
	36.0	17.5	18.4	0.0	0.1	-	66.3
	31.6	14.4	17.1	0.0	0.1	-	64.5
	33.9	16.2	17.6	0.0	0.1	-	67.1
	32.6	15.8	16.7	0.0	0.1	0.0	65.8
	26.3	11.5	14.7	0.0	0.1	0.0	57.5
	28.7	14.0	14.4	0.0	0.1	0.2	61.1
	28.5	14.1	14.1	0.0	0.1	0.3	58.8
	26.4	13.3	12.8	0.0	0.1	0.3	56.2
	25.6	11.8	13.3	0.0	0.2	0.3	53.5
	25.4	10.5	13.4	0.2	0.9	0.4	53.1
	24.2	8.9	12.2	1.2	1.1	0.8	51.0
	24.6	10.2	10.9	1.3	1.2	1.1	53.9
	23.4	9.4	10.5	1.3	1.2	1.1	51.0
	20.8	7.6	10.1	1.2	1.0	1.0	46.8
	21.2	7.1	10.6	1.3	1.0	1.2	46.6
	22.4	8.7	10.1	1.4	1.2	1.1	45.1

5. Supply and Demand of Electricity

Table 2. Power Generation, by Grid and by Source
in gigawatt-hour (GWh)

FY	Philippines										
		Coal	Oil	Natural Gas	Renewable						
						Hydro	Geothermal	Wind	Solar	Biomass	
1990	-	-	-	-	-	-	-	-	-	-	
1991	-	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	-	-	
1998	41,579	9,388	18,174	20	13,997	5,084	8,914	-	-	-	
1999	41,432	11,183	11,799	16	18,434	7,840	10,594	-	-	-	
2000	45,290	16,663	9,185	17	19,425	7,799	11,626	-	-	-	
2001	47,040	18,789	9,858	848	17,546	7,104	10,442	-	-	-	
2002	48,467	16,128	6,293	8,771	17,275	7,033	10,242	-	-	-	
2003	52,941	14,939	7,170	13,139	17,692	7,870	9,822	-	-	-	
2004	55,957	16,194	8,504	12,384	18,874	8,593	10,282	-	-	-	
2005	56,568	15,257	6,141	16,861	18,308	8,387	9,902	17	2	-	
2006	56,784	15,294	4,665	16,366	20,459	9,939	10,465	53	1	-	
2007	59,612	16,837	5,148	18,789	18,837	8,563	10,215	58	1	-	
2008	60,821	15,749	4,868	19,576	20,628	9,843	10,723	61	1	-	
2009	61,934	16,476	5,381	19,887	20,191	9,788	10,324	64	1	14	
2010	67,743	23,301	7,101	19,518	17,823	7,803	9,929	62	1	27	
2011	69,176	25,342	3,398	20,591	19,845	9,698	9,942	88	1	115	
2012	72,922	28,265	4,254	19,642	20,762	10,252	10,250	75	1	183	
2013	75,266	32,081	4,491	18,791	19,903	10,019	9,605	66	1	212	
2014	77,261	33,054	5,708	18,690	19,810	9,137	10,308	152	17	196	
2015	82,413	36,686	5,886	18,878	20,963	8,665	11,044	748	139	367	
2016	90,798	43,303	5,661	19,854	21,979	8,111	11,070	975	1,097	726	
2017	94,370	46,847	3,787	20,547	23,189	9,611	10,270	1,094	1,201	1,013	
2018	99,765	51,932	3,173	21,334	23,326	9,384	10,435	1,153	1,249	1,105	
2019	106,041	57,890	3,752	22,354	22,044	8,025	10,691	1,042	1,246	1,040	
2020	101,756	58,176	2,474	19,497	21,609	7,192	10,757	1,026	1,373	1,261	
2021	106,115	62,052	1,616	18,675	23,771	9,185	10,681	1,270	1,470	1,165	

	Luzon									
		Coal	Oil	Natural Gas	Renewable					
						Hydro	Geothermal	Wind	Solar	Biomass
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	31,786	8,966	14,986	20	7,814	1,783	6,030	-	-	-
	31,745	10,925	9,947	16	10,857	3,543	7,315	-	-	-
	34,679	16,374	7,199	17	11,089	3,569	7,520	-	-	-
	36,184	18,484	7,680	848	9,172	2,806	6,366	-	-	-
	36,387	15,814	3,625	8,771	8,177	2,900	5,276	-	-	-
	37,535	14,351	3,596	13,139	6,448	3,848	2,600	-	-	-
	39,854	15,548	4,591	12,384	7,330	4,297	3,033	-	-	-
	40,627	14,653	2,022	16,861	7,091	4,331	2,742	17	-	-
	41,241	14,099	1,711	16,366	9,065	5,492	3,519	53	-	-
	43,620	14,418	2,192	18,789	8,221	4,562	3,601	58	-	-
	44,200	13,504	1,928	19,576	9,192	5,400	3,730	61	-	-
	44,975	14,091	1,864	19,887	9,132	5,549	3,516	64	-	3
	50,265	20,047	3,287	19,518	7,413	4,014	3,323	62	-	14
	50,017	19,681	1,291	20,591	8,454	4,836	3,486	88	-	44
	52,312	21,878	1,800	19,642	8,993	5,292	3,588	75	-	37
	54,820	25,756	1,601	18,783	8,679	5,156	3,399	66	-	60
	56,766	27,346	2,342	18,686	8,392	4,357	3,817	152	-	65
	60,113	29,680	1,845	18,878	9,711	4,769	4,096	592	66	187
	66,498	33,143	2,562	19,854	10,938	5,011	4,227	767	495	439
	68,512	33,953	2,379	20,547	11,633	5,730	3,910	899	496	599
	72,728	37,362	2,188	21,334	11,845	5,945	3,871	931	503	594
	76,177	40,508	2,674	22,354	10,640	5,084	3,647	824	493	592
	72,419	40,576	1,804	19,497	10,542	4,510	3,808	855	588	780
	75,243	43,133	996	18,675	12,438	5,412	4,503	1,095	721	707

(Continuation)

5. Supply and Demand of Electricity

Table 2. Power Generation, by Grid and by Source
in gigawatt-hour (GWh)

FY	Visayas										Mindanao	
		Coal	Oil	Natural Gas	Renewable							
						Hydro	Geothermal	Wind	Solar	Biomass		
1990	-				-						-	
1991	-				-						-	
1992	-				-						-	
1993	-				-						-	
1994	-				-						-	
1995	-				-						-	
1996	-				-						-	
1997	-				-						-	
1998	4,464	422	1,489		2,552	32	2,520	-	-	-	5,330	
1999	4,441	258	1,496	-	2,687	34	2,653	-	-	-	5,245	
2000	5,147	289	1,494	-	3,364	42	3,322	-	-	-	5,464	
2001	5,154	305	1,537	-	3,311	36	3,275	-	-	-	5,703	
2002	6,099	314	1,652	-	4,134	25	4,108	-	-	-	5,982	
2003	8,842	588	1,861	-	6,394	33	6,361	-	-	-	6,564	
2004	9,016	646	1,998	-	6,373	34	6,338	-	-	-	7,087	
2005	8,698	604	1,800	-	6,295	27	6,267	-	-		7,243	
2006	8,129	719	1,282	-	6,128	28	6,100	-	-		7,414	
2007	8,102	848	1,477	-	5,776	29	5,747	-	-		7,890	
2008	8,650	746	1,665	-	6,239	40	6,199	-	-		7,972	
2009	8,724	822	1,864	-	6,038	42	5,985	-	-	11	8,235	
2010	9,075	1,529	1,727	-	5,820	36	5,771	-	-	13	8,403	
2011	10,456	4,032	683	-	5,740	53	5,616	-	-	72	8,703	
2012	11,483	4,701	734	-	6,047	46	5,930	-	-	71	9,127	
2013	11,100	4,690	796	8	5,606	37	5,463	-	-	106	9,347	
2014	11,014	4,449	766	4	5,794	35	5,627	-	15	117	9,481	
2015	12,170	4,968	672	-	6,530	38	6,105	157	71	159	10,130	
2016	12,955	5,270	637	-	7,047	64	5,974	209	525	276	11,345	
2017	14,054	6,624	541	-	6,889	90	5,564	194	627	414	11,804	
2018	14,266	6,785	353	-	7,129	73	5,737	222	658	439	12,770	
2019	16,060	7,962	524	-	7,573	57	6,278	218	665	356	13,805	
2020	15,485	7,696	298	-	7,491	65	6,205	171	676	374	13,852	
2021	16,268	8,999	468	-	6,801	89	5,535	174	652	350	14,604	

										Grid Share to Total Generation (%)		
	Coal	Oil	Natural Gas	Renewable						Luzon	Visayas	Mindanao
					Hydro	Geothermal	Wind	Solar	Biomass			
				-								
				-								
				-								
				-								
				-								
				-								
				-								
				-								
	-	1,699	-	3,631	3,268	363	-	-	-	76.4	10.7	12.8
	-	355	-	4,890	4,263	627	-	-	-	76.6	10.7	12.7
	-	492	-	4,972	4,188	784	-	-	-	76.6	11.4	12.1
	-	640	-	5,063	4,262	801	-	-	-	76.9	11.0	12.1
	-	1,017	-	4,965	4,107	858	-	-	-	75.1	12.6	12.3
	-	1,714	-	4,850	3,989	861	-	-	-	70.9	16.7	12.4
	-	1,916	-	5,171	4,262	910	-	-	-	71.2	16.1	12.7
	-	2,320	-	4,923	4,028	893	-	2	-	71.8	15.4	12.8
	476	1,672	-	5,266	4,419	846	-	1	-	72.6	14.3	13.1
	1,571	1,479	-	4,841	3,972	867	-	1	-	73.2	13.6	13.2
	1,499	1,275	-	5,197	4,402	794	-	1	-	72.7	14.2	13.1
	1,563	1,652	-	5,020	4,196	823	-	1	-	72.6	14.1	13.3
	1,726	2,087	-	4,590	3,754	834	-	1	-	74.2	13.4	12.4
	1,629	1,424	-	5,650	4,808	841	-	1	-	72.3	15.1	12.6
	1,686	1,720	-	5,721	4,913	731	-	1	75	71.7	15.7	12.5
	1,635	2,094	-	5,618	4,827	743	-	1	47	72.8	14.7	12.4
	1,258	2,599	-	5,624	4,745	864	-	1	14	73.5	14.3	12.3
	2,038	3,369	-	4,723	3,858	842	-	2	21	72.9	14.8	12.3
	4,890	2,462	-	3,994	3,036	869	-	77	11	73.2	36.5	2.8
	6,271	867	-	4,666	3,791	797	-	78	-	72.6	36.0	2.5
	7,785	633	-	4,352	3,366	826	-	88	72	72.9	37.5	2.2
	9,420	554	-	3,831	2,885	766	-	87	93	71.8	38.2	2.5
	9,904	372	-	3,576	2,617	744	-	108	107	71.2	39.9	1.8
	9,920	152	-	4,532	3,684	643	-	97	107	70.9	40.6	0.9

5. Supply and Demand of Electricity

Table 3. Installed Generating Capacity, by Source
in megawatt (MW)

FY	Total Installed Capacity									
		Growth Rate (%)	Coal	Natural Gas	Oil-Based	Renewable	Hydro	Geothermal	Solar	Wind
1990	6,702		525	-	3,136	3,041	2,153	888	-	-
1991	6,789	1.3	405	-	3,341	3,043	2,155	888	-	-
1992	6,949	2.4	405	-	3,399	3,145	2,257	888	-	-
1993	7,959	14.5	441	-	4,296	3,222	2,259	963	-	-
1994	9,213	15.8	550	-	5,335	3,328	2,254	1,074	-	-
1995	9,732	5.6	850	-	5,425	3,457	2,303	1,154	-	-
1996	11,193	15.0	1,600	-	5,844	3,749	2,303	1,446	-	-
1997	11,762	5.1	1,600	-	5,973	4,189	2,303	1,886	-	-
1998	11,931	1.4	2,200	3	5,568	4,160	2,304	1,856	-	-
1999	12,431	4.2	3,355	3	4,839	4,234	2,304	1,931	-	-
2000	13,185	6.1	3,963	3	4,987	4,232	2,301	1,931	-	-
2001	13,380	1.5	3,963	1,063	3,905	4,449	2,518	1,931	-	-
2002	14,702	9.9	3,963	2,763	3,527	4,450	2,518	1,931	-	-
2003	15,124	2.9	3,958	2,763	3,604	4,799	2,867	1,932	-	-
2004	15,548	2.8	3,967	2,763	3,669	5,149	3,217	1,932	-	-
2005	15,619	0.5	3,967	2,763	3,663	5,226	3,222	1,978	1.0	25
2006	15,803	1.2	4,177	2,763	3,602	5,261	3,257	1,978	1.0	25
2007	15,941	0.9	4,213	2,834	3,616	5,277	3,293	1,958	1.0	25
2008	15,681	-1.6	4,213	2,831	3,353	5,284	3,291	1,958	1.0	33
2009	15,610	-0.5	4,277	2,831	3,193	5,309	3,291	1,953	1.0	33
2010	16,359	4.8	4,867	2,861	3,193	5,438	3,400	1,966	1.0	33
2011	16,162	-1.2	4,917	2,861	2,994	5,391	3,491	1,783	1.0	33
2012	17,025	5.3	5,568	2,862	3,074	5,522	3,521	1,848	1.0	33
2013	17,325	1.8	5,568	2,862	3,353	5,542	3,521	1,868	1.0	33
2014	17,944	3.6	5,708	2,862	3,476	5,898	3,543	1,918	23	283
2015	18,765	4.6	5,963	2,862	3,610	6,330	3,600	1,917	165	427
2016	21,423	14.2	7,419	3,431	3,616	6,958	3,618	1,916	765	427
2017	22,728	6.1	8,049	3,447	4,153	7,079	3,627	1,916	885	427
2018	23,815	4.8	8,844	3,453	4,292	7,227	3,701	1,944	896	427
2019	25,531	7.2	10,417	3,453	4,262	7,399	3,760	1,928	921	427
2020	26,250	2.8	10,944	3,453	4,237	7,617	3,779	1,928	1,019	443
2021	26,882	2.4	11,669	3,453	3,847	7,914	3,752	1,928	1,317	427

* includes bagasse, municipal waste

		Shares to Total Installed Capacity (%)								
		Coal	Natural Gas	Oil-Based	Renewable					
	Biomass*					Hydro	Geothermal	Solar	Wind	Biomass*
	-	7.8	-	46.8	45.4	32.1	13.2	-	-	-
	-	6.0	-	49.2	44.8	31.7	13.1	-	-	-
	-	5.8	-	48.9	45.3	32.5	12.8	-	-	-
	-	5.5	-	54.0	40.5	28.4	12.1	-	-	-
	-	6.0	-	57.9	36.1	24.5	11.7	-	-	-
	-	8.7	-	55.7	35.5	23.7	11.9	-	-	-
	-	14.3	-	52.2	33.5	20.6	12.9	-	-	-
	-	13.6	-	50.8	35.6	19.6	16.0	-	-	-
	-	18.4	0.03	46.7	34.9	19.3	15.6	-	-	-
	-	27.0	0.02	38.9	34.1	18.5	15.5	-	-	-
	-	30.1	0.02	37.8	32.1	17.5	14.6	-	-	-
	-	29.6	7.9	29.2	33.3	18.8	14.4	-	-	-
	-	27.0	18.8	24.0	30.3	17.1	13.1	-	-	-
	-	26.2	18.3	23.8	31.7	19.0	12.8	-	-	-
	-	25.5	17.8	23.6	33.1	20.7	12.4	-	-	-
	-	25.4	17.7	23.4	33.5	20.6	12.7	0.01	0.2	-
	-	26.4	17.5	22.8	33.3	20.6	12.5	0.01	0.2	-
	-	26.4	17.8	22.7	33.1	20.7	12.3	0.01	0.2	-
	-	26.9	18.1	21.4	33.7	21.0	12.5	0.01	0.2	-
	30	27.4	18.1	20.5	34.0	21.1	12.5	0.01	0.2	0.2
	39	29.7	17.5	19.5	33.2	20.8	12.0	0.01	0.2	0.2
	83	30.4	17.7	18.5	33.4	21.6	11.0	0.01	0.2	0.5
	119	32.7	16.8	18.1	32.4	20.7	10.9	0.01	0.2	0.7
	119	32.1	16.5	19.4	32.0	20.3	10.8	0.01	0.2	0.7
	131	31.8	15.9	19.4	32.9	19.7	10.7	0.1	1.6	0.7
	221	31.8	15.3	19.2	33.7	19.2	10.2	0.9	2.3	1.2
	233	34.6	16.0	16.9	32.5	16.9	8.9	3.6	2.0	1.1
	224	35.4	15.2	18.3	31.1	16.0	8.4	3.9	1.9	1.0
	258	37.1	14.5	18.0	30.3	15.5	8.2	3.8	1.8	1.1
	363	40.8	13.5	16.7	29.0	14.7	7.6	3.6	1.7	1.4
	447	41.7	13.2	16.1	29.0	14.4	7.3	3.9	1.7	1.7
	489	43.4	12.8	14.3	29.4	14.0	7.2	4.9	1.6	1.8

5. Supply and Demand of Electricity

Table 4. Electricity Consumption: By Sector
in gigawatt-hour (GWh)

FY	Total Electricity Sales								
		Growth Rate (%)	Total Consumption						
				Growth Rate (%)	Transport		Industry		
						Rail		Manufacturing	
1990	26,327		21,213		-	-	9,943	9,155	
1991	25,649	-2.6	21,387	0.8	-	-	9,339	8,599	
1992	25,870	0.9	20,645	-3.5	-	-	8,859	8,157	
1993	26,579	2.7	21,209	2.7	-	-	9,395	8,651	
1994	30,459	14.6	24,593	16.0	-	-	10,684	9,838	
1995	33,554	10.2	26,593	8.1	-	-	10,950	10,147	
1996	36,708	9.4	29,240	10.0	27	27	11,851	11,057	
1997	39,797	8.4	32,289	10.4	29	29	12,531	11,774	
1998	41,578	4.5	34,138	5.7	29	29	12,543	11,870	
1999	41,432	-0.4	34,142	0.0	30	30	12,444	11,860	
2000	45,290	9.3	36,555	7.1	55	55	13,191	12,657	
2001	47,040	3.9	39,140	7.1	55	55	14,452	13,866	
2002	48,468	3.0	38,625	-1.3	58	58	13,628	13,076	
2003	52,941	9.2	42,720	10.6	37	37	15,188	14,573	
2004	55,957	5.7	44,076	3.2	67	67	15,012	14,404	
2005	56,568	1.1	45,159	2.5	91	91	15,705	15,069	
2006	56,784	0.4	45,672	1.1	97	97	15,888	15,244	
2007	59,612	5.0	48,009	5.1	107	107	16,522	15,852	
2008	60,820	2.0	49,205	2.5	110	110	17,031	16,341	
2009	61,934	1.8	50,868	3.4	111	111	17,084	16,392	
2010	67,743	9.4	55,266	8.6	109	109	18,576	17,823	
2011	69,176	2.1	56,098	1.5	111	111	19,334	18,550	
2012	72,922	5.4	59,211	5.5	117	117	20,071	19,257	
2013	75,266	3.2	61,566	4.0	112	112	20,677	19,839	
2014	77,261	2.7	63,345	2.9	111	111	21,429	20,560	
2015	82,413	6.7	67,808	7.0	98	98	22,514	21,601	
2016	90,798	10.2	74,154	9.4	102	102	24,119	23,141	
2017	94,370	3.9	77,793	4.9	112	112	25,573	24,537	
2018	99,765	5.7	82,617	6.2	105	105	27,587	26,469	
2019	106,041	6.3	87,118	5.4	106	106	28,194	27,051	
2020	101,756	(4.0)	83,243	(4.4)	76	76	25,566	24,530	
2021	106,115	4.3	88,625	6.5	97	97	27,623	26,504	

	Food, beverages and tobacco	Textile and leather	Wood and wood products	Pulp, paper and print	Chemical and petrochemical	Non-metallic minerals	Iron and steel	Machinery	Not elsewhere specified
	3,741	1,051	319	331	1,002	583	935	918	274
	3,514	988	299	311	941	548	878	863	257
	3,333	937	284	295	893	520	833	818	244
	3,535	993	301	313	947	551	883	868	259
	4,020	1,130	343	356	1,077	627	1,004	987	294
	3,744	1,141	346	413	1,053	683	1,216	1,239	311
	3,646	1,200	365	499	1,071	781	1,531	1,620	344
	3,433	1,214	370	580	1,049	866	1,857	2,038	368
	3,030	1,146	349	628	958	902	2,099	2,391	369
	2,626	1,055	322	664	854	924	2,316	2,737	364
	2,411	1,022	312	739	801	1,005	2,689	3,298	379
	2,642	1,120	342	809	878	1,101	2,946	3,613	415
	2,491	1,056	323	763	828	1,038	2,778	3,407	391
	2,776	1,177	360	851	922	1,157	3,096	3,797	436
	2,744	1,163	355	841	912	1,143	3,060	3,753	431
	2,871	1,217	372	879	954	1,196	3,202	3,927	451
	2,904	1,231	376	890	965	1,210	3,239	3,972	456
	3,020	1,280	391	925	1,003	1,258	3,368	4,131	475
	3,113	1,320	403	954	1,034	1,297	3,472	4,258	489
	3,123	1,324	404	957	1,037	1,301	3,483	4,271	491
	3,396	1,440	440	1,040	1,128	1,415	3,787	4,644	534
	3,534	1,498	458	1,083	1,174	1,472	3,942	4,834	555
	3,669	1,556	475	1,124	1,219	1,528	4,092	5,018	577
	3,780	1,602	490	1,158	1,256	1,575	4,215	5,170	594
	3,917	1,661	507	1,200	1,301	1,632	4,369	5,358	616
	4,116	1,745	533	1,261	1,367	1,714	4,590	5,629	647
	4,409	1,869	571	1,351	1,465	1,837	4,917	6,030	693
	4,675	1,982	605	1,432	1,553	1,947	5,214	6,394	735
	5,043	2,138	653	1,545	1,675	2,101	5,624	6,897	792
	5,154	2,185	667	1,579	1,712	2,147	5,748	7,049	810
	4,674	1,981	605	1,432	1,553	1,947	5,212	6,392	734
	5,050	2,141	654	1,547	1,677	2,104	5,632	6,906	793

(Continuation)

5. Supply and Demand of Electricity

Table 4. Electricity Consumption: By Sector
in gigawatt-hour (GWh)

FY	Total Electricity Sales						
	Total Consumption				Utilities Own Use	Power Losses	
		Household	Services	Agriculture			
	Mining and Construction						
1990	788	5,609	4,695	966	1,134	3,980	
1991	740	6,249	4,847	952	1,086	3,176	
1992	702	6,053	4,910	823	1,154	4,071	
1993	744	6,368	4,725	721	1,132	4,238	
1994	846	7,282	5,865	762	1,132	4,734	
1995	803	8,223	6,353	1,067	1,226	5,735	
1996	794	9,150	7,072	1,140	1,340	6,128	
1997	757	10,477	8,013	1,239	1,471	6,037	
1998	673	11,936	8,725	905	1,590	5,849	
1999	584	11,875	8,901	891	1,536	5,754	
2000	535	12,894	9,512	902	2,390	6,345	
2001	586	13,547	10,098	987	2,196	5,704	
2002	552	13,715	10,172	1,052	3,873	5,970	
2003	616	15,357	11,106	1,032	3,410	6,810	
2004	608	15,920	11,785	1,292	4,654	7,227	
2005	637	16,031	12,245	1,086	4,591	6,817	
2006	644	15,830	12,679	1,178	4,227	6,885	
2007	670	16,376	13,470	1,534	3,994	7,608	
2008	690	16,644	14,136	1,283	3,935	7,680	
2009	692	17,504	14,756	1,413	3,524	7,542	
2010	753	18,833	16,261	1,487	4,677	7,800	
2011	784	18,694	16,624	1,335	5,398	7,680	
2012	813	19,695	17,777	1,551	5,351	8,360	
2013	838	20,614	18,304	1,859	5,959	7,741	
2014	869	20,969	18,761	2,075	6,646	7,270	
2015	913	22,747	20,085	2,364	7,124	7,481	
2016	978	25,631	21,770	2,532	8,357	8,286	
2017	1,037	26,782	22,768	2,558	8,316	8,262	
2018	1,118	28,261	24,016	2,648	8,141	9,007	
2019	1,143	30,552	25,476	2,790	8,929	9,994	
2020	1,036	34,292	20,727	2,582	8,771	9,742	
2121	1,120	34,981	21,119	4,805	7,521	9,968	

Sectoral Shares to Total Consumption					
	Transport	Industry	Household	Services	Agriculture
	-	46.9	26.4	22.1	4.6
	-	43.7	29.2	22.7	4.5
	-	42.9	29.3	23.8	4.0
	-	44.3	30.0	22.3	3.4
	-	43.4	29.6	23.8	3.1
	-	41.2	30.9	23.9	4.0
	0.1	40.5	31.3	24.2	3.9
	0.1	38.8	32.4	24.8	3.8
	0.1	36.7	35.0	25.6	2.7
	0.1	36.4	34.8	26.1	2.6
	0.2	36.1	35.3	26.0	2.5
	0.1	36.9	34.6	25.8	2.5
	0.2	35.3	35.5	26.3	2.7
	0.1	35.6	35.9	26.0	2.4
	0.2	34.1	36.1	26.7	2.9
	0.2	34.8	35.5	27.1	2.4
	0.2	34.8	34.7	27.8	2.6
	0.2	34.4	34.1	28.1	3.2
	0.2	34.6	33.8	28.7	2.6
	0.2	33.6	34.4	29.0	2.8
	0.2	33.6	34.1	29.4	2.7
	0.2	34.5	33.3	29.6	2.4
	0.2	33.9	33.3	30.0	2.6
	0.2	33.6	33.5	29.7	3.0
	0.2	33.8	33.1	29.6	3.3
	0.1	33.2	33.5	29.6	3.5
	0.1	32.5	34.6	29.4	3.4
	0.1	32.9	34.4	29.3	3.3
	0.1	33.4	34.2	29.1	3.2
	0.1	32.4	35.1	29.2	3.2
	0.1	30.7	41.2	24.9	3.1
	0.1	31.2	39.5	23.8	5.4

5. Supply and Demand of Electricity

Table 5. Fuel Input to Power Generation, by Source
in thousand tons of oil equivalent (kTOE)

FY	Total Fuel Input to Power Generation					
		Growth Rate (%)	Coal	Natural Gas	Oil-Based	
1990	9,490		559	-	2,553	
1991	10,370	9.3	679	-	3,459	
1992	10,410	0.4	678	-	3,726	
1993	10,688	2.7	755	-	3,808	
1994	11,682	9.3	663	5	4,121	
1995	11,921	2.0	750	4	4,340	
1996	12,832	7.6	1,304	7	4,153	
1997	14,223	10.8	1,729	5	4,756	
1998	15,431	8.5	2,135	8	4,358	
1999	16,607	7.6	2,577	6	2,963	
2000	17,836	7.4	3,784	9	2,105	
2001	17,025	-4.6	3,692	114	2,471	
2002	16,864	-0.9	3,444	1,239	1,623	
2003	17,258	2.3	3,329	1,911	1,612	
2004	18,223	5.6	3,476	1,844	1,923	
2005	18,698	2.6	4,134	2,560	1,400	
2006	18,545	-0.8	3,714	2,384	969	
2007	18,691	0.8	3,878	2,931	962	
2008	20,225	8.2	4,458	3,080	1,010	
2009	20,045	-0.9	4,442	3,097	1,178	
2010	19,969	-0.4	5,090	2,898	1,480	
2011	20,696	3.6	5,785	3,103	795	
2012	21,687	4.8	6,300	2,972	971	
2013	22,437	3.5	7,806	2,714	1,076	
2014	23,683	5.6	8,227	2,848	1,378	
2015	25,250	6.6	9,265	2,697	1,413	
2016	26,552	5.2	10,232	3,082	1,230	
2017	28,183	6.1	12,312	3,080	969	
2018	29,782	5.7	13,776	3,324	728	
2019	31,121	4.5	15,124	3,409	788	
2020	31,030	-0.3	15,705	3,074	508	
2021	32,022	3.2	16,751	2,698	402	

* includes bagasse, municipal waste and biodiesel

	Hydro	Geothermal	Solar	Wind	Biomass*
	1,509	4,700	-	-	168
	1,281	4,951	-	-	-
	1,105	4,901	-	-	-
	1,252	4,873	-	-	-
	1,459	5,434	-	-	-
	1,551	5,275	-	-	-
	1,750	5,618	-	-	-
	1,511	6,223	-	-	-
	1,266	7,664	-	-	-
	1,952	9,109	-	-	-
	1,941	9,997	-	-	-
	1,768	8,979	-	-	-
	1,751	8,807	-	-	-
	1,959	8,446	-	-	-
	2,139	8,841	-	-	-
	2,088	8,515	0.1	1.5	-
	2,474	8,999	0.1	4.6	-
	2,132	8,783	0.1	5.0	1.0
	2,450	9,220	0.1	5.3	2.0
	2,437	8,877	0.1	5.5	9.2
	1,943	8,538	0.1	5.3	15.7
	2,414	8,549	0.1	7.6	42.1
	2,552	8,813	0.1	6.5	71.6
	2,494	8,258	0.1	5.6	81.8
	2,275	8,863	1.4	13.1	76.8
	2,157	9,496	11.9	64.4	145.8
	2,019	9,519	94.3	83.9	291.3
	2,393	8,831	103.3	94.0	401.7
	2,336	8,973	107.4	99.1	437.7
	1,998	9,192	107.1	89.6	412.8
	1,790	9,249	118.0	88.3	496.7
	2,287	9,184	126.4	109.2	464.0

(Continuation)

5. Supply and Demand of Electricity

Table 5. Fuel Input to Power Generation, by Source
in thousand tons of oil equivalent (kTOE)

FY	Shares to Total Fuel Input (%)							
	Coal	Natural Gas	Oil-Based	Hydro	Geothermal	Solar	Wind	Biomass*
1990	5.9	-	26.9	15.9	49.5	-	-	1.8
1991	6.6	-	33.4	12.4	47.7	-	-	-
1992	6.5	-	35.8	10.6	47.1	-	-	-
1993	7.1	-	35.6	11.7	45.6	-	-	-
1994	5.7	0.0	35.3	12.5	46.5	-	-	-
1995	6.3	0.0	36.4	13.0	44.3	-	-	-
1996	10.2	0.1	32.4	13.6	43.8	-	-	-
1997	12.2	0.0	33.4	10.6	43.7	-	-	-
1998	13.8	0.0	28.2	8.2	49.7	-	-	-
1999	15.5	0.0	17.8	11.8	54.9	-	-	-
2000	21.2	0.0	11.8	10.9	56.0	-	-	-
2001	21.7	0.7	14.5	10.4	52.7	-	-	-
2002	20.4	7.3	9.6	10.4	52.2	-	-	-
2003	19.3	11.1	9.3	11.4	48.9	-	-	-
2004	19.1	10.1	10.6	11.7	48.5	-	-	-
2005	22.1	13.7	7.5	11.2	45.5	0.0	0.0	-
2006	20.0	12.9	5.2	13.3	48.5	0.0	0.0	-
2007	20.7	15.7	5.1	11.4	47.0	0.0	0.0	0.0
2008	22.0	15.2	5.0	12.1	45.6	0.0	0.0	0.0
2009	22.2	15.4	5.9	12.2	44.3	0.0	0.0	0.0
2010	25.5	14.5	7.4	9.7	42.8	0.0	0.0	0.1
2011	28.0	15.0	3.8	11.7	41.3	0.0	0.0	0.2
2012	29.1	13.7	4.5	11.8	40.6	0.0	0.0	0.3
2013	34.8	12.1	4.8	11.1	36.8	0.0	0.0	0.4
2014	34.7	12.0	5.8	9.6	37.4	0.0	0.1	0.3
2015	36.7	10.7	5.6	8.5	37.6	0.0	0.3	0.6
2016	38.5	11.6	4.6	7.6	35.8	0.4	0.3	1.1
2017	43.7	10.9	3.4	8.5	31.3	0.4	0.3	1.4
2018	46.3	11.2	2.4	7.8	30.1	0.4	0.3	1.5
2019	48.6	11.0	2.5	6.4	29.5	0.3	0.3	1.3
2020	50.6	9.9	1.6	5.8	29.8	0.4	0.3	1.6
2021	52.3	8.4	1.3	7.1	28.7	0.4	0.3	1.4

* includes bagasse, municipal waste and biodiesel

2 Energy Balance Tables

The Energy Balance Table (EBT) is a presentation of the basic supply and demand data for all fuels. It also provides other information on the energy sector such as level of energy and oil dependency, fuel mix, transformation efficiencies, power generation structure and sectoral consumption shares. It can also be used for analyzing the changes in the level and mix of energy sources used for particular purposes before or after transformation, for the study of changes in the use pattern of different fuels, and for examining the extent of or scope for substitution between fuels at different stages of the flow from primary supplies to final energy uses.

The EBT covers energy forms inherent to the Philippines such as coal, oil (crude and finished petroleum products), natural gas, hydro, geothermal, solar, wind, biomass and biofuels. It also includes electricity generated and consumed. The construction of energy balances begins with the conversion of the natural units in the commodity balances to a single unit of measurement by multiplying the appropriate equivalent (or conversion factors) for each of the natural units. Many international organizations, such as the IEA, use energy units of tonnes of oil equivalent (TOE) for their balances. In the Philippines, TOE is the standard unit of measurement in the overall energy balance tables.

The methodologies used in compiling our EBT adhere to international standards, such as of the International Energy Agency (IEA), United Nations Statistics Division (UNSD) and the Asia-Pacific Energy Research Centre (APERC). The sectoral classification used for the final energy demand follows that of Philippine Standard Industrial Classification (PSIC) to make the EBT consistent with data from other government agencies. Thus, the EBT is able to comply with the reportorial requirements of international agencies, such as the IEA, UNSD, APERC, Institute of Energy Economics Japan, and data request of local stakeholders from the private and public sector, as well as the academe.

The Policy Formulation and Research Division (PFRD) under the Energy Policy and Planning Bureau (EPPB) of the Department of Energy, generates the Energy Balance Table (EBT) on an annual basis, and is released six (6) months after the reference year.

Energy Balance Tables

Table 1: Over-all Energy Balance Table, 1990-2021
in thousand tons of oil equivalent (kTOE)

	1990	1991	1992	1993	1994	1995	1996
Indigeneous	15,637.09	15,232.89	15,236.94	15,112.35	15,387.87	14,959.14	15,113.60
Imports (+)	11,837.74	12,630.16	14,627.23	13,328.67	15,922.01	18,876.14	20,128.13
Exports (-)	(670.71)	(841.65)	(662.45)	(778.16)	(620.32)	(894.99)	(1,379.85)
International Marine Bunkers (-)	(64.17)	(36.44)	(63.76)	(58.59)	(92.66)	(110.02)	(165.28)
International Aviation Bunkers (-)	(363.46)	(370.94)	(437.51)	(458.08)	(450.93)	(419.39)	(503.94)
Stock Change (+/-)	(604.97)	251.74	(317.52)	(131.79)	311.92	(70.83)	290.70
Total Primary Energy Supply	25,771.51	26,865.76	28,382.93	27,014.40	30,457.89	32,340.05	33,483.36
Refinery (Crude Run)	(68.92)	(81.11)	(76.02)	(67.61)	(55.06)	(36.10)	(53.51)
Power Generation	-	-	-	-	-	-	-
Fuel Input (-)	(9,489.73)	(10,369.67)	(10,410.03)	(10,687.61)	(11,682.08)	(11,920.76)	(12,832.23)
Electricity Generation	2,263.71	2,205.42	2,224.42	2,285.38	2,619.00	2,885.12	3,156.33
Transmission/Dist. Loss (-)	(342.22)	(273.09)	(350.04)	(364.40)	(407.05)	(493.12)	(526.91)
Energy Sector Use & Loss (-)	(510.25)	(474.94)	(542.75)	(540.85)	(535.75)	(578.77)	(663.18)
Net Domestic Supply	17,624.11	17,872.37	19,228.51	17,639.30	20,396.96	22,196.41	22,563.86
Statistical Difference	(1,394.52)	50.55	732.51	(1,982.89)	541.43	63.09	(267.28)
% Statistical Difference	(7.91)	0.28	3.81	(11.24)	2.65	0.28	(1.18)
Total Final Energy Consumption	19,018.63	17,821.82	18,496.00	19,622.19	19,855.53	22,133.32	22,831.14
INDUSTRY	4,136.04	3,406.10	3,529.41	4,089.81	3,970.22	4,973.80	4,854.68
Manufacturing	3,689.81	3,068.04	3,162.61	3,705.71	3,667.70	4,579.53	4,492.40
Food, beverages and tobacco	1,292.36	1,220.00	1,314.99	1,453.26	1,432.90	1,568.02	1,619.33
Beverages	61.17	58.69	56.66	58.14	62.25	63.40	66.27
Tobacco	23.89	19.39	23.69	31.15	23.88	28.97	26.11
Coco/Vegetable Oil	82.77	80.96	92.96	106.15	96.12	128.12	119.09
Sugar	331.35	301.28	340.07	361.36	352.17	387.15	405.94
Food Processing	793.18	759.68	801.61	896.45	898.47	960.38	1,001.92
Textile and leather	205.26	189.18	213.77	248.60	228.55	274.54	283.33
Wood and wood products	83.32	69.70	67.13	66.04	68.78	67.92	53.63
Pulp, paper and print	164.09	137.81	177.62	199.63	178.10	272.03	193.58
Chemical and petrochemical	843.61	382.85	298.23	456.28	342.87	714.92	542.32
Chemicals Except Fertilizer	180.00	163.50	170.89	183.79	170.63	196.15	205.59
Fertilizer	27.61	23.39	35.09	30.97	27.97	35.95	44.19
Lube Refining	636.01	195.97	92.24	241.52	144.27	482.82	292.55

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	15,255.19	16,297.42	18,244.55	19,029.95	17,735.69	19,430.21	19,933.43	20,433.98	21,231.51	21,750.75
	21,825.85	21,178.37	20,609.51	21,884.19	21,947.45	20,001.16	19,971.84	19,881.20	19,080.71	19,453.77
	(1,413.93)	(907.07)	(1,110.54)	(1,825.70)	(1,402.45)	(1,879.09)	(2,087.50)	(1,414.59)	(1,932.00)	(2,375.71)
	(148.27)	(176.63)	(243.86)	(210.74)	(215.46)	(226.37)	(191.51)	(133.58)	(115.99)	(125.82)
	(647.53)	(428.31)	(489.80)	(511.92)	(577.42)	(590.66)	(622.72)	(685.91)	(764.77)	(808.13)
	187.95	222.37	631.26	491.20	(622.39)	592.64	405.44	(834.27)	559.84	(77.53)
	35,059.26	36,186.15	37,641.12	38,856.98	36,865.42	37,327.89	37,408.99	37,246.83	38,059.30	37,817.33
	(54.01)	(77.90)	(157.54)	(149.25)	(212.76)	(229.12)	(209.81)	(104.43)	(148.97)	(167.46)
	-	-	-	-	-	-	-	-	-	-
	(14,223.39)	(15,430.80)	(16,606.95)	(17,836.24)	(17,024.53)	(16,864.00)	(17,257.54)	(18,223.17)	(18,697.58)	(18,545.30)
	3,421.89	3,575.17	3,562.48	3,894.24	4,044.72	4,167.45	4,552.09	4,811.45	4,863.95	4,882.56
	(519.07)	(502.95)	(494.77)	(545.61)	(490.43)	(513.33)	(585.56)	(621.41)	(586.17)	(591.96)
	(654.51)	(707.31)	(768.83)	(977.15)	(832.61)	(1,001.78)	(1,104.15)	(1,038.14)	(975.97)	(785.92)
	23,030.17	23,042.36	23,175.50	23,242.98	22,349.81	22,887.11	22,804.02	22,071.14	22,514.56	22,609.24
	(925.76)	(789.02)	(471.74)	46.59	(467.48)	131.00	(175.29)	(978.89)	(156.44)	246.80
	(4.02)	(3.42)	(2.04)	0.20	(2.09)	0.57	(0.77)	(4.44)	(0.69)	1.09
	23,955.93	23,831.38	23,647.24	23,196.39	22,817.29	22,756.11	22,979.31	23,050.03	22,670.99	22,362.44
	5,490.51	5,175.90	5,073.27	4,536.59	4,508.72	4,300.21	4,825.09	4,749.19	4,952.36	5,036.12
	5,144.79	4,847.49	4,751.30	4,252.41	4,256.28	4,055.79	4,602.94	4,528.58	4,748.00	4,833.09
	1,573.34	1,735.98	1,552.27	1,446.35	1,484.21	1,511.64	1,598.83	1,582.12	1,627.64	1,620.53
	190.08	227.50	174.46	168.49	189.71	187.72	192.36	196.18	197.49	167.08
	25.03	30.70	25.06	21.66	24.22	18.94	20.99	22.79	23.60	22.89
	117.99	128.28	71.71	66.60	71.25	56.10	64.90	60.11	56.43	51.19
	375.39	467.66	448.45	412.65	424.73	459.02	465.84	463.54	475.46	481.86
	864.86	881.84	832.59	776.95	774.32	789.87	854.73	839.49	874.66	897.52
	287.56	311.90	277.47	250.36	245.32	215.45	222.22	228.09	230.11	190.31
	46.90	44.13	44.11	41.45	42.02	40.74	43.50	41.31	40.55	39.46
	161.22	224.36	251.75	258.35	228.92	228.66	247.46	246.81	251.62	152.00
	1,029.10	408.95	670.36	321.55	327.08	254.43	289.74	264.51	268.62	296.11
	205.78	237.37	309.03	275.04	267.86	222.71	252.62	232.79	227.43	246.76
	39.93	44.65	40.15	34.93	28.29	28.06	32.56	27.86	37.05	45.11
	783.39	126.92	321.18	11.58	30.93	3.66	4.57	3.86	4.14	4.24

(Continuation)

Table 1: Over-all Energy Balance Table, 1990-2020
in thousand tons of oil equivalent (kTOE)

	2007	2008	2009	2010	2011	2012	
Indigeneous	22,554.08	23,857.76	24,590.31	24,724.82	25,705.64	26,248.48	
Imports (+)	19,738.85	20,182.75	17,740.39	21,691.15	21,035.90	21,846.35	
Exports (-)	(2,821.93)	(2,802.63)	(2,433.68)	(3,932.15)	(3,388.89)	(2,962.38)	
International Marine Bunkers (-)	(229.04)	(226.86)	(197.52)	(182.93)	(212.24)	(181.02)	
International Aviation Bunkers (-)	(981.01)	(953.19)	(976.17)	(988.93)	(1,070.67)	(1,081.92)	
Stock Change (+/-)	219.29	399.24	1,180.26	(265.61)	(218.99)	(345.91)	
Total Primary Energy Supply	38,480.25	40,457.08	39,903.59	41,046.35	41,850.74	43,523.59	
Refinery (Crude Run)	(110.47)	(189.29)	(218.39)	(268.27)	(288.37)	(265.94)	
Power Generation	-	-	-	-	-	-	
Fuel Input (-)	(18,691.19)	(20,224.93)	(20,045.08)	(19,969.08)	(20,696.23)	(21,687.02)	
Electricity Generation	5,125.69	5,229.66	5,325.40	5,824.83	5,948.04	6,270.16	
Transmission/Dist. Loss (-)	(654.21)	(660.37)	(648.51)	(670.69)	(660.32)	(718.85)	
Energy Sector Use & Loss (-)	(764.97)	(691.15)	(628.89)	(770.48)	(809.99)	(845.15)	
Net Domestic Supply	23,385.10	23,921.00	23,688.12	25,192.65	25,343.86	26,276.80	
Statistical Difference	232.71	619.23	(237.69)	100.43	161.67	502.74	
% Statistical Difference	1.00	2.59	(1.00)	0.40	0.64	1.91	
Total Final Energy Consumption	23,152.39	23,301.77	23,925.81	25,092.22	25,182.19	25,774.06	
INDUSTRY	5,261.59	5,777.83	5,369.39	5,948.44	5,947.65	5,805.97	
Manufacturing	5,026.69	5,537.69	5,083.43	5,639.50	5,570.15	5,379.70	
Food, beverages and tobacco	1,652.82	1,736.57	1,727.26	1,811.61	1,796.76	1,771.08	
Beverages	188.98	234.09	255.76	241.11	207.02	187.38	
Tobacco	24.71	27.73	30.72	36.34	33.36	31.15	
Coco/Vegetable Oil	52.62	64.59	38.03	31.37	30.53	31.67	
Sugar	483.74	476.92	485.84	494.90	502.92	505.18	
Food Processing	902.76	933.24	916.92	1,007.89	1,022.93	1,015.70	
Textile and leather	158.65	136.06	132.46	141.41	140.45	145.62	
Wood and wood products	47.85	45.61	45.80	48.69	47.87	48.59	
Pulp, paper and print	171.72	155.43	153.62	164.87	160.60	163.52	
Chemical and petrochemical	291.64	285.59	294.75	285.33	264.01	246.79	
Chemicals Except Fertilizer	249.55	245.89	257.21	242.33	220.93	202.42	
Fertilizer	37.68	35.05	32.99	38.33	38.21	39.31	
Lube Refining	4.42	4.64	4.55	4.66	4.88	5.06	

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	25,469.01	26,606.16	26,881.33	29,404.87	29,514.74	29,977.24	30,906.16	29,675.55	30,300.62
	23,188.80	25,764.42	29,659.79	32,170.71	34,591.34	37,746.69	36,585.53	32,970.69	35,281.06
	(3,027.38)	(4,519.28)	(3,672.32)	(5,512.58)	(5,263.19)	(4,862.30)	(6,787.76)	(5,622.12)	(5,853.01)
	(162.84)	(89.39)	(27.05)	(49.78)	(96.27)	(82.80)	(54.01)	(100.73)	(70.83)
	(1,097.38)	(1,040.08)	(1,215.64)	(1,295.63)	(1,579.97)	(1,624.73)	(1,618.11)	(567.09)	(534.94)
	618.96	267.82	(351.75)	(127.53)	791.57	(1,437.54)	820.15	221.11	120.59
	44,989.16	46,989.65	51,274.36	54,590.05	57,958.22	59,716.57	59,851.96	56,577.41	59,243.47
	(247.44)	(249.51)	(508.75)	(555.83)	(521.40)	(617.46)	(365.00)	(198.65)	(211.34)
	-	-	-	-	-	-	-	-	-
	(22,436.64)	(23,682.96)	(25,249.84)	(26,552.41)	(28,183.04)	(29,781.73)	(31,120.51)	(31,029.59)	(32,022.07)
	6,471.70	6,643.25	7,086.26	7,807.21	8,114.39	8,578.22	9,117.93	8,749.42	9,124.22
	(665.59)	(641.01)	(643.27)	(712.64)	(710.38)	(774.43)	(859.36)	(837.64)	(857.14)
	(845.50)	(944.36)	(952.11)	(962.56)	(970.63)	(997.96)	(1,147.88)	(1,055.96)	(807.35)
	27,265.68	28,115.05	31,006.65	33,613.82	35,687.16	36,123.21	35,477.14	32,205.00	34,469.81
	(33.78)	(390.48)	18.76	83.64	212.80	400.08	(782.38)	(387.52)	(662.01)
	(0.12)	(1.39)	0.06	0.25	0.60	1.11	(2.21)	(1.20)	(1.92)
	27,299.46	28,505.53	30,987.88	33,530.18	35,474.36	35,723.14	36,259.52	32,592.51	35,131.83
	6,312.36	6,528.87	6,750.05	7,449.22	7,925.11	7,523.33	7,305.83	6,335.82	6,819.16
	5,848.35	6,059.53	6,232.56	6,932.42	7,341.74	6,976.24	6,706.39	5,638.51	6,060.20
	1,807.65	1,871.25	1,854.57	2,120.07	2,084.83	2,070.56	2,105.51	1,719.21	1,833.57
	171.71	166.66	140.36	164.15	110.13	172.15	160.97	164.71	199.54
	22.80	22.41	21.48	20.22	21.89	23.97	23.90	20.35	19.87
	32.54	30.42	27.11	28.11	33.32	42.39	48.75	45.17	49.32
	523.19	541.35	560.22	575.29	582.70	580.90	587.65	442.93	458.21
	1,057.41	1,110.41	1,105.41	1,332.30	1,336.79	1,251.15	1,284.25	1,046.04	1,106.62
	253.46	266.45	173.09	179.11	190.95	197.03	212.37	179.66	197.13
	51.00	51.86	60.83	63.40	65.88	71.36	72.34	67.75	66.18
	177.60	193.29	188.55	206.45	227.60	622.96	294.85	261.32	295.26
	226.24	286.23	326.34	328.37	372.89	311.27	298.91	364.29	287.39
	200.59	262.48	303.28	300.29	348.17	277.86	265.11	338.74	256.99
	20.46	18.38	17.40	18.86	18.30	26.49	26.73	19.13	23.46
	5.19	5.38	5.65	9.22	6.42	6.92	7.08	6.42	6.93

(Continuation)

Table 1: Over-all Energy Balance Table, 1990-2020
in thousand tons of oil equivalent (kTOE)

	1990	1991	1992	1993	1994	1995	1996	
Non-metallic minerals	745.92	756.09	757.57	873.23	1,033.95	1,190.72	1,216.76	
Glass/Glass Products	79.34	61.55	74.22	94.03	78.68	105.90	112.52	
Cement	633.91	664.02	650.17	740.53	916.62	1,039.95	1,072.41	
Other Non-Metlc Minerals	32.66	30.51	33.17	38.67	38.66	44.87	31.83	
Iron and steel	223.92	193.42	213.70	275.01	240.43	326.71	381.18	
Machinery	78.96	74.16	70.35	74.61	84.85	106.57	139.31	
Not elsewhere specified	52.37	44.83	49.25	59.04	57.27	58.11	62.97	
Other Manufacturing	18.08	17.54	17.17	18.08	19.96	22.01	25.03	
Rubber/ Rubber Products	34.29	27.29	32.09	40.96	37.31	36.10	37.94	
Mining	372.24	260.19	276.46	279.58	198.52	239.81	198.44	
Construction	73.99	77.87	90.34	104.52	104.00	154.46	163.84	
TRANSPORT	4,685.41	4,419.57	5,127.58	5,790.96	6,082.92	7,174.54	8,115.93	
Railway	1.96	1.93	1.89	1.86	1.82	1.79	4.09	
Road Transport	3,976.46	3,836.24	4,408.18	4,921.81	5,148.85	5,909.07	6,521.87	
Water Transport	560.16	454.57	586.79	730.87	743.64	1,054.84	1,303.80	
Domestic Air Transport	146.83	126.82	130.72	136.43	188.61	208.84	286.16	
HOUSEHOLDS	8,847.74	8,668.60	8,520.93	8,414.27	8,346.29	8,356.36	8,309.05	
SERVICES	815.73	837.56	856.26	855.22	969.92	1,041.19	1,115.51	
AGRICULTURE	133.78	127.89	112.67	102.91	101.60	131.08	139.09	
Agri-Industry	73.51	72.67	64.25	57.77	60.45	82.47	89.54	
Agri Crops Product	19.45	19.16	16.67	14.71	15.50	20.83	21.46	
Livestock/Poultry	46.04	45.47	40.03	35.74	37.48	53.17	59.48	
Agri Services	8.02	8.04	7.55	7.33	7.47	8.47	8.59	
Forestry	32.35	27.99	24.18	20.94	18.17	15.86	13.78	
Fishery	27.92	27.24	24.24	24.20	22.99	32.75	35.77	
NON-ENERGY USE	399.94	362.10	349.16	369.01	384.57	456.36	296.88	
Self-sufficiency	61	57	54	56	51	46	45	

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	1,306.94	1,347.80	1,146.96	1,065.68	1,027.18	960.50	1,215.44	1,216.22	1,333.15	1,459.81
	110.79	112.82	96.11	82.24	77.51	58.81	109.88	110.19	99.58	90.57
	1,140.09	1,176.49	1,003.73	923.15	869.91	830.31	1,010.20	1,029.73	1,153.21	1,291.83
	56.07	58.49	47.12	60.29	79.76	71.38	95.36	76.30	80.37	77.41
	426.73	443.75	462.82	499.15	495.35	457.55	505.31	453.11	452.04	494.51
	197.54	235.71	259.07	294.61	330.15	327.57	419.23	432.09	466.06	467.66
	115.45	94.90	86.48	74.89	76.04	59.24	61.22	64.31	78.21	112.70
	73.30	46.64	42.55	37.32	47.51	39.49	39.80	40.69	56.25	94.85
	42.16	48.27	43.94	37.58	28.53	19.75	21.41	23.62	21.96	17.85
	159.27	165.59	136.69	114.06	79.08	70.74	70.87	72.99	73.73	88.04
	186.45	162.82	185.28	170.12	173.37	173.67	151.29	147.62	130.63	114.99
	8,077.51	8,302.80	8,221.25	8,301.96	8,226.99	8,529.21	8,340.93	8,633.08	8,225.85	7,724.87
	4.65	4.60	4.90	6.03	5.53	5.28	3.46	6.49	13.06	8.71
	6,607.54	6,667.02	6,813.33	6,834.32	6,861.38	7,201.27	7,175.05	7,412.05	7,088.45	6,638.79
	1,131.43	1,374.97	1,143.10	1,120.41	1,077.00	1,080.37	927.86	963.95	885.26	836.10
	333.90	256.21	259.91	341.20	283.09	242.29	234.56	250.59	239.09	241.27
	8,297.18	8,243.96	8,124.58	7,905.69	7,654.47	7,450.73	7,257.22	7,151.35	7,072.32	7,095.03
	1,257.81	1,436.36	1,556.14	1,684.41	1,851.90	1,867.22	1,903.89	1,868.52	1,852.99	1,927.20
	493.52	422.12	406.79	364.28	353.78	381.04	400.25	401.47	380.50	355.25
	136.58	99.65	97.94	91.05	107.61	108.90	119.22	130.35	111.60	118.80
	60.00	36.45	33.86	26.34	37.34	36.20	38.39	40.32	35.89	35.52
	68.72	55.80	55.04	56.92	62.88	66.58	67.00	81.80	69.68	73.92
	7.86	7.39	9.04	7.80	7.39	6.12	13.83	8.23	6.03	9.36
	41.24	9.79	10.23	4.62	1.83	2.52	5.45	5.65	2.67	3.60
	315.70	312.68	298.61	268.62	244.34	269.63	275.57	265.47	266.23	232.85
	339.41	250.23	265.22	403.46	221.43	227.69	251.92	246.43	186.98	223.98
	44	45	48	49	48	52	53	55	56	58

(Continuation)

Table 1: Over-all Energy Balance Table, 1990-2020
in thousand tons of oil equivalent (kTOE)

	2007	2008	2009	2010	2011	2012	
Non-metallic minerals	1,538.24	1,926.14	1,575.84	1,985.35	1,955.72	1,781.38	
Glass/Glass Products	103.28	107.20	96.30	99.31	100.90	94.24	
Cement	1,358.77	1,747.05	1,411.70	1,806.30	1,774.90	1,600.55	
Other Non-Metlc Minerals	76.18	71.89	67.85	79.74	79.92	86.58	
Iron and steel	555.30	605.47	516.87	519.73	508.31	519.32	
Machinery	465.23	505.41	497.31	521.79	521.22	527.83	
Not elsewhere specified	145.26	141.42	139.52	160.73	175.20	175.58	
Other Manufacturing	123.84	120.89	118.20	145.74	159.30	159.42	
Rubber/ Rubber Products	21.41	20.52	21.32	14.99	15.90	16.15	
Mining	96.66	119.01	150.23	209.59	261.85	307.47	
Construction	138.24	121.13	135.72	99.35	115.66	118.80	
TRANSPORT	8,031.46	7,496.43	7,914.14	8,035.50	7,982.80	8,364.20	
Railway	9.67	9.69	9.71	11.80	14.23	17.06	
Road Transport	6,933.88	6,621.97	7,065.77	7,085.72	6,990.10	7,341.64	
Water Transport	940.57	690.02	610.06	701.93	671.93	635.80	
Domestic Air Transport	147.34	174.76	228.60	236.06	306.54	369.70	
HOUSEHOLDS	7,251.02	7,376.73	7,632.69	7,878.44	7,991.18	8,171.33	
SERVICES	1,989.16	2,043.54	2,412.95	2,662.83	2,738.94	2,829.56	
AGRICULTURE	340.28	366.01	330.03	347.10	301.94	318.13	
Agri-Industry	146.06	130.26	128.13	133.52	123.44	144.78	
Agri Crops Product	35.32	33.93	38.29	40.96	40.14	48.75	
Livestock/Poultry	95.40	79.30	82.87	85.06	76.65	88.80	
Agri Services	15.34	17.03	6.98	7.50	6.65	7.24	
Forestry	3.57	4.90	1.08	1.63	1.17	0.99	
Fishery	190.65	230.86	200.82	211.95	177.33	172.36	
NON-ENERGY USE	278.88	241.22	266.61	219.92	219.67	284.87	
Self-sufficiency	59	59	62	60	61	60	

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	1,979.11	1,976.24	2,121.26	2,425.23	2,733.41	1,912.42	1,811.58	1,096.82	1,297.51
	91.05	82.65	79.05	91.02	81.75	119.07	106.53	117.39	128.21
	1,796.22	1,816.41	1,958.77	2,243.06	2,569.01	1,697.16	1,607.19	880.21	1,061.21
	91.84	77.18	83.43	91.14	82.65	96.19	97.86	99.22	108.09
	615.60	671.43	723.60	758.35	780.90	823.44	736.07	937.27	1,026.57
	541.74	564.01	633.51	682.01	722.82	733.64	735.19	616.64	656.46
	195.94	178.77	150.82	169.43	162.46	233.56	439.55	395.55	400.13
	180.98	163.63	135.57	153.00	137.76	198.32	403.06	371.12	371.49
	14.96	15.14	15.25	16.43	24.71	35.24	36.49	24.43	28.65
	341.29	343.88	363.33	296.22	329.15	293.37	326.71	447.76	409.01
	122.73	125.46	154.15	220.58	254.22	253.72	272.73	249.55	349.96
	8,783.96	9,132.81	10,557.29	11,424.90	11,823.30	12,238.08	12,697.01	9,808.57	10,982.95
	18.97	21.09	10.14	10.74	11.76	10.77	10.68	8.06	10.14
	7,695.63	7,853.23	9,075.91	9,969.02	10,337.91	10,760.93	11,161.17	8,853.79	9,934.62
	636.62	716.01	1,025.13	851.32	961.77	882.74	898.82	727.99	844.09
	432.73	542.48	446.11	593.83	511.86	583.64	626.34	218.73	194.11
	8,385.69	8,488.40	8,731.34	9,034.90	9,192.49	9,430.66	9,710.81	10,028.09	10,178.56
	3,037.57	3,397.07	3,369.73	3,864.77	4,404.46	4,668.13	4,935.75	4,611.10	4,847.88
	352.16	353.83	400.57	450.44	515.62	439.55	473.48	436.81	660.91
	174.59	187.71	213.17	233.18	246.68	239.37	253.89	262.66	484.28
	62.45	63.22	71.33	74.17	93.08	78.43	84.31	65.41	99.53
	106.25	118.59	135.11	151.51	146.33	153.41	161.64	189.91	371.09
	5.89	5.90	6.72	7.50	7.27	7.53	7.94	7.34	13.67
	0.81	1.08	0.75	0.78	6.58	1.04	1.13	1.42	1.27
	176.76	165.05	186.65	216.47	262.36	199.14	218.46	172.72	175.36
	427.72	604.55	1,178.91	1,305.95	1,613.39	1,423.39	1,136.64	1,372.13	1,642.36
	57	57	52	54	51	50	52	52	51

Energy Balance Tables

Table 2: Energy Balance Table, 2019
in thousand tons of oil equivalent (kTOE)

	Coal	Natgas	Condensate	Crude	Gasoline	
Indigeneous	7,257.93	3,626.03	418.25	104.31	-	
Imports (+)	14,615.99	-	-	8,153.55	2,331.33	
Exports (-)	(5,267.39)	-	(418.25)	(133.56)	(49.18)	
International Marine Bunkers (-)	-	-	-	-	-	
International Aviation Bunkers (-)	-	-	-	-	-	
Stock Change (+/-)	875.09	-	-	(81.91)	57.82	
Total Primary Energy Supply	17,481.62	3,626.03	-	8,042.38	2,339.97	
Refinery (Crude Run)	-	-	-	(7,996.84)	1,797.59	
Power Generation	-	-	-	-	-	
Fuel Input (-)	(15,123.67)	(3,408.84)	-	-	-	
Electricity Generation	4,977.68	1,922.13	-	-	-	
Transmission/Dist. Loss (-)	-	-	-	-	-	
Energy Sector Use & Loss (-)	-	(155.66)	-	(224.45)	-	
Net Domestic Supply	2,357.95	61.5	-	(178.9)	4,137.56	
Statistical Difference	0.00	(0.00)	-	-	(741.91)	
% Statistical Difference	0.00	(0.00)	-	-	(178.22)	
Total Final Energy Consumption	2,357.95	61.53	-	-	4,879.47	
INDUSTRY	2,217.09	61.53	-	-	-	
Manufacturing	2,217.09	61.53	-	-	-	
Food, beverages and tobacco	201.53	-	-	-	-	
Beverages	22.26	-	-	-	-	
Tobacco	-	-	-	-	-	
Coco/Vegetable Oil	14.68	-	-	-	-	
Sugar	10.94	-	-	-	-	
Food Processing	153.65	-	-	-	-	
Textile and leather	20.06	-	-	-	-	
Wood and wood products	-	-	-	-	-	
Pulp, paper and print	152.84	-	-	-	-	
Chemical and petrochemical	17.43	-	-	-	-	
Chemicals Except Fertilizer	4.25	-	-	-	-	
Fertilizer	13.18	-	-	-	-	
Lube Refining	-	-	-	-	-	

	Kero	Diesel	Fuel Oil	LPG	Jet A-1	Avgas	Naphtha
	-	-	-	-	-	-	-
	17.01	6,662.50	730.81	1,471.22	1,473.54	12.91	729.12
	-	(72.74)	(273.98)	(5.24)	-	-	(123.95)
	-	(13.83)	(40.18)	-	-	-	-
	-	-	-	-	(1,618.11)	-	-
	3.87	(132.25)	23.55	4.22	19.63	(0.24)	(40.64)
	20.87	6,443.68	440.19	1,470.20	(124.93)	12.67	564.53
	32.23	3,143.02	670.57	307.08	798.88	-	173.65
	-	-	-	-	-	-	-
	-	(406.08)	(382.04)	-	-	-	-
	-	244.21	78.43	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	53.1	9,180.6	728.7	1,777.3	674.0	12.7	738.2
	(21.47)	23.21	(80.84)	(138.85)	52.88	7.40	9.06
	(40.43)	0.25	(11.09)	(7.81)	7.85	58.43	1.23
	74.57	9,157.40	809.56	1,916.13	621.07	5.27	729.12
	1.87	754.09	452.81	172.59	-	-	-
	1.85	339.46	391.42	155.44	-	-	-
	0.04	117.80	94.97	53.06	-	-	-
	0.00	13.52	39.53	-	-	-	-
	0.00	2.76	2.38	0.99	-	-	-
	-	5.49	1.05	0.01	-	-	-
	-	14.03	1.38	-	-	-	-
	0.04	82.01	50.62	52.06	-	-	-
	-	0.88	0.74	2.78	-	-	-
	-	5.67	5.84	3.34	-	-	-
	-	1.62	2.56	2.04	-	-	-
	1.70	39.98	83.79	8.03	-	-	-
	1.70	38.17	81.91	8.03	-	-	-
	-	1.81	1.88	-	-	-	-
	-	-	-	-	-	-	-

(Continuation)

Table 2: Energy Balance Table, 2019*in thousand tons of oil equivalent (kTOE)*

	Asphalt	Other PP	Hydro	Geo	Solar	
Indigeneous	-	-	1,997.88	9,192.44	107.14	
Imports (+)	120.18	149.10	-	-	-	
Exports (-)	(25.32)	(418.15)	-	-	-	
International Marine Bunkers (-)	-	-	-	-	-	
International Aviation Bunkers (-)	-	-	-	-	-	
Stock Change (+/-)	0.29	18.77	-	-	-	
Total Primary Energy Supply	95.15	(250.28)	1,997.88	9,192.44	107.14	
Refinery (Crude Run)	42.80	666.03	-	-	-	
Power Generation	-	-	-	-	-	
Fuel Input (-)	-	-	(1,997.88)	(9,192.4)	(107.14)	
Electricity Generation	-	-	690.07	919.24	107.14	
Transmission/Dist. Loss (-)	-	-	-	-	-	
Energy Sector Use & Loss (-)	-	-	-	-	-	
Net Domestic Supply	138.0	415.8	-	-	-	
Statistical Difference	6.81	280.22	-	-	-	
% Statistical Difference	4.94	67.40				
Total Final Energy Consumption	131.14	135.53	-	-	-	
INDUSTRY	-	-	-	-	-	
Manufacturing	-	-	-	-	-	
Food, beverages and tobacco	-	-	-	-	-	
Beverages	-	-	-	-	-	
Tobacco	-	-	-	-	-	
Coco/Vegetable Oil	-	-	-	-	-	
Sugar	-	-	-	-	-	
Food Processing	-	-	-	-	-	
Textile and leather	-	-	-	-	-	
Wood and wood products	-	-	-	-	-	
Pulp, paper and print	-	-	-	-	-	
Chemical and petrochemical	-	-	-	-	-	
Chemicals Except Fertilizer	-	-	-	-	-	
Fertilizer	-	-	-	-	-	
Lube Refining	-	-	-	-	-	

	Wind	Biomass	Biodiesel	Bio Ethanol	Electricity	Total
	89.57	7,735.70	178.18	198.73	-	30,906.16
	-	-	-	118.28	-	36,585.53
	-	-	-	-	-	(6,787.76)
	-	-	-	-	-	(54.01)
	-	-	-	-	-	(1,618.11)
	-	-	9.01	62.94	-	820.15
	89.57	7,735.70	187.19	379.95	-	59,851.96
	-	-	-	-	-	(365.00)
	-	-	-	-	-	-
	(89.57)	(404.10)	(8.75)	-	-	(31,120.51)
	89.57	89.45	-	-	9,117.93	9,117.93
	-	-	-	-	(859.36)	(859.36)
	-	-	-	-	(767.77)	(1,147.88)
	-	7,331.6	178.4	379.9	7,490.80	35,477.14
	-	-	-	-	(0.00)	(782.38)
	-	-	-	-	(0.00)	(2.21)
	-	7,331.60	178.44	379.95	7,490.80	36,259.52
	-	1,207.07	14.54	-	2,424.25	7,305.83
	-	1,207.07	6.54	-	2,325.99	6,706.39
	-	1,192.67	2.27	-	443.16	2,105.51
	-	-	0.26	-	85.39	160.97
	-	-	0.05	-	17.71	23.90
	-	-	0.11	-	27.40	48.75
	-	522.39	0.27	-	38.63	587.65
	-	670.28	1.58	-	274.02	1,284.25
	-	-	0.02	-	187.88	212.37
	-	-	0.11	-	57.39	72.34
	-	-	0.03	-	135.76	294.85
	-	-	0.77	-	147.22	298.91
	-	-	0.74	-	130.32	265.11
	-	-	0.03	-	9.82	26.73
	-	-	-	-	7.08	7.08

(Continuation)

Table 2: Energy Balance Table, 2019*in thousand tons of oil equivalent (kTOE)*

	Coal	Natgas	Condensate	Crude	Gasoline	
Non-metallic minerals	1,458.57	-	-	-	-	
Glass/Glass Products	-	-	-	-	-	
Cement	1,453.37	-	-	-	-	
Other Non-Metallic Minerals	5.20	-	-	-	-	
Iron and steel	109.67	-	-	-	-	
Machinery	-	-	-	-	-	
Not elsewhere specified	257.00	61.53	-	-	-	
Other Manufacturing	243.52	61.53	-	-	-	
Rubber/ Rubber Products	13.47	-	-	-	-	
Mining	-	-	-	-	-	
Construction	-	-	-	-	-	
TRANSPORT	-	-	-	-	4,870.44	
Railway	-	-	-	-	-	
Road Transport	-	-	-	-	4,699.46	
Water Transport	-	-	-	-	170.97	
Domestic Air Transport	-	-	-	-	-	
HOUSEHOLDS	-	-	-	-	-	
SERVICES	-	-	-	-	-	
AGRICULTURE	-	-	-	-	9.03	
Agri-Industry	-	-	-	-	2.81	
Agri Crops Product	-	-	-	-	2.81	
Livestock/Poultry	-	-	-	-	0.00	
Agri Services	-	-	-	-	-	
Forestry	-	-	-	-	0.09	
Fishery	-	-	-	-	6.13	
NON-ENERGY USE	140.86	-	-	-	-	
Self-sufficiency						

	Kero	Diesel	Fuel Oil	LPG	Jet A-1	Avgas	Naphtha
	-	54.25	92.06	21.04	-	-	-
	-	1.70	57.60	18.58	-	-	-
	-	43.60	34.44	-	-	-	-
	-	8.95	0.02	2.46	-	-	-
	0.00	20.01	92.52	19.26	-	-	-
	0.11	95.28	10.63	21.23	-	-	-
	-	3.95	8.30	24.67	-	-	-
	-	-	6.96	24.67	-	-	-
	-	3.95	1.34	-	-	-	-
	0.01	192.22	55.30	-	-	-	-
	0.02	222.40	6.10	17.14	-	-	-
	-	6,479.35	196.19	8.79	621.07	5.27	-
	-	1.51	-	-	-	-	-
	-	5,952.31	-	8.79	-	-	-
	-	525.53	196.19	-	-	-	-
	-	-	-	-	621.07	5.27	-
	72.31	-	-	1,239.64	-	-	-
	-	1,706.44	158.14	495.11	-	-	-
	0.38	217.53	2.42	-	-	-	-
	0.31	39.33	0.10	-	-	-	-
	0.31	37.27	-	-	-	-	-
	-	2.06	0.10	-	-	-	-
	-	-	-	-	-	-	-
	0.00	0.35	-	-	-	-	-
	0.07	177.84	2.31	-	-	-	-
	-	-	-	-	-	-	729.12

(Continuation)

Table 2: Energy Balance Table, 2019*in thousand tons of oil equivalent (kTOE)*

	Asphalt	Other PP	Hydro	Geo	Solar	
Non-metallic minerals	-	-	-	-	-	
Glass/Glass Products	-	-	-	-	-	
Cement	-	-	-	-	-	
Other Non-Metallic Minerals	-	-	-	-	-	
Iron and steel	-	-	-	-	-	
Machinery	-	-	-	-	-	
Not elsewhere specified	-	-	-	-	-	
Other Manufacturing	-	-	-	-	-	
Rubber/ Rubber Products	-	-	-	-	-	
Mining	-	-	-	-	-	
Construction	-	-	-	-	-	
TRANSPORT	-	-	-	-	-	
Railway	-	-	-	-	-	
Road Transport	-	-	-	-	-	
Water Transport	-	-	-	-	-	
Domestic Air Transport	-	-	-	-	-	
HOUSEHOLDS	-	-	-	-	-	
SERVICES	-	-	-	-	-	
AGRICULTURE	-	-	-	-	-	
Agri-Industry	-	-	-	-	-	
Agri Crops Product	-	-	-	-	-	
Livestock/Poultry	-	-	-	-	-	
Agri Services	-	-	-	-	-	
Forestry	-	-	-	-	-	
Fishery	-	-	-	-	-	
NON-ENERGY USE	131.14	135.53	-	-	-	
Self-sufficiency						

	Wind	Biomass	Biodiesel	BioEthanol	Electricity	Total
	-	-	1.05	-	184.61	1,811.58
	-	-	0.03	-	28.62	106.53
	-	-	0.84	-	74.93	1,607.19
	-	-	0.17	-	81.07	97.86
	-	-	0.39	-	494.23	736.07
	-	-	1.84	-	606.10	735.19
	-	14.40	0.08	-	69.63	439.55
	-	14.40	-	-	51.98	403.06
	-	-	0.08	-	17.65	36.49
	-	-	3.71	-	75.48	326.71
	-	-	4.29	-	22.78	272.73
	-	-	126.81	379.95	9.14	12,697.01
	-	-	0.03	-	9.14	10.68
	-	-	120.66	379.95	-	11,161.17
	-	-	6.13	-	-	898.82
	-	-	-	-	-	626.34
	-	5,771.90	-	-	2,626.97	9,710.81
	-	352.64	32.90	-	2,190.53	4,935.75
	-	-	4.19	-	239.93	473.48
	-	-	0.76	-	210.58	253.89
	-	-	0.72	-	43.21	84.31
	-	-	0.04	-	159.43	161.64
	-	-	-	-	7.94	7.94
	-	-	0.01	-	0.68	1.13
	-	-	3.43	-	28.67	218.46
	-	-	-	-	-	1,136.64
						51.64

Energy Balance Tables

Table 3: Energy Balance Table, 2020

in thousand tons of oil equivalent (kTOE)

	Coal	Natgas	Condensate	Crude	Gasoline	
Indigenous Production	6,835.69	3,288.34	362.21	94.10	-	
Imports	15,582.60	-	-	4,427.43	3,117.18	
Exports	(3,971.92)	-	(362.21)	(340.08)	(137.24)	
International Marine Bunkers	-	-	-	-	-	
International Civil Aviation	-	-	-	-	-	
Stock Change	(900.19)	-	-	555.42	90.73	
Total Primary Energy Supply	17,546.18	3,288.34	-	4,736.86	3,070.67	
Refinery (Crude Run)	-	-	-	(4,652.17)	1,004.52	
Power Generation	-	-	-	-	-	
Fuel Input	(15,704.77)	(3,074.49)	-	-	-	
Electricity Generation	5,002.24	1,676.43	-	-	-	
Transmission/Dist. Loss	-	-	-	-	-	
Energy Sector Use & Loss	-	(176.66)	-	(125.11)	-	
Net Domestic Supply	1,841.41	37.2	-	(40.4)	4,075.19	
Statistical Difference	0.00	(0.00)	-	-	(79.77)	
Statistical Difference (%)	0.00	(0.00)	-	-		
Total Final Energy Consumption	1,841.41	37.20	-	-	4,154.96	
Industry	1,629.21	37.20	-	-	-	
Manufacturing	1,629.21	37.20	-	-	-	
Food, beverages and tobacco	154.37	-	-	-	-	
Beverages	17.01	-	-	-	-	
Tobacco	-	-	-	-	-	
Coco/Vegetable Oil	11.39	-	-	-	-	
Sugar	4.64	-	-	-	-	
Food Processing	121.32	-	-	-	-	
Textiles, Apparel and Leather	8.02	-	-	-	-	
Wood and wood products	-	-	-	-	-	
Pulp, paper and print	132.06	-	-	-	-	
Chemical and petrochemical	38.93	-	-	-	-	
Chemicals Except Fertilizer	31.43	-	-	-	-	
Fertilizer	7.50	-	-	-	-	
Lube Refining	-	-	-	-	-	

	Kero	Diesel	Fuel Oil	LPG	Jet A-1	Avgas	Naphtha
	-	-	-	-	-	-	-
	38.55	5,654.24	935.92	1,577.45	431.90	0.93	926.25
	-	(147.50)	(241.35)	(0.04)	(14.45)	-	(98.87)
	-	(19.87)	(80.86)	-	-	-	-
	-	-	-	-	(567.09)	-	-
	3.99	302.74	62.59	0.51	43.73	0.45	52.23
	42.54	5,789.61	676.30	1,577.91	(105.91)	1.38	879.61
	23.23	2,007.21	340.14	163.41	338.67	-	92.47
	-	-	-	-	-	-	-
	-	(289.46)	(218.27)	-	-	-	-
	-	170.05	42.66	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	65.8	7,507.4	798.2	1,741.3	232.8	1.4	972.1
	(2.39)	(311.72)	42.78	(91.68)	16.90	(1.50)	45.83
	(3.63)	(4.15)	5.36	(5.26)	7.26	(108.52)	4.71
	68.15	7,819.07	755.39	1,833.00	215.85	2.88	926.25
	16.60	830.17	527.55	178.36	-	-	-
	16.59	292.00	474.17	169.08	-	-	-
	0.05	96.62	108.82	61.08	-	-	-
	-	23.49	44.98	1.34	-	-	-
	-	0.90	1.24	2.13	-	-	-
	-	8.71	-	0.05	-	-	-
	-	10.61	0.64	-	-	-	-
	0.05	52.92	61.96	57.55	-	-	-
	-	0.48	0.68	0.11	-	-	-
	-	5.78	3.81	6.00	-	-	-
	0.01	1.75	3.12	1.25	-	-	-
	14.56	43.60	114.81	18.03	-	-	-
	14.56	42.59	113.11	18.03	-	-	-
	-	1.01	1.69	-	-	-	-
	-	-	-	-	-	-	-

(Continuation)

Table 3: Energy Balance Table, 2020*in thousand tons of oil equivalent (kTOE)*

	Asphalt	OtherPP	Hydro	Geo	Solar	
Indigenous Production	-	-	1,790.39	9,249.20	118.02	
Imports	83.46	60.21	-	-	-	
Exports	-	(308.45)	-	-	-	
International Marine Bunkers	-	-	-	-	-	
International Civil Aviation	-	-	-	-	-	
Stock Change	(0.32)	(50.66)	-	-	-	
Total Primary Energy Supply	83.14	(298.90)	1,790.39	9,249.20	118.02	
Refinery (Crude Run)	2.70	481.17	-	-	-	
Power Generation	-	-	-	-	-	
Fuel Input	-	-	(1,790.39)	(9,249.2)	(118.02)	
Electricity Generation	-	-	618.40	924.92	118.02	
Transmission/Dist. Loss	-	-	-	-	-	
Energy Sector Use & Loss	-	-	-	-	-	
Net Domestic Supply	85.8	182.3	-	-	-	
Statistical Difference	(11.20)	45.63	-	-	-	
Statistical Difference (%)	(13.04)	25.04				
Total Final Energy Consumption	97.04	136.64	-	-	-	
Industry	-	-	-	-	-	
Manufacturing	-	-	-	-	-	
Food, beverages and tobacco	-	-	-	-	-	
Beverages	-	-	-	-	-	
Tobacco	-	-	-	-	-	
Coco/Vegetable Oil	-	-	-	-	-	
Sugar	-	-	-	-	-	
Food Processing	-	-	-	-	-	
Textiles, Apparel and Leather	-	-	-	-	-	
Wood and wood products	-	-	-	-	-	
Pulp, paper and print	-	-	-	-	-	
Chemical and petrochemical	-	-	-	-	-	
Chemicals Except Fertilizer	-	-	-	-	-	
Fertilizer	-	-	-	-	-	
Lube Refining	-	-	-	-	-	

	Wind	Biomass	Biodiesel	BioEthanol	Electricity	Total
	88.26	7,563.25	131.40	154.68	-	29,675.55
	-	-	-	134.57	-	32,970.69
	-	-	-	-	-	(5,622.12)
	-	-	-	-	-	(100.73)
	-	-	-	-	-	(567.09)
	-	-	25.38	34.51	-	221.11
	88.26	7,563.25	156.78	323.77	-	56,577.41
	-	-	-	-	-	(198.65)
	-	-	-	-	-	-
	(88.26)	(491.01)	(5.72)	-	-	(31,029.59)
	88.26	108.43	-	-	8,749.42	8,749.42
	-	-	-	-	(837.64)	(837.64)
	-	-	-	-	(754.19)	(1,055.96)
	-	7,072.2	151.1	323.8	7,157.59	32,205.00
	-	-	-	-	(0.00)	(387.52)
	-	-	-	-	(0.00)	(1.20)
	-	7,072.24	151.06	323.77	7,157.59	32,592.51
	-	905.30	13.12	-	2,198.31	6,335.82
	-	905.30	5.77	-	2,109.21	5,638.51
	-	894.50	1.91	-	401.86	1,719.21
	-	-	0.46	-	77.43	164.71
	-	-	0.02	-	16.06	20.35
	-	-	0.17	-	24.85	45.17
	-	391.80	0.21	-	35.03	442.93
	-	502.71	1.05	-	248.48	1,046.04
	-	-	0.01	-	170.37	179.66
	-	-	0.11	-	52.04	67.75
	-	-	0.03	-	123.11	261.32
	-	-	0.86	-	133.49	364.29
	-	-	0.84	-	118.17	338.74
	-	-	0.02	-	8.90	19.13
	-	-	-	-	6.42	6.42

(Continuation)

Table 3: Energy Balance Table, 2020*in thousand tons of oil equivalent (kTOE)*

	Coal	Natgas	Condensate	Crude	Gasoline	
Non-metallic minerals	697.89	-	-	-	-	
Glass/Glass Products	-	-	-	-	-	
Cement	692.39	-	-	-	-	
Other Non-Metallic Minerals	5.51	-	-	-	-	
Iron and steel	371.45	-	-	-	-	
Machinery	-	-	-	-	-	
Not elsewhere specified	226.49	37.20	-	-	-	
Other Manufacturing	219.63	37.20	-	-	-	
Rubber/ Rubber Products	6.86	-	-	-	-	
Mining	-	-	-	-	-	
Construction	-	-	-	-	-	
TRANSPORT	-	-	-	-	4,145.21	
Railway	-	-	-	-	-	
Road Transport	-	-	-	-	4,008.62	
Water Transport	-	-	-	-	136.59	
Domestic Air Transport	-	-	-	-	-	
HOUSEHOLDS	-	-	-	-	-	
SERVICES	-	-	-	-	-	
AGRICULTURE	-	-	-	-	9.75	
Agri-Industry	-	-	-	-	6.95	
Agri Crops Product	-	-	-	-	2.55	
Livestock/Poultry	-	-	-	-	4.40	
Agri Services	-	-	-	-	-	
Forestry	-	-	-	-	0.02	
Fishery	-	-	-	-	2.78	
NON-ENERGY USE	212.20	-	-	-	-	
Self-sufficiency						

	Kero	Diesel	Fuel Oil	LPG	Jet A-1	Avgas	Naphtha
	-	70.64	139.71	19.77	-	-	-
	-	4.26	69.23	17.87	-	-	-
	-	52.57	66.27	-	-	-	-
	-	13.81	4.21	1.90	-	-	-
	1.44	11.15	89.20	15.64	-	-	-
	0.53	50.11	0.84	14.56	-	-	-
	-	11.86	13.18	32.65	-	-	-
	-	10.49	13.01	32.65	-	-	-
	-	1.37	0.16	-	-	-	-
	-	326.12	50.04	-	-	-	-
	0.02	212.06	3.34	9.28	-	-	-
	-	4,913.53	99.40	4.39	215.85	2.88	-
	-	1.48	-	-	-	-	-
	-	4,426.43	-	4.39	-	-	-
	-	485.62	99.40	-	-	-	-
	-	-	-	-	215.85	2.88	-
	51.02	-	-	1,186.64	-	-	-
	-	1,876.96	126.22	463.61	-	-	-
	0.52	198.41	2.22	-	-	-	-
	0.36	59.27	0.09	-	-	-	-
	0.36	22.09	-	-	-	-	-
	-	37.18	0.09	-	-	-	-
	-	-	-	-	-	-	-
	-	0.76	-	-	-	-	-
	0.17	138.38	2.13	-	-	-	-
	-	-	-	-	-	-	926.25

(Continuation)

Table 3: Energy Balance Table, 2020*in thousand tons of oil equivalent (kTOE)*

	Asphalt	OtherPP	Hydro	Geo	Solar	
Non-metallic minerals	-	-	-	-	-	
Glass/Glass Products	-	-	-	-	-	
Cement	-	-	-	-	-	
Other Non-Metallic Minerals	-	-	-	-	-	
Iron and steel	-	-	-	-	-	
Machinery	-	-	-	-	-	
Not elsewhere specified	-	-	-	-	-	
Other Manufacturing	-	-	-	-	-	
Rubber/ Rubber Products	-	-	-	-	-	
Mining	-	-	-	-	-	
Construction	-	-	-	-	-	
TRANSPORT	-	-	-	-	-	
Railway	-	-	-	-	-	
Road Transport	-	-	-	-	-	
Water Transport	-	-	-	-	-	
Domestic Air Transport	-	-	-	-	-	
HOUSEHOLDS	-	-	-	-	-	
SERVICES	-	-	-	-	-	
AGRICULTURE	-	-	-	-	-	
Agri-Industry	-	-	-	-	-	
Agri Crops Product	-	-	-	-	-	
Livestock/Poultry	-	-	-	-	-	
Agri Services	-	-	-	-	-	
Forestry	-	-	-	-	-	
Fishery	-	-	-	-	-	
NON-ENERGY USE	97.04	136.64	-	-	-	
Self-sufficiency						

	Wind	Biomass	Biodiesel	BioEthanol	Electricity	Total
	-	-	1.40	-	167.41	1,096.82
	-	-	0.08	-	25.95	117.39
	-	-	1.04	-	67.95	880.21
	-	-	0.27	-	73.51	99.22
	-	-	0.22	-	448.17	937.27
	-	-	0.99	-	549.62	616.64
	-	10.80	0.23	-	63.14	395.55
	-	10.80	0.21	-	47.13	371.12
	-	-	0.03	-	16.01	24.43
	-	-	3.16	-	68.44	447.76
	-	-	4.19	-	20.66	249.55
	-	-	97.00	323.77	6.55	9,808.57
	-	-	0.03	-	6.55	8.06
	-	-	90.59	323.77	-	8,853.79
	-	-	6.38	-	-	727.99
	-	-	-	-	-	218.73
	-	5,841.88	-	-	2,948.55	10,028.09
	-	325.07	37.03	-	1,782.21	4,611.10
	-	-	3.92	-	221.98	436.81
	-	-	1.17	-	194.83	262.66
	-	-	0.44	-	39.97	65.41
	-	-	0.73	-	147.51	189.91
	-	-	-	-	7.34	7.34
	-	-	0.01	-	0.63	1.42
	-	-	2.73	-	26.53	172.72
	-	-	-	-	-	1,372.13
						52.45

Energy Balance Tables

Table 4: Energy Balance Table, 2021

in thousand tons of oil equivalent (kTOE)

	Coal	Natgas	Condensate	Crude	Gasoline	
Indigeneous	7,414.37	2,820.16	306.56	84.98	-	
Imports (+)	16,487.90	-	-	3,990.18	3,103.41	
Exports (-)	(4,907.52)	-	(306.56)	(84.90)	(105.01)	
International Marine Bunkers (-)	-	-	-	-	-	
International Civil Aviation (-)	-	-	-	-	-	
Stock Change (+/-)	(81.32)	-	-	99.88	1.83	
Total Primary Energy Supply	18,913.42	2,820.16	-	4,090.14	3,000.23	
Refinery (Crude Run)	-	-	-	(3,869.23)	893.52	
Power Generation	-	-	-	-	-	
Fuel Input (-)	(16,751.17)	(2,698.28)	-	-	-	
Electricity Generation	5,335.53	1,605.80	-	-	-	
Transmission/Dist. Loss (-)	-	-	-	-	-	
Energy Sector Use & Loss (-)	-	(121.52)	-	(39.13)	-	
Net Domestic Supply	2,162.25	0.3	-	181.8	3,893.75	
Statistical Difference	0.00	(0.00)	-	-	(835.61)	
% Statistical Difference	0.00	(0.00)	-	-		
Total Final Energy Consumption	2,162.25	0.35	-	-	4,729.36	
INDUSTRY	1,949.62	0.35	-	-	-	
Manufacturing	1,949.62	0.35	-	-	-	
Food, beverages and tobacco	184.48	-	-	-	-	
Beverages	33.20	-	-	-	-	
Tobacco	-	-	-	-	-	
Coco/Vegetable Oil	11.80	-	-	-	-	
Sugar	6.89	-	-	-	-	
Food Processing	132.59	-	-	-	-	
Textile and leather	11.99	-	-	-	-	
Textiles/Apparel	11.99	-	-	-	-	
Wood and wood products	-	-	-	-	-	
Wood Prod/Furniture	-	-	-	-	-	
Pulp, paper and print	152.40	-	-	-	-	
Paper Prod/Printing	152.40	-	-	-	-	
Chemical and petrochemical	44.38	-	-	-	-	
Chemicals Except Fertilizer	32.42	-	-	-	-	
Fertilizer	11.97	-	-	-	-	
Lube Refining	-	-	-	-	-	

	Kero	Diesel	Fuel Oil	LPG	Jet A-1	Avgas	Naphtha
	-	-	-	-	-	-	-
	50.49	6,823.16	1,024.88	1,818.49	420.25	2.66	1,090.95
	-	-	-	-	-	-	-
	-	(35.69)	(35.14)	-	-	-	-
	-	-	-	-	(534.94)	-	-
	(6.75)	63.55	(49.15)	9.38	(6.70)	(0.62)	3.61
	43.74	6,851.02	940.59	1,827.87	(121.40)	2.05	1,094.56
	21.28	1,671.88	28.37	161.34	266.69	-	-
	-	-	-	-	-	-	-
	-	(216.93)	(185.16)	-	-	-	-
	-	103.07	35.91	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	65.0	8,306.0	783.8	1,989.2	145.3	2.0	1,094.6
	(6.77)	(236.47)	(13.43)	91.58	(45.76)	(1.01)	66.44
	(10.42)	(2.85)	(1.71)	4.60	(31.49)	(49.43)	6.07
	71.79	8,542.44	797.22	1,897.63	191.05	3.06	1,028.12
	19.89	888.13	447.67	199.64	-	-	-
	19.89	295.83	395.81	190.67	-	-	-
	0.02	114.75	112.80	72.82	-	-	-
	0.02	34.21	46.93	0.85	-	-	-
	-	0.39	0.03	2.09	-	-	-
	-	10.24	0.16	0.06	-	-	-
	-	11.74	1.38	-	-	-	-
	-	58.17	64.30	69.82	-	-	-
	-	0.39	0.48	0.18	-	-	-
	-	0.39	0.48	0.18	-	-	-
	-	1.68	0.70	7.53	-	-	-
	-	1.68	0.70	7.53	-	-	-
	0.02	5.20	3.33	1.20	-	-	-
	0.02	5.20	3.33	1.20	-	-	-
	18.60	38.62	22.91	17.88	-	-	-
	18.60	38.09	21.57	17.88	-	-	-
	-	0.53	1.34	-	-	-	-
	-	-	-	-	-	-	-

(Continuation)

Table 4: Energy Balance Table, 2021*in thousand tons of oil equivalent (kTOE)*

	Asphalt	OtherPP	Hydro	Geo	Solar	
Indigenous	-	-	2,286.61	9,184.37	126.36	
Imports (+)	98.20	244.59	-	-	-	
Exports (-)	-	(449.01)	-	-	-	
International Marine Bunkers (-)	-	-	-	-	-	
International Civil Aviation (-)	-	-	-	-	-	
Stock Change (+/-)	(6.49)	36.77	-	-	-	
Total Primary Energy Supply	91.71	(167.65)	2,286.61	9,184.37	126.36	
Refinery (Crude Run)	-	614.80	-	-	-	
Power Generation	-	-	-	-	-	
Fuel Input (-)	-	-	(2,286.61)	(9,184.37)	(126.36)	
Electricity Generation	-	-	789.80	918.44	126.36	
Transmission/Dist. Loss (-)	-	-	-	-	-	
Energy Sector Use & Loss (-)	-	-	-	-	-	
Net Domestic Supply	91.7	447.2	-	-	-	
Statistical Difference	(22.28)	159.52	-	-	-	
% Statistical Difference	(24.29)	35.68				
Total Final Energy Consumption	113.99	287.63	-	-	-	
INDUSTRY	-	-	-	-	-	
Manufacturing	-	-	-	-	-	
Food, beverages and tobacco	-	-	-	-	-	
Beverages	-	-	-	-	-	
Tobacco	-	-	-	-	-	
Coco/Vegetable Oil	-	-	-	-	-	
Sugar	-	-	-	-	-	
Food Processing	-	-	-	-	-	
Textile and leather	-	-	-	-	-	
Textiles/Apparel	-	-	-	-	-	
Wood and wood products	-	-	-	-	-	
Wood Prod/Furniture	-	-	-	-	-	
Pulp, paper and print	-	-	-	-	-	
Paper Prod/Printing	-	-	-	-	-	
Chemical and petrochemical	-	-	-	-	-	
Chemicals Except Fertilizer	-	-	-	-	-	
Fertilizer	-	-	-	-	-	
Lube Refining	-	-	-	-	-	

	Wind	Biomass	Biodiesel	BioEthanol	Electricity	Total
	109.17	7,611.39	156.60	200.05	-	30,300.62
	-	-	-	125.89	-	35,281.06
	-	-	-	-	-	(5,853.01)
	-	-	-	-	-	(70.83)
	-	-	-	-	-	(534.94)
	-	-	14.02	42.59	-	120.59
	109.17	7,611.39	170.62	368.53	-	59,243.47
	-	-	-	-	-	(211.34)
	-	-	-	-	-	-
	(109.17)	(454.12)	(9.89)	-	-	(32,022.07)
	109.17	100.15	-	-	9,124.22	9,124.22
	-	-	-	-	(857.14)	(857.14)
	-	-	-	-	(646.69)	(807.35)
	-	7,157.3	160.7	368.5	7,620.40	34,469.81
	-	-	-	-	(0.00)	(662.01)
	-	-	-	-	(0.00)	(1.92)
	-	7,157.27	160.74	368.53	7,620.40	35,131.83
	-	923.27	15.40	-	2,375.17	6,819.16
	-	923.27	5.84	-	2,278.91	6,060.20
	-	912.25	2.26	-	434.19	1,833.57
	-	-	0.68	-	83.66	199.54
	-	-	0.01	-	17.35	19.87
	-	-	0.20	-	26.85	49.32
	-	400.12	0.23	-	37.85	458.21
	-	512.12	1.15	-	268.47	1,106.62
	-	-	0.01	-	184.08	197.13
	-	-	0.01	-	184.08	197.13
	-	-	0.03	-	56.23	66.18
	-	-	0.03	-	56.23	66.18
	-	-	0.10	-	133.01	295.26
	-	-	0.10	-	133.01	295.26
	-	-	0.76	-	144.24	287.39
	-	-	0.75	-	127.68	256.99
	-	-	0.01	-	9.62	23.46
	-	-	-	-	6.93	6.93

(Continuation)

Table 4: Energy Balance Table, 2021*in thousand tons of oil equivalent (kTOE)*

	Coal	Natgas	Condensate	Crude	Gasoline	
Non-metallic minerals	903.87	-	-	-	-	
Glass/Glass Products	-	-	-	-	-	
Cement	895.47	-	-	-	-	
Other Non-Metallic Minerals	8.40	-	-	-	-	
Iron and steel	378.88	-	-	-	-	
Basic Metal	378.88	-	-	-	-	
Machinery	-	-	-	-	-	
Machinery/Equipment	-	-	-	-	-	
Not elsewhere specified	273.62	0.35	-	-	-	
Other Manufacturing	263.55	0.35	-	-	-	
Rubber/ Rubber Products	10.07	-	-	-	-	
Mining	-	-	-	-	-	
Construction	-	-	-	-	-	
TRANSPORT	-	-	-	-	4,713.98	
Railway	-	-	-	-	-	
Road Transport	-	-	-	-	4,566.17	
Water Transport	-	-	-	-	147.81	
Domestic Air Transport	-	-	-	-	-	
HOUSEHOLDS	-	-	-	-	-	
SERVICES	-	-	-	-	-	
AGRICULTURE	-	-	-	-	15.38	
Agri-Industry	-	-	-	-	13.58	
Agri Crops Product	-	-	-	-	1.23	
Livestock/Poultry	-	-	-	-	12.35	
Agri Services	-	-	-	-	-	
Forestry	-	-	-	-	0.01	
Fishery	-	-	-	-	1.79	
NON-ENERGY USE	212.63	-	-	-	-	
Self-sufficiency						

	Kero	Diesel	Fuel Oil	LPG	Jet A-1	Avgas	Naphtha
	-	69.99	123.15	18.24	-	-	-
	-	4.39	79.65	16.04	-	-	-
	-	53.59	37.68	-	-	-	-
	-	12.00	5.82	2.20	-	-	-
	0.51	13.11	131.45	18.14	-	-	-
	0.51	13.11	131.45	18.14	-	-	-
	0.74	44.17	0.45	16.38	-	-	-
	0.74	44.17	0.45	16.38	-	-	-
	-	7.93	0.54	38.29	-	-	-
	-	6.82	0.38	38.29	-	-	-
	-	1.11	0.15	-	-	-	-
	-	282.87	48.73	-	-	-	-
	0.00	309.43	3.13	8.97	-	-	-
	-	5,401.14	193.12	2.81	191.05	3.06	-
	-	1.72	-	-	-	-	-
	-	4,902.73	-	2.81	-	-	-
	-	496.69	193.12	-	-	-	-
	-	-	-	-	191.05	3.06	-
	51.42	-	-	1,214.98	-	-	-
	-	2,027.44	154.71	480.20	-	-	-
	0.48	225.72	1.72	-	-	-	-
	0.39	105.44	0.16	-	-	-	-
	0.39	23.05	-	-	-	-	-
	-	82.40	0.16	-	-	-	-
	-	-	-	-	-	-	-
	-	0.09	-	-	-	-	-
	0.09	120.19	1.55	-	-	-	-
	-	-	-	-	-	-	1,028.12

(Continuation)

Table 4: Energy Balance Table, 2021*in thousand tons of oil equivalent (kTOE)*

	Asphalt	OtherPP	Hydro	Geo	Solar	
Non-metallic minerals	-	-	-	-	-	
Glass/Glass Products	-	-	-	-	-	
Cement	-	-	-	-	-	
Other Non-Metallic Minerals	-	-	-	-	-	
Iron and steel	-	-	-	-	-	
Basic Metal	-	-	-	-	-	
Machinery	-	-	-	-	-	
Machinery/Equipment	-	-	-	-	-	
Not elsewhere specified	-	-	-	-	-	
Other Manufacturing	-	-	-	-	-	
Rubber/ Rubber Products	-	-	-	-	-	
Mining	-	-	-	-	-	
Construction	-	-	-	-	-	
TRANSPORT	-	-	-	-	-	
Railway	-	-	-	-	-	
Road Transport	-	-	-	-	-	
Water Transport	-	-	-	-	-	
Domestic Air Transport	-	-	-	-	-	
HOUSEHOLDS	-	-	-	-	-	
SERVICES	-	-	-	-	-	
AGRICULTURE	-	-	-	-	-	
Agri-Industry	-	-	-	-	-	
Agri Crops Product	-	-	-	-	-	
Livestock/Poultry	-	-	-	-	-	
Agri Services	-	-	-	-	-	
Forestry	-	-	-	-	-	
Fishery	-	-	-	-	-	
NON-ENERGY USE	113.99	287.63	-	-	-	
Self-sufficiency						

	Wind	Biomass	Biodiesel	BioEthanol	Electricity	Total
	-	-	1.38	-	180.87	1,297.51
	-	-	0.09	-	28.04	128.21
	-	-	1.06	-	73.41	1,061.21
	-	-	0.24	-	79.42	108.09
	-	-	0.26	-	484.22	1,026.57
	-	-	0.26	-	484.22	1,026.57
	-	-	0.87	-	593.84	656.46
	-	-	0.87	-	593.84	656.46
	-	11.03	0.16	-	68.22	400.13
	-	11.03	0.13	-	50.93	371.49
	-	-	0.02	-	17.30	28.65
	-	-	3.46	-	73.95	409.01
	-	-	6.11	-	22.32	349.96
	-	-	100.88	368.53	8.38	10,982.95
	-	-	0.03	-	8.38	10.14
	-	-	94.38	368.53	-	9,934.62
	-	-	6.47	-	-	844.09
	-	-	-	-	-	194.11
	-	5,904.36	-	-	3,007.80	10,178.56
	-	329.63	40.00	-	1,815.89	4,847.88
	-	-	4.45	-	413.16	660.91
	-	-	2.08	-	362.62	484.28
	-	-	0.45	-	74.40	99.53
	-	-	1.63	-	274.55	371.09
	-	-	-	-	13.67	13.67
	-	-	0.00	-	1.17	1.27
	-	-	2.37	-	49.38	175.36
	-	-	-	-	-	1,642.36
						51.15

Energy Balance Tables

Table 5: Economic Growth and Energy Supply and Demand

Year	GDP (at 2018 prices)		Population		Total Final Energy Consumption		
	in billion Php	Growth Rates (%)	in millions	Growth Rates (%)	in million tons of oil equivalent	Growth Rates (%)	
1990	5,239.63	-	60.94	-	19.02	-	
1991	5,216.76	-0.44	62.36	2.34	17.82	-6.29	
1992	5,238.55	0.42	63.82	2.34	18.50	3.78	
1993	5,352.85	2.18	65.32	2.34	19.62	6.09	
1994	5,586.97	4.37	66.84	2.34	19.86	1.19	
1995	5,845.38	4.63	68.41	2.34	22.13	11.47	
1996	6,187.93	5.86	70.01	2.34	22.83	3.15	
1997	6,508.87	5.19	71.65	2.34	23.96	4.93	
1998	6,475.41	-0.51	75.36	5.18	23.83	-0.52	
1999	6,692.10	3.35	76.99	2.16	23.65	-0.77	
2000	6,985.38	4.38	77.02	0.04	23.20	-1.91	
2001	7,198.38	3.05	78.59	2.04	22.82	-1.63	
2002	7,465.89	3.72	80.28	2.15	22.76	-0.27	
2003	7,845.68	5.09	81.88	2.00	22.98	0.98	
2004	8,361.08	6.57	83.56	2.05	23.05	0.31	
2005	8,774.32	4.94	85.26	2.03	22.67	-1.64	
2006	9,240.80	5.32	86.97	2.01	22.36	-1.36	
2007	9,843.24	6.52	88.71	1.99	23.15	3.53	
2008	10,270.88	4.34	89.44	0.82	23.30	0.64	
2009	10,419.63	1.45	91.02	1.77	23.93	2.68	
2010	11,183.86	7.33	92.60	1.74	25.09	4.88	
2011	11,615.36	3.86	94.18	1.71	25.18	0.36	
2012	12,416.47	6.90	96.50	2.46	25.77	2.35	
2013	13,254.64	6.75	98.19	1.75	27.30	5.92	
2014	14,096.05	6.35	99.88	1.72	28.51	4.42	
2015	14,990.91	6.35	101.56	1.68	30.99	8.72	
2016	16,062.68	7.15	103.24	1.65	33.53	8.20	
2017	17,175.98	6.93	104.92	1.63	35.47	5.79	
2018	18,265.19	6.34	106.60	1.60	35.72	0.70	
2019	19,382.75	6.12	108.27	1.57	36.26	1.50	
2020	17,537.84	-9.52	109.03	0.70	32.59	-10.11	
2021	18,538.05	5.70	110.20	1.07	35.13	7.79	

	Total Primary Energy Supply		TPED per GDP (TOE/Php 1M)	TPES per Capita (TOE/person)	GHG Emission		GHG Emission per GDP	GHG Emission Per Capita
	in million tons of oil equivalent	Growth Rates (%)			in metric tons of CO ₂ equivalent	Growth Rates (%)		
	25.77	-	5.18	0.42	37.73	-	0.72	0.62
	26.87	4.25	5.14	0.43	38.05	0.83	0.73	0.61
	28.38	5.65	5.28	0.44	41.91	10.15	0.80	0.66
	27.01	-4.82	5.42	0.41	46.37	10.63	0.87	0.71
	30.46	12.75	5.35	0.46	47.46	2.36	0.85	0.71
	32.34	6.18	5.52	0.47	55.62	17.20	0.95	0.81
	33.48	3.53	5.45	0.48	59.94	7.76	0.97	0.86
	35.06	4.71	5.53	0.49	66.64	11.17	1.02	0.93
	36.19	3.21	5.71	0.48	66.97	0.49	1.03	0.89
	37.64	4.02	5.70	0.49	64.31	-3.97	0.96	0.84
	38.86	3.23	5.56	0.50	64.82	0.79	0.93	0.84
	36.87	-5.13	5.19	0.47	64.76	-0.10	0.90	0.82
	37.33	1.25	4.98	0.46	64.07	-1.07	0.86	0.80
	37.41	0.22	4.79	0.46	65.74	2.61	0.84	0.80
	37.25	-0.43	4.57	0.45	67.22	2.25	0.80	0.80
	38.06	2.18	4.36	0.45	68.08	1.28	0.78	0.80
	37.82	-0.64	4.07	0.43	62.56	-8.11	0.68	0.72
	38.48	1.75	3.89	0.43	65.55	4.79	0.67	0.74
	40.46	5.14	3.88	0.45	68.10	3.88	0.66	0.76
	39.90	-1.37	3.85	0.44	68.84	1.09	0.66	0.76
	41.05	2.86	3.66	0.44	74.23	7.83	0.66	0.80
	41.85	1.96	3.59	0.44	74.65	0.58	0.64	0.79
	43.52	4.00	3.46	0.45	77.07	3.24	0.62	0.80
	44.99	3.37	3.40	0.46	85.78	11.31	0.65	0.87
	46.99	4.45	3.36	0.47	91.22	6.34	0.65	0.91
	51.27	9.12	3.42	0.50	99.30	8.86	0.66	0.98
	54.59	6.47	3.39	0.53	109.25	10.01	0.68	1.06
	57.96	6.17	3.36	0.55	120.69	10.48	0.70	1.15
	59.72	3.03	3.25	0.56	125.58	4.05	0.69	1.18
	59.85	0.23	3.13	0.55	132.45	5.47	0.68	1.22
	56.58	-5.47	3.25	0.52	122.58	-7.45	0.70	1.12
	59.24	4.71	3.23	0.54	130.45	6.42	0.70	1.18

3 Total Primary Energy Supply (TPES) and Total Final Energy Consumption (TFEC)

Total Primary Energy Supply (TPES) includes: a) indigenous production (domestic extraction of primary fuels); (2) exports; (3) imports (4) stock change (difference between opening and closing stock); and (5) international marine and aviation bunkers (deliveries of oil to ships and aircrafts for consumption during international voyages).

Total Final Energy Consumption (TFEC)¹ covers energy consumption of major economic sectors such as (1) Industry - with subsectors for manufacturing (18 industries), mining and construction, (2) Transport (with subsectors for rail, road, water and air transport), (3) Households, (4) Services; and (5) Agriculture (with subsectors for agri-industry and forestry). It also includes consumption of fuels not exclusively used for fuel (energy) purposes, but as raw material in different sectors (i.e. feedstocks, etc.) as non-energy use.

Greenhouse gases (GHG) are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds. This property causes the greenhouse effect. The key greenhouse gases emitted by human activities are:

- Carbon dioxide (CO₂): Fossil fuel use is the primary source of CO₂. CO₂ can also be emitted from direct human-induced impacts on forestry and other land use, such as through deforestation, land clearing for agriculture, and degradation of soils. Likewise, land can also remove CO₂ from the atmosphere through reforestation, improvement of soils, and other activities.
- Methane (CH₄): Agricultural activities, waste management, energy use, and biomass burning all contribute to CH₄ emissions.
- Nitrous oxide (N₂O): Agricultural activities, such as fertilizer use, are the primary source of N₂O emissions. Fossil fuel combustion also generates N₂O.
- Fluorinated gases (F-gases): Industrial processes, refrigeration, and the use of a variety of consumer products contribute to emissions of F-gases, which include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

¹ A more detailed breakdown of TFEC can be found in Chapter 4 of this Compendium.

Total Primary Energy Supply and Total Final Energy Consumption

Table 1. Total Primary Energy Supply, by Source
in thousand tons of oil equivalent (kTOE)

FY	Total Primary Energy Supply								
		Indigenous Energy							
			Oil	Natural Gas	Coal	Hydro	Geothermal	Biomass	Wind
1990	25,772	15,637	232	-	625	1,509	4,700	8,571	-
1991	26,866	15,233	147	-	663	1,281	4,951	8,191	-
1992	28,383	15,237	439	-	811	1,105	4,901	7,981	-
1993	27,014	15,112	446	-	769	1,252	4,873	7,772	-
1994	30,458	15,388	224	5	701	1,459	5,434	7,565	-
1995	32,340	14,959	128	4	642	1,551	5,275	7,358	-
1996	33,483	15,114	44	7	533	1,750	5,618	7,161	-
1997	35,059	15,255	40	5	513	1,511	6,223	6,965	-
1998	36,186	16,297	39	8	552	1,266	7,664	6,769	-
1999	37,641	18,245	42	6	560	1,952	9,109	6,576	-
2000	38,857	19,030	56	9	644	1,941	9,997	6,383	-
2001	36,865	17,736	96	115	586	1,768	8,979	6,192	-
2002	37,328	19,430	619	1,449	803	1,751	8,807	6,002	-
2003	37,409	19,933	528	2,208	980	1,959	8,446	5,813	-
2004	37,247	20,434	478	2,039	1,311	2,139	8,841	5,625	-
2005	38,059	21,232	610	2,701	1,521	2,088	8,515	5,796	2
2006	37,817	21,751	559	2,529	1,216	2,474	8,999	5,968	5
2007	38,480	22,554	625	3,033	1,795	2,132	8,783	6,141	5
2008	40,457	23,858	715	3,192	1,905	2,450	9,220	6,315	5
2009	39,904	24,590	962	3,215	2,474	2,437	8,877	6,496	6
2010	41,046	24,725	916	3,028	3,510	1,943	8,538	6,679	5
2011	41,851	25,706	842	3,269	3,648	2,414	8,549	6,874	8
2012	43,524	26,248	700	3,134	3,874	2,552	8,813	7,035	6
2013	44,989	25,469	680	2,887	3,747	2,494	8,258	7,237	6
2014	46,990	26,606	849	3,036	4,012	2,275	8,863	7,356	13
2015	51,274	26,881	715	2,854	3,894	2,157	9,496	7,431	64
2016	54,590	29,405	702	3,270	5,917	2,019	9,519	7,494	84
2017	57,958	29,515	622	3,226	6,298	2,393	8,831	7,651	94
2018	59,717	29,977	594	3,601	6,204	2,336	8,973	7,725	99
2019	59,852	30,906	523	3,626	7,258	1,998	9,192	7,736	90
2020	56,577	29,676	456	3,288	6,836	1,790	9,249	7,563	88
2021	59,243	30,301	392	2,820	7,414	2,287	9,184	7,611	109

(Continuation)

Table 1. Total Primary Energy Supply, by Source
in thousand tons of oil equivalent (kTOE)

FY	Total Primary Energy Supply								
	Indigenous Energy			Imported Energy				Fossil Fuels	
	Solar	Biodiesel	Bioethanol		Oil	Coal	Bioethanol		
1990	-	-	-	10,134	9,504	631	-	10,991	
1991	-	-	-	11,633	10,757	876	-	12,443	
1992	-	-	-	13,146	12,603	543	-	14,395	
1993	-	-	-	11,902	11,168	734	-	13,117	
1994	-	-	-	15,070	14,242	828	-	16,000	
1995	-	-	-	17,381	16,378	1,003	-	18,155	
1996	-	-	-	18,370	16,687	1,682	-	18,954	
1997	-	-	-	19,804	17,578	2,226	-	20,361	
1998	-	-	-	19,889	17,472	2,417	-	20,487	
1999	-	-	-	19,397	16,570	2,827	-	20,005	
2000	-	-	-	19,827	15,847	3,980	-	20,536	
2001	-	-	-	19,130	15,206	3,924	-	19,927	
2002	-	-	-	17,898	14,474	3,423	-	20,769	
2003	-	0.0	-	17,476	14,152	3,323	-	21,191	
2004	-	0.1	-	16,813	13,592	3,221	-	20,642	
2005	0	0.1	-	16,828	13,030	3,797	1	21,658	
2006	0	0.5	-	16,067	12,243	3,822	1	20,370	
2007	0	40	-	15,926	12,319	3,596	11	21,368	
2008	0	54	1	16,599	12,111	4,451	37	22,374	
2009	0	112	13	15,313	11,688	3,593	33	21,931	
2010	0	101	6	16,322	12,693	3,521	108	23,667	
2011	0	101	2	16,145	11,945	4,078	121	23,783	
2012	0	113	21	17,275	12,906	4,210	159	24,824	
2013	0	125	35	19,520	13,075	6,255	190	26,644	
2014	1	134	66	20,383	13,571	6,630	182	28,098	
2015	12	164	94	24,393	16,496	7,721	176	31,680	
2016	94	178	127	25,185	17,844	7,169	172	34,903	
2017	103	167	131	28,443	19,048	9,177	219	38,370	
2018	107	168	170	29,739	19,400	10,145	194	39,945	
2019	107	178	199	28,946	18,532	10,224	190	40,162	
2020	118	131	155	26,902	15,997	10,710	194	37,288	
2021	126	157	200	28,943	17,261	11,499	183	39,386	

*renewable and natural gas

									Self Sufficiency (%)
					Renewable		Green Energy*		
	Share to TPES (%)	Oil	Coal	Natural Gas		Share to TPES (%)		Share to TPES (%)	
	42.65	9,736	1,255	-	14,780	57.35	14,780	57.35	60.68
	46.31	10,904	1,539	-	14,423	53.69	14,423	53.69	56.70
	50.72	13,042	1,354	-	13,988	49.28	13,988	49.28	53.68
	48.56	11,614	1,503	-	13,897	51.44	13,897	51.44	55.94
	52.53	14,466	1,529	5	14,458	47.47	14,463	47.48	50.52
	56.14	16,506	1,644	4	14,185	43.86	14,189	43.88	46.26
	56.61	16,731	2,215	7	14,529	43.39	14,537	43.41	45.14
	58.08	17,618	2,739	5	14,698	41.92	14,703	41.94	43.51
	56.62	17,511	2,969	8	15,699	43.38	15,707	43.41	45.04
	53.15	16,612	3,387	6	17,637	46.85	17,643	46.87	48.47
	52.85	15,903	4,624	9	18,321	47.15	18,330	47.17	48.97
	54.05	15,301	4,510	115	16,939	45.95	17,054	46.26	48.11
	55.64	15,093	4,227	1,449	16,559	44.36	18,008	48.24	52.05
	56.65	14,680	4,303	2,208	16,218	43.35	18,426	49.25	53.29
	55.42	14,071	4,532	2,039	16,605	44.58	18,645	50.06	54.86
	56.91	13,640	5,317	2,701	16,401	43.09	19,102	50.19	55.79
	53.86	12,802	5,039	2,529	17,447	46.14	19,977	52.82	57.52
	55.53	12,944	5,391	3,033	17,112	44.47	20,145	52.35	58.61
	55.30	12,826	6,356	3,192	18,083	44.70	21,275	52.59	58.97
	54.96	12,650	6,067	3,215	17,973	45.04	21,187	53.10	61.62
	57.66	13,609	7,031	3,028	17,379	42.34	20,407	49.72	60.24
	56.83	12,787	7,726	3,269	18,068	43.17	21,337	50.98	61.42
	57.04	13,605	8,085	3,134	18,700	42.96	21,834	50.17	60.31
	59.22	13,754	10,003	2,887	18,345	40.78	21,232	47.19	56.61
	59.80	14,420	10,642	3,036	18,891	40.20	21,927	46.66	56.62
	61.79	17,211	11,615	2,854	19,594	38.21	22,448	43.78	52.43
	63.94	18,547	13,086	3,270	19,687	36.06	22,957	42.05	53.86
	66.20	19,669	15,475	3,226	19,588	33.80	22,814	39.36	50.92
	66.89	19,994	16,349	3,601	19,772	33.11	23,373	39.14	50.20
	67.10	19,054	17,482	3,626	19,690	32.90	23,316	38.96	51.64
	65.91	16,453	17,546	3,288	19,290	34.09	22,578	39.91	52.45
	66.48	17,653	18,913	2,820	19,857	33.52	22,677	38.28	51.15

Total Primary Energy Supply and Total Final Energy Consumption

Table 2. Total Primary Energy Supply: by Source
In Thousand Tons of Oil Equivalent (kTOE)

FY	Total Primary Energy Supply (TPES)								
		Oil	Coal	Natural Gas	Renewable	Geothermal	Hydro	Solar	
1990	25,772	9,736	1,255	-	14,780	4,700	1,509	-	
1991	26,866	10,904	1,539	-	14,423	4,951	1,281	-	
1992	28,383	13,042	1,354	-	13,988	4,901	1,105	-	
1993	27,014	11,614	1,503	-	13,897	4,873	1,252	-	
1994	30,458	14,466	1,529	5	14,458	5,434	1,459	-	
1995	32,340	16,506	1,644	4	14,185	5,275	1,551	-	
1996	33,483	16,731	2,215	7	14,529	5,618	1,750	-	
1997	35,059	17,618	2,739	5	14,698	6,223	1,511	-	
1998	36,186	17,511	2,969	8	15,699	7,664	1,266	-	
1999	37,641	16,612	3,387	6	17,637	9,109	1,952	-	
2000	38,857	15,903	4,624	9	18,321	9,997	1,941	-	
2001	36,865	15,301	4,510	115	16,939	8,979	1,768	-	
2002	37,328	15,093	4,227	1,449	16,559	8,807	1,751	-	
2003	37,409	14,680	4,303	2,208	16,218	8,446	1,959	-	
2004	37,247	14,071	4,532	2,039	16,605	8,841	2,139	-	
2005	38,059	13,640	5,317	2,701	16,401	8,515	2,088	0.13	
2006	37,817	12,802	5,039	2,529	17,447	8,999	2,474	0.12	
2007	38,480	12,944	5,391	3,033	17,112	8,783	2,132	0.11	
2008	40,457	12,826	6,356	3,192	18,083	9,220	2,450	0.11	
2009	39,904	12,650	6,067	3,215	17,973	8,877	2,437	0.11	
2010	41,046	13,609	7,031	3,028	17,379	8,538	1,943	0.11	
2011	41,851	12,787	7,726	3,269	18,068	8,549	2,414	0.10	
2012	43,524	13,605	8,085	3,134	18,700	8,813	2,552	0.11	
2013	44,989	13,754	10,003	2,887	18,345	8,258	2,494	0.12	
2014	46,990	14,420	10,642	3,036	18,891	8,863	2,275	1.42	
2015	51,274	17,211	11,615	2,854	19,594	9,496	2,157	11.91	
2016	54,590	18,547	13,086	3,270	19,687	9,519	2,019	94.33	
2017	57,958	19,669	15,475	3,226	19,588	8,831	2,393	103.3	
2018	59,717	19,994	16,349	3,601	19,772	8,973	2,336	107.4	
2019	59,852	19,054	17,482	3,626	19,690	9,192	1,998	107.1	
2020	56,577	16,453	17,546	3,288	19,290	9,249	1,790	118.0	
2021	59,243	17,653	18,913	2,820	19,857	9,184	2,287	126.4	

				Growth Rates (%)				
				Oil	Coal	Natural Gas	Renewable	Total
	Wind	Biomass	Biofuels					
	-	8,571	-					
	-	8,191	-	12.00	22.59		-2.42	4.25
	-	7,981	-	19.61	-12.03		-3.02	5.65
	-	7,772	-	-10.94	11.01		-0.65	-4.82
	-	7,565	-	24.55	1.75		4.04	12.75
	-	7,358	-	14.10	7.54		-1.89	6.18
	-	7,161	-	1.36	34.71	68.70	2.43	3.54
	-	6,965	-	5.30	23.65	-39.15	1.16	4.71
	-	6,769	-	-0.61	8.38	70.11	6.81	3.21
	-	6,576	-	-5.13	14.08	-23.03	12.34	4.02
	-	6,383	-	-4.27	36.56	48.43	3.88	3.23
	-	6,192	-	-3.78	-2.47	1,217.18	-7.55	-5.13
	-	6,002	-	-1.36	-6.29	1,156.34	-2.24	1.25
	-	5,813	0.0	-2.74	1.81	52.41	-2.06	0.22
	-	5,625	0.1	-4.15	5.31	-7.65	2.39	-0.43
	1.5	5,796	1.5	-3.06	17.34	32.45	-1.23	2.18
	4.6	5,968	1.9	-6.14	-5.24	-6.35	6.38	-0.64
	5.0	6,141	51.3	1.11	7.00	19.89	-1.92	1.75
	5.3	6,315	91.7	-0.91	17.89	5.27	5.67	5.14
	5.5	6,496	158.0	-1.37	-4.56	0.70	-0.61	-1.37
	5.3	6,679	214.3	7.58	15.89	-5.81	-3.30	2.86
	7.6	6,874	223.7	-6.04	9.89	7.97	3.96	1.96
	6.5	7,035	292.9	6.40	4.64	-4.14	3.50	4.00
	5.6	7,237	350.3	1.10	23.73	-7.89	-1.89	3.37
	13.1	7,356	382.4	4.84	6.39	5.17	2.97	4.45
	64.4	7,431	434.0	19.35	9.14	-5.99	3.72	9.12
	83.9	7,494	476.8	7.76	12.67	14.57	0.47	6.47
	94.0	7,651	517.0	6.05	18.25	-1.35	-0.50	6.17
	99.1	7,725	532.1	1.65	5.65	11.64	0.94	3.03
	89.6	7,736	567.1	-4.70	6.93	0.69	-0.42	0.23
	88.3	7,563	480.6	-13.65	0.37	-9.31	-2.03	-5.47
	109.2	7,611	539.2	7.29	7.79	-14.24	2.94	4.71

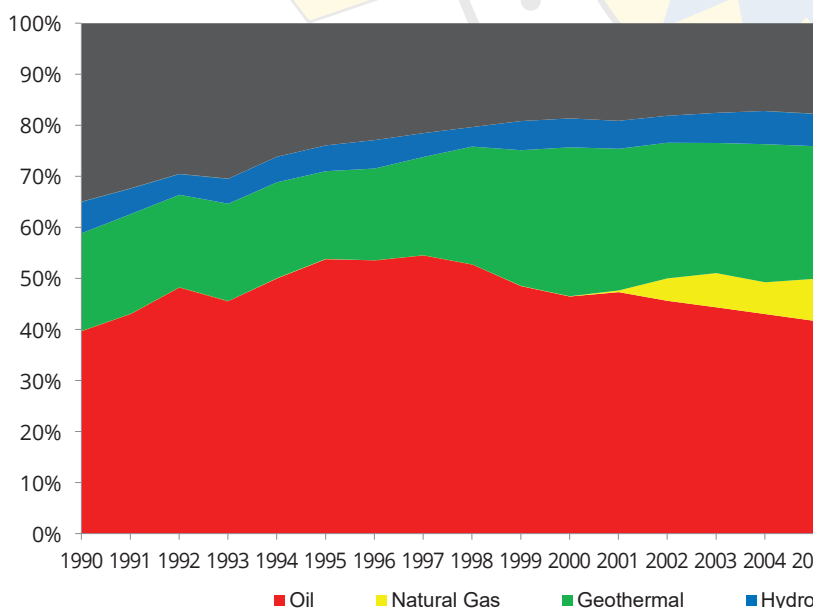
Total Primary Energy Supply and Total Final Energy Consumption

Table 3. Trends in Total Primary Energy Supply (TPES)

Fuel Shares (in Percent)

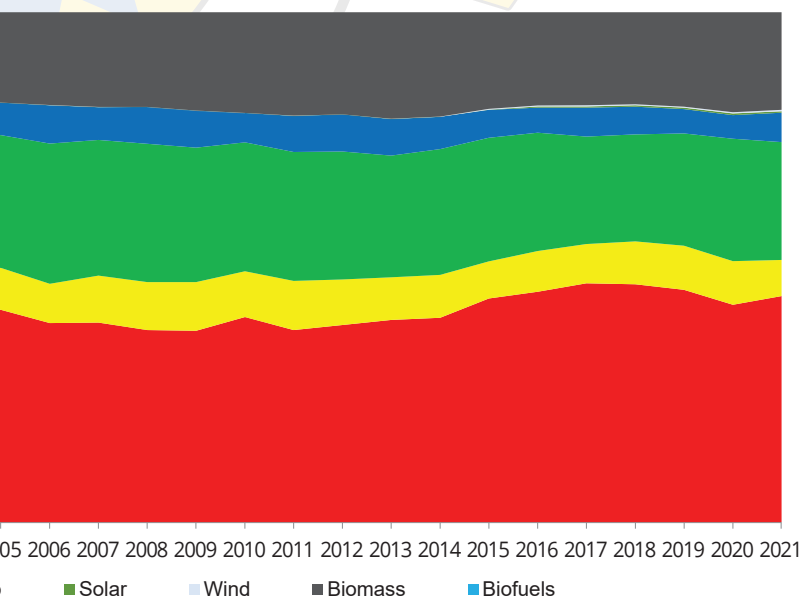
	1990	1991	1992	1993	1994	1995	1996	
Oil	37.78	40.59	45.95	42.99	47.50	51.04	49.97	
Coal	4.87	5.73	4.77	5.56	5.02	5.08	6.62	
Natural Gas	-	-	-	-	0.01	0.01	0.02	
Renewable	57.35	53.69	49.28	51.44	47.47	43.86	43.39	
Geothermal	18.24	18.43	17.27	18.04	17.84	16.31	16.78	
Hydro	5.86	4.77	3.89	4.64	4.79	4.80	5.23	
Solar	-	-	-	-	-	-	-	
Wind	-	-	-	-	-	-	-	
Biomass	33.26	30.49	28.12	28.77	24.84	22.75	21.39	
Biofuels	-	-	-	-	-	-	-	

	2006	2007	2008	2009	2010	2011	2012	
Oil	33.85	33.64	31.70	31.70	33.15	30.55	31.26	
Coal	13.32	14.01	15.71	15.20	17.13	18.46	18.57	
Natural Gas	6.69	7.88	7.89	8.06	7.38	7.81	7.20	
Renewable	46.14	44.47	44.70	45.04	42.34	43.17	42.96	
Geothermal	23.79	22.82	22.79	22.25	20.80	20.43	20.25	
Hydro	6.54	5.54	6.06	6.11	4.73	5.77	5.86	
Solar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Wind	0.01	0.01	0.01	0.01	0.01	0.02	0.01	
Biomass	15.78	15.96	15.61	16.28	16.27	16.42	16.16	
Biofuels	0.01	0.13	0.23	0.40	0.52	0.53	0.67	



	1997	1998	1999	2000	2001	2002	2003	2004	2005
	50.25	48.39	44.13	40.93	41.51	40.43	39.24	37.78	35.84
	7.81	8.20	9.00	11.90	12.23	11.32	11.50	12.17	13.97
	0.01	0.02	0.02	0.02	0.31	3.88	5.90	5.47	7.10
	41.92	43.38	46.85	47.15	45.95	44.36	43.35	44.58	43.09
	17.75	21.18	24.20	25.73	24.35	23.59	22.58	23.74	22.37
	4.31	3.50	5.19	5.00	4.80	4.69	5.24	5.74	5.49
	-	-	-	-	-	-	-	-	0.00
	-	-	-	-	-	-	-	-	0.00
	19.87	18.71	17.47	16.43	16.80	16.08	15.54	15.10	15.23
	-	-	-	-	-	-	0.00	0.00	0.00

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	30.57	30.69	33.57	33.97	33.94	33.48	31.84	29.08	29.80
	22.23	22.65	22.65	23.97	26.70	27.38	29.21	31.01	31.92
	6.42	6.46	5.57	5.99	5.57	6.03	6.06	5.81	4.76
	40.78	40.20	38.21	36.06	33.80	33.11	32.90	34.09	33.52
	18.36	18.86	18.52	17.44	15.24	15.03	15.36	16.35	15.50
	5.54	4.84	4.21	3.70	4.13	3.91	3.34	3.16	3.86
	0.00	0.00	0.02	0.17	0.18	0.18	0.18	0.21	0.21
	0.01	0.03	0.13	0.15	0.16	0.17	0.15	0.16	0.18
	16.09	15.66	14.49	13.73	13.20	12.94	12.92	13.37	12.85
	0.78	0.81	0.85	0.87	0.89	0.89	0.95	0.85	0.91



Total Primary Energy Supply and Total Final Energy Consumption

Table 4: Total Energy Consumption, by Sector and by Fuel

Sector/Fuel	1990	1991	1992	1993	1994	1995	1996	
Transport	4,685.41	4,419.57	5,127.58	5,790.96	6,082.92	7,174.54	8,115.93	
Natural Gas	-	-	-	-	-	-	-	
Oil	4,685.41	4,419.57	5,127.58	5,790.96	6,082.92	7,174.54	8,113.58	
Biodiesel	-	-	-	-	-	-	-	
Bioethanol	-	-	-	-	-	-	-	
Electricity	-	-	-	-	-	-	2.34	
Industry	4,136.04	3,406.10	3,529.41	4,089.81	3,970.22	4,973.80	4,854.68	
Coal	525.73	655.51	538.12	601.82	697.90	733.51	753.69	
Natural Gas	-	-	-	-	-	-	-	
Oil	2,239.59	1,414.19	1,677.89	2,109.54	1,763.35	2,688.05	2,450.09	
Biomass	515.77	533.39	551.67	570.63	590.31	610.72	631.90	
Biodiesel	-	-	-	-	-	-	-	
Electricity	854.94	803.01	761.74	807.82	918.66	941.53	1,019.00	
Households	8,847.74	8,668.60	8,520.93	8,414.27	8,346.29	8,356.36	8,309.05	
Oil	779.37	770.65	865.29	957.00	1,035.88	1,190.49	1,281.54	
Biomass	7,586.08	7,360.63	7,135.18	6,909.72	6,684.27	6,458.81	6,240.75	
Electricity	482.29	537.32	520.46	547.55	626.14	707.05	786.76	
Services	815.73	837.56	856.26	855.22	969.92	1,041.19	1,115.51	
Oil	110.94	123.50	139.83	157.07	175.51	206.01	219.21	
Biomass	301.10	297.29	294.24	291.87	290.12	288.92	288.22	
Biodiesel	-	-	-	-	-	-	-	
Electricity	403.70	416.77	422.18	406.28	504.30	546.26	608.08	
Agriculture	133.78	127.89	112.67	102.91	101.60	131.08	139.09	
Oil	50.72	46.04	41.90	40.92	36.08	39.33	41.09	
Biodiesel	-	-	-	-	-	-	-	
Electricity	83.06	81.86	70.77	61.99	65.52	91.75	98.00	
Non-Energy Use	399.94	362.10	349.16	369.01	384.57	456.36	296.88	
Coal	170.59	160.64	137.52	146.12	167.78	160.95	157.61	
Oil	229.35	201.46	211.63	222.89	216.79	295.41	139.27	
Total	19,018.63	17,821.82	18,496.00	19,622.19	19,855.53	22,133.32	22,831.14	

Total excludes energy for power applications / power generation

	1997	1998	1999	2000	2001	2002	2003	2004
	8,077.51	8,302.80	8,221.25	8,301.96	8,226.99	8,529.21	8,340.93	8,633.08
	-	-	-	-	-	0.00	0.00	0.00
	8,075.04	8,300.34	8,218.64	8,297.21	8,222.26	8,524.22	8,337.76	8,627.22
	-	-	-	-	-	-	0.01	0.08
	-	-	-	-	-	-	-	-
	2.47	2.46	2.61	4.75	4.73	4.99	3.16	5.78
	5,490.51	5,175.90	5,073.27	4,536.59	4,508.72	4,300.21	4,825.09	4,749.19
	845.07	719.80	685.53	700.70	693.32	685.12	848.11	896.58
	-	-	-	-	-	-	-	-
	2,914.08	2,700.91	2,617.33	1,976.69	1,822.29	1,666.39	1,866.63	1,728.90
	653.89	676.70	700.37	724.94	750.44	776.91	804.39	832.91
	-	-	-	-	-	-	-	-
	1,077.48	1,078.50	1,070.03	1,134.26	1,242.67	1,171.79	1,305.96	1,290.80
	8,297.18	8,243.96	8,124.58	7,905.69	7,654.47	7,450.73	7,257.22	7,151.35
	1,373.59	1,413.02	1,516.96	1,428.51	1,339.16	1,339.05	1,222.48	1,286.22
	6,022.69	5,804.63	5,586.57	5,368.50	5,150.44	4,932.38	4,714.32	4,496.25
	900.90	1,026.32	1,021.06	1,108.68	1,164.87	1,179.31	1,320.43	1,368.87
	1,257.81	1,436.36	1,556.14	1,684.41	1,851.90	1,867.22	1,903.89	1,868.52
	280.82	397.98	502.07	576.91	692.82	700.36	654.95	559.23
	287.98	288.15	288.69	289.58	290.77	292.25	293.99	295.97
	-	-	-	-	-	-	-	-
	689.02	750.24	765.37	817.92	868.30	874.61	954.95	1,013.33
	493.52	422.12	406.79	364.28	353.78	381.04	400.25	401.47
	387.01	344.27	330.19	286.74	268.89	290.62	311.49	290.40
	-	-	-	-	-	-	-	-
	106.50	77.85	76.59	77.54	84.89	90.42	88.76	111.08
	339.41	250.23	265.22	403.46	221.43	227.69	251.92	246.43
	164.98	113.44	123.78	139.31	124.49	97.27	126.12	158.52
	174.42	136.78	141.44	264.15	96.94	130.43	125.80	87.91
	23,955.93	23,831.38	23,647.24	23,196.39	22,817.29	22,756.11	22,979.31	23,050.03

(Continuation)

Table 4: Total Energy Consumption, by Sector and by Fuel

Sector/Fuel	2005	2006	2007	2008	2009	2010	2011	2012	
Transport	8,225.85	7,724.87	8,031.46	7,496.43	7,914.14	8,035.50	7,982.80	8,364.20	
Natural Gas	0.00	-	-	0.38	0.42	0.36	1.08	1.19	
Oil	8,216.50	7,714.62	7,978.58	7,406.82	7,773.38	7,842.66	7,770.15	8,091.64	
Biodiesel	0.11	0.54	23.83	40.55	85.77	85.47	93.92	89.37	
Bioethanol	1.40	1.41	19.81	39.18	45.04	97.63	108.10	171.95	
Electricity	7.84	8.30	9.24	9.50	9.53	9.37	9.55	10.04	
Industry	4,952.36	5,036.12	5,261.59	5,777.83	5,369.39	5,948.44	5,947.65	5,805.97	
Coal	1,056.46	1,175.08	1,330.91	1,745.66	1,469.28	1,841.18	1,838.44	1,670.82	
Natural Gas	12.11	52.11	76.70	69.77	69.71	69.31	76.57	57.59	
Oil	1,670.87	1,549.55	1,503.59	1,534.55	1,359.37	1,402.38	1,316.71	1,273.24	
Biomass	862.51	893.25	925.15	958.28	992.67	1,028.38	1,047.32	1,066.63	
Biodiesel	-	-	4.62	5.18	9.36	9.92	6.19	11.89	
Electricity	1,350.40	1,366.13	1,420.61	1,464.39	1,469.00	1,597.27	1,662.42	1,725.79	
Households	7,072.32	7,095.03	7,251.02	7,376.73	7,632.69	7,878.44	7,991.18	8,171.33	
Oil	1,058.85	960.09	930.43	894.28	937.57	930.26	916.23	901.01	
Biomass	4,635.02	4,773.78	4,912.54	5,051.31	5,190.07	5,328.83	5,467.59	5,576.86	
Electricity	1,378.45	1,361.15	1,408.05	1,431.15	1,505.05	1,619.35	1,607.36	1,693.46	
Services	1,852.99	1,927.20	1,989.16	2,043.54	2,412.95	2,662.83	2,738.94	2,829.56	
Oil	501.90	536.43	526.60	519.26	826.45	941.26	978.97	965.14	
Biomass	298.16	300.56	303.14	305.90	308.82	312.57	317.90	323.34	
Biodiesel	-	-	1.16	2.90	8.88	10.85	12.68	12.52	
Electricity	1,052.92	1,090.20	1,158.25	1,215.48	1,268.81	1,398.16	1,429.39	1,528.57	
Agriculture	380.50	355.25	340.28	366.01	330.03	347.10	301.94	318.13	
Oil	287.10	253.94	207.49	253.69	204.77	215.29	185.77	181.45	
Biodiesel	-	-	0.89	1.87	3.80	3.96	1.36	3.34	
Electricity	93.40	101.31	131.89	110.45	121.46	127.85	114.80	133.34	
Non-Energy Use	186.98	223.98	278.88	241.22	266.61	219.92	219.67	284.87	
Coal	127.12	149.34	182.83	152.13	155.01	99.88	102.51	113.20	
Oil	59.85	74.63	96.06	89.09	111.60	120.04	117.16	171.68	
Total	22,670.99	22,362.44	23,152.39	23,301.77	23,925.81	25,092.22	25,182.19	25,774.06	

Total excludes energy for power applications / power generation

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	8,783.96	9,132.81	10,557.29	11,424.90	11,823.30	12,238.08	12,697.01	9,808.57	10,982.95
	0.81	0.08	-	-	-	-	-	-	-
	8,459.87	8,781.87	10,151.05	10,986.14	11,351.81	11,752.67	12,181.11	9,381.26	10,505.16
	91.84	95.57	116.29	121.00	122.61	126.56	126.81	97.00	100.88
	221.79	245.73	281.50	308.95	339.28	349.81	379.95	323.77	368.53
	9.65	9.55	8.45	8.81	9.60	9.05	9.14	6.55	8.38
	6,312.36	6,528.87	6,750.05	7,449.22	7,925.11	7,523.33	7,305.83	6,335.82	6,819.16
	2,082.42	2,260.87	2,217.92	2,677.04	3,007.98	2,410.92	2,217.09	1,629.21	1,949.62
	62.08	76.89	49.79	64.80	52.51	59.39	61.53	37.20	0.35
	1,278.19	1,206.28	1,382.48	1,457.54	1,470.34	1,468.83	1,381.36	1,552.69	1,555.34
	1,098.87	1,131.07	1,151.99	1,163.51	1,180.96	1,198.68	1,207.07	905.30	923.27
	12.92	11.22	12.02	12.66	14.41	13.42	14.54	13.12	15.40
	1,777.88	1,842.53	1,935.85	2,073.67	2,198.91	2,372.08	2,424.25	2,198.31	2,375.17
	8,385.69	8,488.40	8,731.34	9,034.90	9,192.49	9,430.66	9,710.81	10,028.09	10,178.56
	879.80	862.10	973.05	1,122.42	1,158.61	1,254.59	1,311.95	1,237.66	1,266.40
	5,733.43	5,823.30	5,802.40	5,708.59	5,731.04	5,746.07	5,771.90	5,841.88	5,904.36
	1,772.46	1,803.00	1,955.89	2,203.89	2,302.84	2,429.99	2,626.97	2,948.55	3,007.80
	3,037.57	3,397.07	3,369.73	3,864.77	4,404.46	4,668.13	4,935.75	4,611.10	4,847.88
	1,120.92	1,432.39	1,291.71	1,632.33	2,074.19	2,222.55	2,359.69	2,466.80	2,662.36
	327.50	331.90	336.55	339.91	345.01	350.19	352.64	325.07	329.63
	15.32	19.64	14.49	20.63	27.56	30.37	32.90	37.03	40.00
	1,573.84	1,613.14	1,726.98	1,871.90	1,957.69	2,065.03	2,190.53	1,782.21	1,815.89
	352.16	353.83	400.57	450.44	515.62	439.55	473.48	436.81	660.91
	188.72	172.00	193.56	228.60	290.34	208.03	229.36	210.90	243.30
	3.59	3.38	3.76	4.14	5.34	3.87	4.19	3.92	4.45
	159.85	178.46	203.25	217.69	219.94	227.65	239.93	221.98	413.16
	427.72	604.55	1,178.91	1,305.95	1,613.39	1,423.39	1,136.64	1,372.13	1,642.36
	113.74	154.20	132.13	177.38	155.01	162.19	140.86	212.20	212.63
	313.97	450.34	1,046.78	1,128.57	1,458.38	1,261.20	995.78	1,159.93	1,429.73
	27,299.46	28,505.53	30,987.88	33,530.18	35,474.36	35,723.14	36,259.52	32,592.51	35,131.83

(Continuation)

Table 4: Total Energy Consumption, by Sector and by Fuel

By Sector	1990	1991	1992	1993	1994	1995	1996	
Total	19,018.63	17,821.82	18,496.00	19,622.19	19,855.53	22,133.32	22,831.14	
Transport	4,685.41	4,419.57	5,127.58	5,790.96	6,082.92	7,174.54	8,115.93	
Industry	4,136.04	3,406.10	3,529.41	4,089.81	3,970.22	4,973.80	4,854.68	
Households	8,847.74	8,668.60	8,520.93	8,414.27	8,346.29	8,356.36	8,309.05	
Services	815.73	837.56	856.26	855.22	969.92	1,041.19	1,115.51	
Agriculture	133.78	127.89	112.67	102.91	101.60	131.08	139.09	
Non-Energy Use	399.94	362.10	349.16	369.01	384.57	456.36	296.88	

By Sector	2005	2006	2007	2008	2009	2010	2011	2012	
Total	22,670.99	22,362.44	23,152.39	23,301.77	23,925.81	25,092.22	25,182.19	25,774.06	
Transport	8,225.85	7,724.87	8,031.46	7,496.43	7,914.14	8,035.50	7,982.80	8,364.20	
Industry	4,952.36	5,036.12	5,261.59	5,777.83	5,369.39	5,948.44	5,947.65	5,805.97	
Households	7,072.32	7,095.03	7,251.02	7,376.73	7,632.69	7,878.44	7,991.18	8,171.33	
Services	1,852.99	1,927.20	1,989.16	2,043.54	2,412.95	2,662.83	2,738.94	2,829.56	
Agriculture	380.50	355.25	340.28	366.01	330.03	347.10	301.94	318.13	
Non-Energy Use	186.98	223.98	278.88	241.22	266.61	219.92	219.67	284.87	

By Fuel	1990	1991	1992	1993	1994	1995	1996	
Total	19,018.63	17,821.82	18,496.00	19,622.19	19,855.53	22,133.32	22,831.14	
Coal	696.32	816.15	675.64	747.94	865.68	894.45	911.30	
Natural Gas	-	-	-	-	-	-	-	
Oil	8,095.37	6,975.41	8,064.12	9,278.38	9,310.54	11,593.83	12,244.78	
Biomass	8,402.95	8,191.31	7,981.09	7,772.22	7,564.69	7,358.45	7,160.87	
Biodiesel	-	-	-	-	-	-	-	
Bioethanol	-	-	-	-	-	-	-	
Electricity	1,823.99	1,838.95	1,775.15	1,823.65	2,114.62	2,286.59	2,514.19	

By Fuel	2005	2006	2007	2008	2009	2010	2011	2012	
Total	22,670.99	22,362.44	23,152.39	23,301.77	23,925.81	25,092.22	25,182.19	25,774.06	
Coal	1,183.58	1,324.42	1,513.74	1,897.79	1,624.28	1,941.06	1,940.96	1,784.02	
Natural Gas	12.11	52.11	76.70	70.15	70.13	69.67	77.65	58.79	
Oil	11,795.09	11,089.28	11,242.76	10,697.70	11,213.13	11,451.89	11,284.99	11,584.15	
Biomass	5,795.69	5,967.59	6,140.84	6,315.49	6,491.56	6,669.78	6,832.82	6,966.83	
Biodiesel	0.11	0.54	30.51	50.50	107.82	110.18	114.15	117.13	
Bioethanol	1.40	1.41	19.81	39.18	45.04	97.63	108.10	171.95	
Electricity	3,883.01	3,927.10	4,128.04	4,230.97	4,373.85	4,752.00	4,823.53	5,091.20	

Total excludes energy for power applications / power generation

	1997	1998	1999	2000	2001	2002	2003	2004
	23,955.93	23,831.38	23,647.24	23,196.39	22,817.29	22,756.11	22,979.31	23,050.03
	8,077.51	8,302.80	8,221.25	8,301.96	8,226.99	8,529.21	8,340.93	8,633.08
	5,490.51	5,175.90	5,073.27	4,536.59	4,508.72	4,300.21	4,825.09	4,749.19
	8,297.18	8,243.96	8,124.58	7,905.69	7,654.47	7,450.73	7,257.22	7,151.35
	1,257.81	1,436.36	1,556.14	1,684.41	1,851.90	1,867.22	1,903.89	1,868.52
	493.52	422.12	406.79	364.28	353.78	381.04	400.25	401.47
	339.41	250.23	265.22	403.46	221.43	227.69	251.92	246.43

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	27,299.46	28,505.53	30,987.88	33,530.18	35,474.36	35,723.14	36,259.52	32,592.51	35,131.83
	8,783.96	9,132.81	10,557.29	11,424.90	11,823.30	12,238.08	12,697.01	9,808.57	10,982.95
	6,312.36	6,528.87	6,750.05	7,449.22	7,925.11	7,523.33	7,305.83	6,335.82	6,819.16
	8,385.69	8,488.40	8,731.34	9,034.90	9,192.49	9,430.66	9,710.81	10,028.09	10,178.56
	3,037.57	3,397.07	3,369.73	3,864.77	4,404.46	4,668.13	4,935.75	4,611.10	4,847.88
	352.16	353.83	400.57	450.44	515.62	439.55	473.48	436.81	660.91
	427.72	604.55	1,178.91	1,305.95	1,613.39	1,423.39	1,136.64	1,372.13	1,642.36

	1997	1998	1999	2000	2001	2002	2003	2004
	23,955.93	23,831.38	23,647.24	23,196.39	22,817.29	22,756.11	22,979.31	23,050.03
	1,010.05	833.25	809.31	840.01	817.81	782.38	974.24	1,055.10
	-	-	-	-	-	0.00	0.00	0.00
	13,204.96	13,293.29	13,326.64	12,830.21	12,442.37	12,651.07	12,519.12	12,579.88
	6,964.55	6,769.47	6,575.63	6,383.02	6,191.66	6,001.54	5,812.69	5,625.13
	-	-	-	-	-	-	0.01	0.08
	-	-	-	-	-	-	-	-
	2,776.37	2,935.37	2,935.67	3,143.15	3,365.46	3,321.12	3,673.26	3,789.85

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	27,299.46	28,505.53	30,987.88	33,530.18	35,474.36	35,723.14	36,259.52	32,592.51	35,131.83
	2,196.16	2,415.07	2,350.05	2,854.41	3,162.99	2,573.11	2,357.95	1,841.41	2,162.25
	62.89	76.98	49.79	64.80	52.51	59.39	61.53	37.20	0.35
	12,241.46	12,905.00	15,038.63	16,555.60	17,803.68	18,167.87	18,459.25	16,009.24	17,662.29
	7,159.80	7,286.26	7,290.93	7,212.01	7,257.01	7,294.94	7,331.60	7,072.24	7,157.27
	123.67	129.82	146.56	158.44	169.91	174.22	178.44	151.06	160.74
	221.79	245.73	281.50	308.95	339.28	349.81	379.95	323.77	368.53
	5,293.69	5,446.67	5,830.42	6,375.97	6,688.98	7,103.79	7,490.80	7,157.59	7,620.40

Total Primary Energy Supply and Total Final Energy Consumption

Table 5.1: Sectoral Shares in Final Energy Consumption , by Sector (%)

	1990	1991	1992	1993	1994	1995	1996	
Transport	24.64	24.80	27.72	29.51	30.64	32.42	35.55	
Industry	21.75	19.11	19.08	20.84	20.00	22.47	21.26	
Households	46.52	48.64	46.07	42.88	42.04	37.75	36.39	
Services	4.29	4.70	4.63	4.36	4.88	4.70	4.89	
Agriculture	0.70	0.72	0.61	0.52	0.51	0.59	0.61	
Non-Energy Use	2.10	2.03	1.89	1.88	1.94	2.06	1.30	

	2006	2007	2008	2009	2010	2011	2012	
Transport	34.54	34.69	32.17	33.08	32.02	31.70	32.45	
Industry	22.52	22.73	24.80	22.44	23.71	23.62	22.53	
Households	31.73	31.32	31.66	31.90	31.40	31.73	31.70	
Services	8.62	8.59	8.77	10.09	10.61	10.88	10.98	
Agriculture	1.59	1.47	1.57	1.38	1.38	1.20	1.23	
Non-Energy Use	1.00	1.20	1.04	1.11	0.88	0.87	1.11	

Table 5.2: Sectoral Shares in Final Energy Consumption , by Fuel (%)

	1990	1991	1992	1993	1994	1995	1996	
Coal	3.66	4.58	3.65	3.81	4.36	4.04	3.99	
Natural Gas	-	-	-	-	-	-	-	
Oil	42.57	39.14	43.60	47.29	46.89	52.38	53.63	
Biomass	44.18	45.96	43.15	39.61	38.10	33.25	31.36	
Biodiesel	-	-	-	-	-	-	-	
Bioethanol	-	-	-	-	-	-	-	
Electricity	9.59	10.32	9.60	9.29	10.65	10.33	11.01	

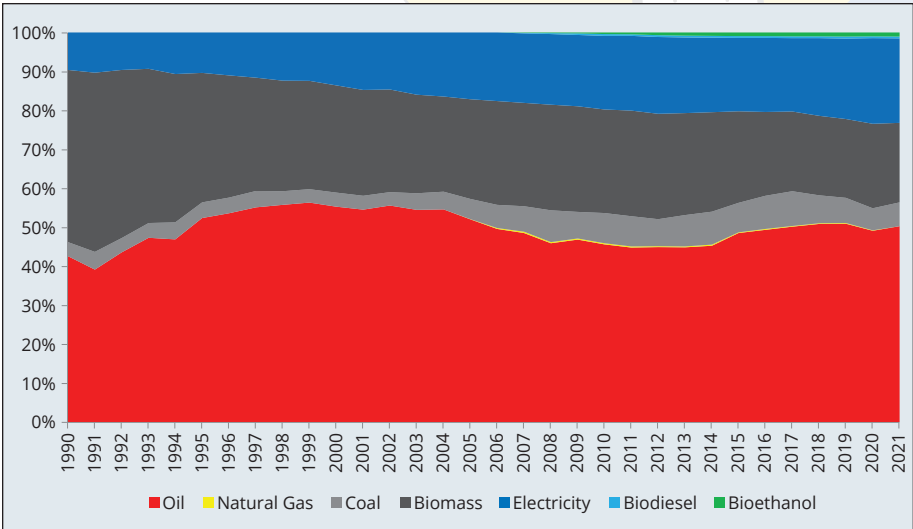
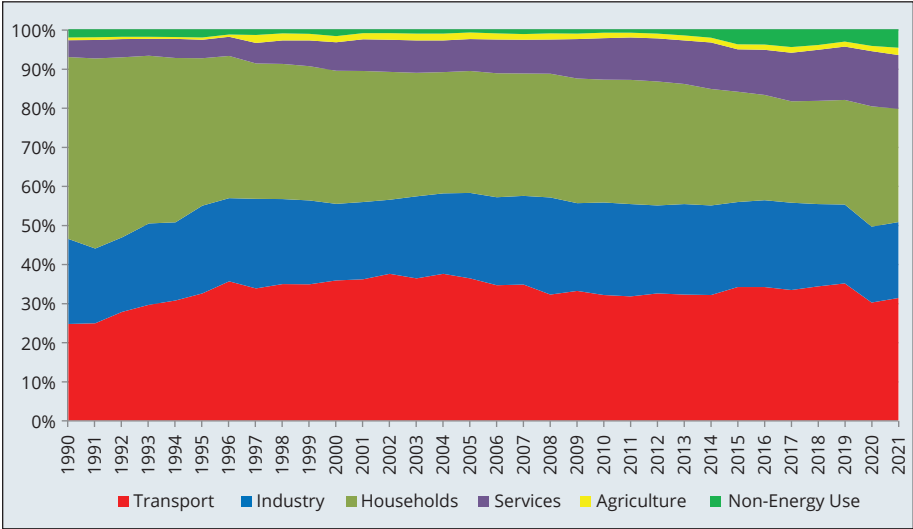
	2006	2007	2008	2009	2010	2011	2012	
Coal	5.92	6.54	8.14	6.79	7.74	7.71	6.92	
Natural Gas	0.23	0.33	0.30	0.29	0.28	0.31	0.23	
Oil	49.59	48.56	45.91	46.87	45.64	44.81	44.95	
Biomass	26.69	26.52	27.10	27.13	26.58	27.13	27.03	
Biodiesel	0.00	0.13	0.22	0.45	0.44	0.45	0.45	
Bioethanol	0.01	0.09	0.17	0.19	0.39	0.43	0.67	
Electricity	17.56	17.83	18.16	18.28	18.94	19.15	19.75	

	1997	1998	1999	2000	2001	2002	2003	2004	2005
	33.72	34.84	34.77	35.79	36.06	37.48	36.30	37.45	36.28
	22.92	21.72	21.45	19.56	19.76	18.90	21.00	20.60	21.84
	34.64	34.59	34.36	34.08	33.55	32.74	31.58	31.03	31.20
	5.25	6.03	6.58	7.26	8.12	8.21	8.29	8.11	8.17
	2.06	1.77	1.72	1.57	1.55	1.67	1.74	1.74	1.68
	1.42	1.05	1.12	1.74	0.97	1.00	1.10	1.07	0.82

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	32.18	32.04	34.07	34.07	33.33	34.26	35.02	30.09	31.26
	23.12	22.90	21.78	22.22	22.34	21.06	20.15	19.44	19.41
	30.72	29.78	28.18	26.95	25.91	26.40	26.78	30.77	28.97
	11.13	11.92	10.87	11.53	12.42	13.07	13.61	14.15	13.80
	1.29	1.24	1.29	1.34	1.45	1.23	1.31	1.34	1.88
	1.57	2.12	3.80	3.89	4.55	3.98	3.13	4.21	4.67

	1997	1998	1999	2000	2001	2002	2003	2004	2005
	4.22	3.50	3.42	3.62	3.58	3.44	4.24	4.58	5.22
	-	-	-	-	-	0.00	0.00	0.00	0.05
	55.12	55.78	56.36	55.31	54.53	55.59	54.48	54.58	52.03
	29.07	28.41	27.81	27.52	27.14	26.37	25.30	24.40	25.56
	-	-	-	-	-	-	0.00	0.00	0.00
	-	-	-	-	-	-	-	-	0.01
	11.59	12.32	12.41	13.55	14.75	14.59	15.99	16.44	17.13

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	8.04	8.47	7.58	8.51	8.92	7.20	6.50	5.65	6.15
	0.23	0.27	0.16	0.19	0.15	0.17	0.17	0.11	0.00
	44.84	45.27	48.53	49.38	50.19	50.86	50.91	49.12	50.27
	26.23	25.56	23.53	21.51	20.46	20.42	20.22	21.70	20.37
	0.45	0.46	0.47	0.47	0.48	0.49	0.49	0.46	0.46
	0.81	0.86	0.91	0.92	0.96	0.98	1.05	0.99	1.05
	19.39	19.11	18.82	19.02	18.86	19.89	20.66	21.96	21.69



Total Primary Energy Supply and Total Final Energy Consumption

Table 6. Total Final Energy Consumption, by Sector
In Thousand Tons of Oil Equivalent (kTOE)

FY	Total Final Energy Consumption (TFEC)							
		Transport				Industry		
			Land	Water	Air		Manufacturing	Non-Manufacturing
1990	19,018.63	4,685.41	3,978.42	560.16	146.83	4,136.04	3,689.81	446.23
1991	17,821.82	4,419.57	3,838.17	454.57	126.82	3,406.10	3,068.04	338.06
1992	18,496.00	5,127.58	4,410.07	586.79	130.72	3,529.41	3,162.61	366.79
1993	19,622.19	5,790.96	4,923.67	730.87	136.43	4,089.81	3,705.71	384.10
1994	19,855.53	6,082.92	5,150.67	743.64	188.61	3,970.22	3,667.70	302.52
1995	22,133.32	7,174.54	5,910.86	1,054.84	208.84	4,973.80	4,579.53	394.27
1996	22,831.14	8,115.93	6,525.97	1,303.80	286.16	4,854.68	4,492.40	362.28
1997	23,955.93	8,077.51	6,612.18	1,131.43	333.90	5,490.51	5,144.79	345.72
1998	23,831.38	8,302.80	6,671.62	1,374.97	256.21	5,175.90	4,847.49	328.41
1999	23,647.24	8,221.25	6,818.23	1,143.10	259.91	5,073.27	4,751.30	321.96
2000	23,196.39	8,301.96	6,840.35	1,120.41	341.20	4,536.59	4,252.41	284.18
2001	22,817.29	8,226.99	6,866.90	1,077.00	283.09	4,508.72	4,256.28	252.44
2002	22,756.11	8,529.21	7,206.55	1,080.37	242.29	4,300.21	4,055.79	244.41
2003	22,979.31	8,340.93	7,178.51	927.86	234.56	4,825.09	4,602.94	222.16
2004	23,050.03	8,633.08	7,418.54	963.95	250.59	4,749.19	4,528.58	220.61
2005	22,670.99	8,225.85	7,101.50	885.26	239.09	4,952.36	4,748.00	204.36
2006	22,362.44	7,724.87	6,647.50	836.10	241.27	5,036.12	4,833.09	203.03
2007	23,152.39	8,031.46	6,943.55	940.57	147.34	5,261.59	5,026.69	234.90
2008	23,301.77	7,496.43	6,631.66	690.02	174.76	5,777.83	5,537.69	240.14
2009	23,925.81	7,914.14	7,075.48	610.06	228.60	5,369.39	5,083.43	285.96
2010	25,092.22	8,035.50	7,097.51	701.93	236.06	5,948.44	5,639.50	308.94
2011	25,182.19	7,982.80	7,004.33	671.93	306.54	5,947.65	5,570.15	377.51
2012	25,774.06	8,364.20	7,358.70	635.80	369.70	5,805.97	5,379.70	426.27
2013	27,299.46	8,783.96	7,714.61	636.62	432.73	6,312.36	5,848.35	464.02
2014	28,505.53	9,132.81	7,874.32	716.01	542.48	6,528.87	6,059.53	469.34
2015	30,987.88	10,557.29	9,086.05	1,025.13	446.11	6,750.05	6,232.56	517.49
2016	33,530.18	11,424.90	9,979.76	851.32	593.83	7,449.22	6,932.42	516.80
2017	35,474.36	11,823.30	10,349.67	961.77	511.86	7,925.11	7,341.74	583.37
2018	35,723.14	12,238.08	10,771.70	882.74	583.64	7,523.33	6,976.24	547.09
2019	36,259.52	12,697.01	11,171.85	898.82	626.34	7,305.83	6,706.39	599.44
2020	32,592.51	9,808.57	8,861.85	727.99	218.73	6,335.82	5,638.51	697.31
2021	35,131.83	10,982.95	9,944.76	844.09	194.11	6,819.16	6,060.20	758.96

(Continuation)

Table 6. Total Final Energy Consumption, by Sector*In Thousand Tons of Oil Equivalent (kTOE)*

FY	Total Final Energy Consumption (TFEC)				Total	
	Households	Services	Agriculture	Non-Energy Use		
1990	8,847.74	815.73	133.78	399.94		
1991	8,668.60	837.56	127.89	362.10	-6.29	
1992	8,520.93	856.26	112.67	349.16	3.78	
1993	8,414.27	855.22	102.91	369.01	6.09	
1994	8,346.29	969.92	101.60	384.57	1.19	
1995	8,356.36	1,041.19	131.08	456.36	11.47	
1996	8,309.05	1,115.51	139.09	296.88	3.15	
1997	8,297.18	1,257.81	493.52	339.41	4.93	
1998	8,243.96	1,436.36	422.12	250.23	-0.52	
1999	8,124.58	1,556.14	406.79	265.22	-0.77	
2000	7,905.69	1,684.41	364.28	403.46	-1.91	
2001	7,654.47	1,851.90	353.78	221.43	-1.63	
2002	7,450.73	1,867.22	381.04	227.69	-0.27	
2003	7,257.22	1,903.89	400.25	251.92	0.98	
2004	7,151.35	1,868.52	401.47	246.43	0.31	
2005	7,072.32	1,852.99	380.50	186.98	-1.64	
2006	7,095.03	1,927.20	355.25	223.98	-1.36	
2007	7,251.02	1,989.16	340.28	278.88	3.53	
2008	7,376.73	2,043.54	366.01	241.22	0.65	
2009	7,632.69	2,412.95	330.03	266.61	2.68	
2010	7,878.44	2,662.83	347.10	219.92	4.88	
2011	7,991.18	2,738.94	301.94	219.67	0.36	
2012	8,171.33	2,829.56	318.13	284.87	2.35	
2013	8,385.69	3,037.57	352.16	427.72	5.92	
2014	8,488.40	3,397.07	353.83	604.55	4.42	
2015	8,731.34	3,369.73	400.57	1,178.91	8.71	
2016	9,034.90	3,864.77	450.44	1,305.95	8.20	
2017	9,192.49	4,404.46	515.62	1,613.39	5.80	
2018	9,430.66	4,668.13	439.55	1,423.39	0.70	
2019	9,710.81	4,935.75	473.48	1,136.64	1.50	
2020	10,028.09	4,611.10	436.81	1,372.13	-10.11	
2021	10,178.56	4,847.88	660.91	1,642.36	7.79	

Growth Rates (%)						
	Transport	Industry	Households	Services	Agriculture	Non-Energy Use
	-5.67	-17.65	-2.02	2.68	-4.40	-9.46
	16.02	3.62	-1.70	2.23	-11.91	-3.58
	12.94	15.88	-1.25	-0.12	-8.66	5.69
	5.04	-2.92	-0.81	13.41	-1.27	4.22
	17.95	25.28	0.12	7.35	29.01	18.67
	13.12	-2.39	-0.57	7.14	6.11	-34.95
	-0.47	13.10	-0.14	12.76	254.82	14.32
	2.79	-5.73	-0.64	14.20	-14.47	-26.28
	-0.98	-1.98	-1.45	8.34	-3.63	5.99
	0.98	-10.58	-2.69	8.24	-10.45	52.12
	-0.90	-0.61	-3.18	9.94	-2.88	-45.12
	3.67	-4.62	-2.66	0.83	7.71	2.83
	-2.21	12.21	-2.60	1.96	5.04	10.64
	3.50	-1.57	-1.46	-1.86	0.31	-2.18
	-4.72	4.28	-1.11	-0.83	-5.22	-24.13
	-6.09	1.69	0.32	4.00	-6.64	19.79
	3.97	4.48	2.20	3.22	-4.22	24.52
	-6.66	9.81	1.73	2.73	7.56	-13.51
	5.57	-7.07	3.47	18.08	-9.83	10.53
	1.53	10.78	3.22	10.36	5.17	-17.51
	-0.66	-0.01	1.43	2.86	-13.01	-0.11
	4.78	-2.38	2.25	3.31	5.36	29.68
	5.02	8.72	2.62	7.35	10.70	50.14
	3.97	3.43	1.22	11.84	0.48	41.34
	15.60	3.39	2.86	-0.80	13.21	95.01
	8.22	10.36	3.48	14.69	12.45	10.78
	3.49	6.39	1.74	13.96	14.47	23.54
	3.51	-5.07	2.59	5.99	-14.75	-11.78
	3.75	-2.89	2.97	5.73	7.72	-20.15
	-22.75	-13.28	3.27	-6.58	-7.75	20.72
	11.97	7.63	1.50	5.14	51.31	19.69

Total Primary Energy Supply and Total Final Energy Consumption

Table 7. Total Final Energy Consumption, by Fuel*

In Thousand Tons of Oil Equivalent (kTOE)

FY	Total Final Energy Consumption (TFEC)								
		Coal	Natural Gas	Oil	Biomass	Biodiesel	Bioethanol	Electricity	
1990	19,018.63	696.32	-	8,095.37	8,402.95	-	-	1,823.99	
1991	17,821.82	816.15	-	6,975.41	8,191.31	-	-	1,838.95	
1992	18,496.00	675.64	-	8,064.12	7,981.09	-	-	1,775.15	
1993	19,622.19	747.94	-	9,278.38	7,772.22	-	-	1,823.65	
1994	19,855.53	865.68	-	9,310.54	7,564.69	-	-	2,114.62	
1995	22,133.32	894.45	-	11,593.83	7,358.45	-	-	2,286.59	
1996	22,831.14	911.30	-	12,244.78	7,160.87	-	-	2,514.19	
1997	23,955.93	1,010.05	-	13,204.96	6,964.55	-	-	2,776.37	
1998	23,831.38	833.25	-	13,293.29	6,769.47	-	-	2,935.37	
1999	23,647.24	809.31	-	13,326.64	6,575.63	-	-	2,935.67	
2000	23,196.39	840.01	-	12,830.21	6,383.02	-	-	3,143.15	
2001	22,817.29	817.81	-	12,442.37	6,191.66	-	-	3,365.46	
2002	22,756.11	782.38	0.00	12,651.07	6,001.54	-	-	3,321.12	
2003	22,979.31	974.24	0.00	12,519.12	5,812.69	0.01	-	3,673.26	
2004	23,050.03	1,055.10	0.00	12,579.88	5,625.13	0.08	-	3,789.85	
2005	22,670.99	1,183.58	12.11	11,795.09	5,795.69	0.11	1.40	3,883.01	
2006	22,362.44	1,324.42	52.11	11,089.28	5,967.59	0.54	1.41	3,927.10	
2007	23,152.39	1,513.74	76.70	11,242.76	6,140.84	30.51	19.81	4,128.04	
2008	23,301.77	1,897.79	70.15	10,697.70	6,315.49	50.50	39.18	4,230.97	
2009	23,925.81	1,624.28	70.13	11,213.13	6,491.56	107.82	45.04	4,373.85	
2010	25,092.22	1,941.06	69.67	11,451.89	6,669.78	110.18	97.63	4,752.00	
2011	25,182.19	1,940.96	77.65	11,284.99	6,832.82	114.15	108.10	4,823.53	
2012	25,774.06	1,784.02	58.79	11,584.15	6,966.83	117.13	171.95	5,091.20	
2013	27,299.46	2,196.16	62.89	12,241.46	7,159.80	123.67	221.79	5,293.69	
2014	28,505.53	2,415.07	76.98	12,905.00	7,286.26	129.82	245.73	5,446.67	
2015	30,987.88	2,350.05	49.79	15,038.63	7,290.93	146.56	281.50	5,830.42	
2016	33,530.18	2,854.41	64.80	16,555.60	7,212.01	158.44	308.95	6,375.97	
2017	35,474.36	3,162.99	52.51	17,803.68	7,257.01	169.91	339.28	6,688.98	
2018	35,723.14	2,573.11	59.39	18,167.87	7,294.94	174.22	349.81	7,103.79	
2019	36,259.52	2,357.95	61.53	18,459.25	7,331.60	178.44	379.95	7,490.80	
2020	32,592.51	1,841.41	37.20	16,009.24	7,072.24	151.06	323.77	7,157.59	
2021	35,131.83	2,162.25	0.35	17,662.29	7,157.27	160.74	368.53	7,620.40	

*includes non-energy use; does not include energy for power application

	Growth Rates (%)							
	TFEC	Coal	Natural Gas	Oil	Biomass	Biodiesel	Bioethanol	Electricity
	-6.29	17.21		-13.83	-2.52			0.82
	3.78	-17.22		15.61	-2.57			-3.47
	6.09	10.70		15.06	-2.62			2.73
	1.19	15.74		0.35	-2.67			15.96
	11.47	3.32		24.52	-2.73			8.13
	3.15	1.88		5.61	-2.69			9.95
	4.93	10.84		7.84	-2.74			10.43
	-0.52	-17.50		0.67	-2.80			5.73
	-0.77	-2.87		0.25	-2.86			0.01
	-1.91	3.79		-3.73	-2.93			7.07
	-1.63	-2.64		-3.02	-3.00			7.07
	-0.27	-4.33		1.68	-3.07			-1.32
	0.98	24.52		-1.04	-3.15			10.60
	0.31	8.30	1,019.7	0.49	-3.23	1,019.68		3.17
	-1.64	12.18	35.6	-6.24	3.03	35.59		2.46
	-1.36	11.90	383.0	-5.98	2.97	383.01	1.23	1.14
	3.53	14.29	5,592.0	1.38	2.90	5,592.02	1,301.33	5.12
	0.65	25.37	60	-4.85	2.84	65.56	97.75	2.49
	2.68	-14.41	93	4.82	2.79	113.49	14.95	3.38
	4.88	19.50	157	2.13	2.75	2.19	116.79	8.65
	0.36	-0.01	199	-1.46	2.44	3.59	10.72	1.51
	2.35	-8.09	209	2.65	1.96	2.61	59.07	5.55
	5.92	23.10	285	5.67	2.77	5.59	28.99	3.98
	4.42	9.97	347	5.42	1.77	4.98	10.80	2.89
	8.71	-2.69	379	16.53	0.06	12.89	14.56	7.05
	8.20	21.46	446	10.09	-1.08	8.10	9.75	9.36
	5.80	10.81	447	7.54	0.62	7.24	9.82	4.91
	0.70	-18.65	448	2.05	0.52	2.54	3.10	6.20
	1.50	-8.36	449	1.60	0.50	2.42	8.62	5.45
	-10.11	-21.91	450	-13.27	-3.54	-15.34	-14.79	-4.45
	7.79	17.42	451	10.33	1.20	6.40	13.83	6.47

Total Primary Energy Supply and Total Final Energy Consumption

Table 8. Greenhouse Gas Emissions (GHG) Inventory for the Energy Sector
in Metric Tons of Carbon Dioxide Equivalent (MTCO_{2e})

FY	Total GHG Emission	By Sector								By Fuel Type			
		Power Generation	Transport	Industry	Other*	Energy**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)				
1990	37.73	10.37	14.18	9.23	2.69	1.26	33.43	4.30	0.00				
1991	38.05	13.70	13.39	7.09	2.69	1.16	32.75	5.29	0.00				
1992	41.91	14.54	15.56	7.47	2.99	1.35	37.09	4.82	0.00				
1993	46.37	15.03	17.58	9.10	3.30	1.35	40.99	5.38	0.00				
1994	47.46	15.75	18.45	8.38	3.55	1.34	42.05	5.40	0.01				
1995	55.62	16.85	21.79	11.49	4.05	1.44	49.73	5.88	0.01				
1996	59.94	18.47	24.65	10.80	4.35	1.67	51.77	8.16	0.02				
1997	66.64	22.08	24.45	12.65	5.85	1.61	56.43	10.20	0.01				
1998	66.97	22.42	25.16	11.47	6.17	1.74	55.64	11.31	0.02				
1999	64.31	19.73	24.86	11.05	6.72	1.94	51.37	12.93	0.01				
2000	64.82	21.76	25.11	9.03	6.56	2.35	47.03	17.77	0.02				
2001	64.76	22.81	24.88	8.50	6.61	1.96	47.11	17.38	0.27				
2002	64.07	21.73	25.79	7.97	6.68	1.89	44.32	16.36	3.39				
2003	65.74	22.82	25.18	9.20	6.27	2.26	44.02	16.55	5.17				
2004	67.22	24.24	26.07	9.03	6.07	1.81	45.12	17.33	4.77				
2005	68.08	26.84	24.81	9.48	5.26	1.68	41.19	20.57	6.32				
2006	62.56	23.39	23.30	9.66	4.99	1.22	37.27	19.37	5.92				
2007	65.55	25.28	24.11	10.18	4.71	1.27	37.82	20.64	7.09				
2008	68.10	28.08	22.33	11.90	4.74	1.05	36.04	24.59	7.47				
2009	68.84	28.59	23.40	10.25	5.63	0.96	37.89	23.43	7.52				
2010	74.23	31.65	23.63	11.87	5.99	1.08	39.68	27.46	7.08				
2011	74.65	32.70	23.42	11.57	5.97	0.99	36.80	30.21	7.65				
2012	77.07	35.00	24.38	10.71	5.87	1.10	38.15	31.58	7.33				
2013	85.78	40.69	25.48	12.36	6.31	0.94	39.85	39.18	6.75				
2014	91.22	43.63	26.45	12.88	7.15	1.11	42.56	41.56	7.10				
2015	99.30	47.49	30.60	13.20	7.06	0.96	47.15	45.48	6.68				
2016	109.25	51.61	33.11	15.29	8.59	0.66	50.47	51.13	7.65				
2017	120.69	59.00	34.19	16.63	10.16	0.71	52.47	60.67	7.55				
2018	125.58	64.60	35.38	14.22	10.63	0.75	53.06	64.10	8.42				
2019	132.45	70.32	36.63	13.18	11.27	1.05	55.31	68.66	8.48				
2020	122.58	70.95	28.16	11.32	11.35	0.79	46.26	68.63	7.69				
2021	130.45	73.88	31.54	12.50	12.13	0.40	49.81	74.05	6.60				

*includes emission from the services, households and agriculture sectors

**includes losses incurred in oil refining

Growth Rates (%)									
	Total	By Sector					By Fuel Type		
		Power Generation	Transport	Industry	Other*	Energy**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)
	0.83	32.18	-7.55	-23.14	0.04	-7.55	-2.03	23.07	0.00
	10.15	6.09	16.24	5.28	11.15	16.24	13.23	-8.90	0.00
	10.63	3.40	0.00	21.86	10.14	0.00	10.51	11.55	0.00
	2.36	4.78	-1.15	-7.96	7.55	-1.15	2.60	0.36	0.00
	17.20	7.01	7.97	37.12	14.32	7.97	18.26	8.97	-3.26
	7.76	9.60	15.76	-5.96	7.27	15.76	4.10	38.66	68.70
	11.17	19.54	-3.63	17.08	34.55	-3.63	9.00	25.09	-39.15
	0.49	1.54	8.03	-9.31	5.52	8.03	-1.40	10.91	70.11
	-3.97	-12.02	11.63	-3.62	8.87	11.63	-7.67	14.27	-23.03
	0.79	10.32	21.18	-18.28	-2.42	21.18	-8.45	37.45	48.43
	-0.10	4.82	-16.62	-5.89	0.69	-16.62	0.17	-2.21	1,217.14
	-1.07	-4.73	-3.66	-6.19	1.10	-3.66	-5.93	-5.85	1,156.34
	2.61	5.02	19.66	15.42	-6.11	19.66	-0.66	1.17	52.41
	2.25	6.21	-20.13	-1.92	-3.19	-20.13	2.49	4.69	-7.65
	1.28	10.73	-6.95	5.05	-13.41	-6.95	-8.70	18.69	32.45
	-8.11	-12.87	-27.31	1.84	-5.09	-27.31	-9.53	-5.79	-6.34
	4.79	8.09	3.75	5.42	-5.54	3.75	1.48	6.53	19.89
	3.88	11.07	-17.53	16.83	0.70	-17.53	-4.70	19.12	5.27
	1.09	1.83	-8.22	-13.81	18.73	-8.22	5.13	-4.72	0.70
	7.83	10.70	12.62	15.79	6.36	12.62	4.72	17.24	-5.81
	0.58	3.32	-8.25	-2.56	-0.29	-8.25	-7.26	9.99	7.97
	3.24	7.02	11.04	-7.38	-1.67	11.04	3.69	4.55	-4.14
	11.31	16.26	-14.80	15.42	7.41	-14.80	4.44	24.06	-7.89
	6.34	7.23	18.04	4.19	13.33	18.04	6.81	6.06	5.17
	8.86	8.84	-13.40	2.45	-1.32	-13.40	10.78	9.44	-5.99
	10.01	8.67	-31.51	15.88	21.71	-31.51	7.04	12.42	14.57
	10.48	14.34	8.63	8.76	18.27	8.63	3.96	18.67	-1.35
	4.05	9.49	5.67	-14.50	4.62	5.67	1.12	5.65	11.64
	5.47	8.85	39.08	-7.31	6.07	39.08	4.23	7.12	0.69
	-7.45	0.90	-24.21	-14.09	0.71	-24.21	-16.36	-0.05	-9.31
	6.42	4.13	-49.22	10.35	6.83	-49.22	7.67	7.89	-14.24

Total Primary Energy Supply and Total Final Energy Consumption

Table 9. Environment and Greenhouse Gas Emissions (GHG) Emission Indicators

FY	GDP (in billion pesos: at constant 2018 prices)*	Population (in million)	Total Primary Energy Supply (in MTOE)	Total Power Generation (in TWh)	Total Oil Consumption (in kTOE)	GHG Emission		
						Total	from Electricity Generation	
1990	5,239.63	60.94	25.77	26.33	7.87	43.80	10.37	
1991	5,216.76	62.36	26.87	25.65	6.77	46.46	13.70	
1992	5,238.55	63.82	28.38	25.87	7.85	51.63	14.54	
1993	5,352.85	65.32	27.01	26.58	9.06	56.02	15.03	
1994	5,586.97	66.84	30.46	30.46	9.09	57.80	15.75	
1995	5,845.38	68.41	32.34	33.55	11.30	66.59	16.85	
1996	6,187.93	70.01	33.48	36.71	12.11	70.24	18.47	
1997	6,508.87	71.65	35.06	39.80	13.03	78.51	22.08	
1998	6,475.41	75.36	36.19	41.58	13.16	78.06	22.42	
1999	6,692.10	76.99	37.64	41.43	13.19	71.10	19.73	
2000	6,985.38	77.02	38.86	45.29	12.57	68.79	21.76	
2001	7,198.38	78.59	36.87	47.04	12.35	69.92	22.81	
2002	7,465.89	80.28	37.33	48.47	12.52	66.05	21.73	
2003	7,845.68	81.88	37.41	52.94	12.39	66.85	22.82	
2004	8,361.08	83.56	37.25	55.96	12.49	69.36	24.24	
2005	8,774.32	85.26	38.06	56.57	11.74	68.04	26.84	
2006	9,240.80	86.97	37.82	56.78	11.02	60.66	23.39	
2007	9,843.24	88.71	38.48	59.61	11.20	63.10	25.28	
2008	10,270.88	89.44	40.46	60.82	10.70	64.12	28.08	
2009	10,419.63	91.02	39.90	61.93	11.25	66.48	28.59	
2010	11,183.86	92.60	41.05	67.74	11.54	71.33	31.65	
2011	11,615.36	94.18	41.85	69.18	11.39	69.50	32.70	
2012	12,416.47	96.50	43.52	72.92	11.70	73.15	35.00	
2013	13,254.64	98.19	44.99	75.27	12.27	80.54	40.69	
2014	14,096.05	99.88	46.99	77.26	12.83	86.19	43.63	
2015	14,990.91	101.56	51.27	82.41	14.42	94.64	47.49	
2016	16,062.68	103.24	54.59	90.80	15.89	102.08	51.61	
2017	17,175.98	104.92	57.96	94.37	16.85	111.48	59.00	
2018	18,265.19	106.60	59.72	99.76	17.43	117.66	64.60	
2019	19,382.75	108.27	59.85	106.04	18.02	125.62	70.32	
2020	17,537.84	109.03	56.58	101.76	15.32	117.21	70.95	
2021	18,538.05	110.20	59.24	106.11	16.76	123.69	73.88	

(in MTCO ₂ e)		GHG Related Indicators				
	from Oil Consumption	GHG/TPES (tCO ₂ e/TOE)	GHG/GDP (tCO ₂ e/PhP 100K)	GHG/Capita (tCO ₂ e/person)	GHG/Electricity Generation (tCO ₂ e/MWh)	GHG/Oil Consumption (tCO ₂ e/TOE)
	33.43	1.46	0.72	0.62	0.39	2.60
	32.75	1.42	0.73	0.61	0.53	2.00
	37.09	1.48	0.80	0.66	0.56	1.94
	40.99	1.72	0.87	0.71	0.57	2.50
	42.05	1.56	0.85	0.71	0.52	2.00
	49.73	1.72	0.95	0.81	0.50	2.18
	51.77	1.79	0.97	0.86	0.50	2.30
	56.43	1.90	1.02	0.93	0.55	2.34
	55.64	1.85	1.03	0.89	0.54	2.38
	51.37	1.71	0.96	0.84	0.48	2.52
	47.03	1.67	0.93	0.84	0.48	2.53
	47.11	1.76	0.90	0.82	0.48	2.56
	44.32	1.72	0.86	0.80	0.45	2.59
	44.02	1.76	0.84	0.80	0.43	2.65
	45.12	1.80	0.80	0.80	0.43	2.77
	41.19	1.79	0.78	0.80	0.47	2.69
	37.27	1.65	0.68	0.72	0.41	2.67
	37.82	1.70	0.67	0.74	0.42	2.69
	36.04	1.68	0.66	0.76	0.46	2.56
	37.89	1.73	0.66	0.76	0.46	2.70
	39.68	1.81	0.66	0.80	0.47	2.57
	36.80	1.78	0.64	0.79	0.47	2.68
	38.15	1.77	0.62	0.80	0.48	2.58
	39.85	1.91	0.65	0.87	0.54	2.65
	42.56	1.94	0.65	0.91	0.56	2.65
	47.15	1.94	0.66	0.98	0.58	2.48
	50.47	2.00	0.68	1.06	0.57	2.51
	52.47	2.08	0.70	1.15	0.63	2.51
	53.06	2.10	0.69	1.18	0.65	2.54
	55.31	2.21	0.68	1.22	0.66	2.77
	46.26	2.17	0.70	1.12	0.70	2.71
	49.81	2.20	0.70	1.18	0.70	2.75

4 Total Final Energy Consumption

In compilation of the Energy Balance Table (EBT), the total final energy consumption (TFEC) is reported by major economic sector and by fuel.

- Transport includes all fuels used for land, water and air transport, except international marine and aviation bunkers. It includes consumption of fuels in the following sub-sectors:
 - Railway: inland and light rail transport;
 - Road: road vehicles, including agricultural; and industrial highway use, light to heavy inland vehicles, including motorcycles and tricycles;
 - Water transport: inter-island ships or ferries and local waterways ferries and bancas;
 - Air: aircrafts for domestic aviation, either for commercial, private and agricultural.
 - Fuels consumed in the sector are petroleum products, natural gas, biofuels and electricity.
- Industry refers to the consumption of industrial sectors. It excludes the fuels used for transportation of goods produced by industries. It includes the consumption of fuels in the following sub-sectors:
 - Manufacturing: physical or chemical transformation of materials, substances, or components into new products, which can take place in plants, factories or mills.
 - Mining: extraction of minerals
 - Construction: construction activities for buildings and civil engineering works
 - Fuels consumed in the sector are coal, petroleum products, natural gas, biodiesel, biomass and electricity.
- Households includes consumption by households, excluding fuels for transport.
 - Fuels consumed in the sector are biomass, petroleum products and electricity.
- Services includes consumption of establishments engaged in wholesale and retail, trade, finance, public and private services.
 - Fuels consumed in the sector are biomass, petroleum products and electricity.
- Agriculture refers to energy consumed for the exploitation of vegetal and animal natural resources, comprising of activities of the following subsectors:
 - Agri-Industry: growing and harvesting of crops such as palay, corn, sugarcane etc.; activities relating to animal production for the purpose of food consumption are included; support to agricultural activities;
 - Forestry: production of roundwood for the forest-based manufacturing industries as well as extraction and gathering of wild growing non-wood forest products which can be carried out in natural or planted forests.
 - Fishery: production, harvesting, processing and marketing of fisheries and aquatic products.
 - Fuels consumed in the sector are petroleum products, biodiesel and electricity.

Details of Total Final Energy Consumption (TFEC)

Table 1. Total Final Energy Consumption in Transport, by Subsector
in thousand tons of oil equivalent (kTOE)

FY	Transport, Total		Land			
		Growth Rate (%)		Growth Rate (%)	Rail	Road
1990	4,685.41		3,978.42		1.96	3,976.46
1991	4,419.57	(5.67)	3,838.17	(3.53)	1.93	3,836.24
1992	5,127.58	16.02	4,410.07	14.90	1.89	4,408.18
1993	5,790.96	12.94	4,923.67	11.65	1.86	4,921.81
1994	6,082.92	5.04	5,150.67	4.61	1.82	5,148.85
1995	7,174.54	17.95	5,910.86	14.76	1.79	5,909.07
1996	8,115.93	13.12	6,525.97	10.41	4.09	6,521.87
1997	8,077.51	(0.47)	6,612.18	1.32	4.65	6,607.54
1998	8,302.80	2.79	6,671.62	0.90	4.60	6,667.02
1999	8,221.25	(0.98)	6,818.23	2.20	4.90	6,813.33
2000	8,301.96	0.98	6,840.35	0.32	6.03	6,834.32
2001	8,226.99	(0.90)	6,866.90	0.39	5.53	6,861.38
2002	8,529.21	3.67	7,206.55	4.95	5.28	7,201.27
2003	8,340.93	(2.21)	7,178.51	(0.39)	3.46	7,175.05
2004	8,633.08	3.50	7,418.54	3.34	6.49	7,412.05
2005	8,225.85	(4.72)	7,101.50	(4.27)	13.06	7,088.45
2006	7,724.87	(6.09)	6,647.50	(6.39)	8.71	6,638.79
2007	8,031.46	3.97	6,943.55	4.45	9.67	6,933.88
2008	7,496.43	(6.66)	6,631.66	(4.49)	9.69	6,621.97
2009	7,914.14	5.57	7,075.48	6.69	9.71	7,065.77
2010	8,035.50	1.53	7,097.51	0.31	11.80	7,085.72
2011	7,982.80	(0.66)	7,004.33	(1.31)	14.23	6,990.10
2012	8,364.20	4.78	7,358.70	5.06	17.06	7,341.64
2013	8,783.96	5.02	7,714.61	4.84	18.97	7,695.63
2014	9,132.81	3.97	7,874.32	2.07	21.09	7,853.23
2015	10,557.29	15.60	9,086.05	15.39	10.14	9,075.91
2016	11,424.90	8.22	9,979.76	9.84	10.74	9,969.02
2017	11,823.30	3.49	10,349.67	3.71	11.76	10,337.91
2018	12,238.08	3.51	10,771.70	4.08	10.77	10,760.93
2019	12,697.01	3.75	11,171.85	3.71	10.68	11,161.17
2020	9,808.57	(22.75)	8,861.85	(20.68)	8.06	8,853.79
2021	10,982.95	11.97	9,944.76	12.22	10.14	9,934.62

(Continuation)

Table 1. Total Final Energy Consumption in Transport, by Subsector
in thousand tons of oil equivalent (kTOE)

FY	Water		Domestic Air		
		Growth Rate (%)		Growth Rate (%)	
1990	560.16		146.83		
1991	454.57	(18.85)	126.82	(13.62)	
1992	586.79	29.09	130.72	3.07	
1993	730.87	24.55	136.43	4.37	
1994	743.64	1.75	188.61	38.25	
1995	1,054.84	41.85	208.84	10.73	
1996	1,303.80	23.60	286.16	37.02	
1997	1,131.43	(13.22)	333.90	16.68	
1998	1,374.97	21.53	256.21	(23.27)	
1999	1,143.10	(16.86)	259.91	1.45	
2000	1,120.41	(1.99)	341.20	31.27	
2001	1,077.00	(3.87)	283.09	(17.03)	
2002	1,080.37	0.31	242.29	(14.41)	
2003	927.86	(14.12)	234.56	(3.19)	
2004	963.95	3.89	250.59	6.83	
2005	885.26	(8.16)	239.09	(4.59)	
2006	836.10	(5.55)	241.27	0.91	
2007	940.57	12.49	147.34	(38.93)	
2008	690.02	(26.64)	174.76	18.61	
2009	610.06	(11.59)	228.60	30.81	
2010	701.93	15.06	236.06	3.26	
2011	671.93	(4.27)	306.54	29.86	
2012	635.80	(5.38)	369.70	20.60	
2013	636.62	0.13	432.73	17.05	
2014	716.01	12.47	542.48	25.36	
2015	1,025.13	43.17	446.11	(17.76)	
2016	851.32	(16.95)	593.83	33.11	
2017	961.77	12.97	511.86	(13.80)	
2018	882.74	(8.22)	583.64	14.02	
2019	898.82	1.82	626.34	7.32	
2020	727.99	(19.01)	218.73	(65.08)	
2021	844.09	15.95	194.11	(11.25)	

	Sectoral Shares to Total				
	Land			Water	Domestic Air
		Rail	Road		
	84.91	0.04	84.87	11.96	3.13
	86.84	0.04	86.80	10.29	2.87
	86.01	0.04	85.97	11.44	2.55
	85.02	0.03	84.99	12.62	2.36
	84.67	0.03	84.64	12.22	3.10
	82.39	0.02	82.36	14.70	2.91
	80.41	0.05	80.36	16.06	3.53
	81.86	0.06	81.80	14.01	4.13
	80.35	0.06	80.30	16.56	3.09
	82.93	0.06	82.87	13.90	3.16
	82.39	0.07	82.32	13.50	4.11
	83.47	0.07	83.40	13.09	3.44
	84.49	0.06	84.43	12.67	2.84
	86.06	0.04	86.02	11.12	2.81
	85.93	0.08	85.86	11.17	2.90
	86.33	0.16	86.17	10.76	2.91
	86.05	0.11	85.94	10.82	3.12
	86.45	0.12	86.33	11.71	1.83
	88.46	0.13	88.34	9.20	2.33
	89.40	0.12	89.28	7.71	2.89
	88.33	0.15	88.18	8.74	2.94
	87.74	0.18	87.56	8.42	3.84
	87.98	0.20	87.77	7.60	4.42
	87.83	0.22	87.61	7.25	4.93
	86.22	0.23	85.99	7.84	5.94
	86.06	0.10	85.97	9.71	4.23
	87.35	0.09	87.26	7.45	5.20
	87.54	0.10	87.44	8.13	4.33
	88.02	0.09	87.93	7.21	4.77
	87.99	0.08	87.90	7.08	4.93
	90.35	0.08	90.27	7.42	2.23
	90.55	0.09	90.45	7.69	1.77

Details of Total Final Energy Consumption (TFEC)

Table 2. Total Final Energy Consumption in Transport, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Transport, Total										
		Gasoline	Diesel	Fuel Oil	Auto-LPG	Natural Gas	Aviation Fuel	Bioethanol	Biodiesel	Electricity	
1990	4,685	1,591	2,591	357	-	-	147	-	-	-	
1991	4,420	1,371	2,676	246	-	-	127	-	-	-	
1992	5,128	1,534	3,117	346	-	-	131	-	-	-	
1993	5,791	1,713	3,483	458	-	-	136	-	-	-	
1994	6,083	1,867	3,561	467	-	-	189	-	-	-	
1995	7,175	2,198	4,050	717	-	-	209	-	-	-	
1996	8,116	2,471	4,458	899	-	-	286	-	-	2	
1997	8,078	2,675	4,435	631	-	-	334	-	-	2	
1998	8,303	2,806	4,342	896	-	-	256	-	-	2	
1999	8,221	2,890	4,412	657	-	-	260	-	-	3	
2000	8,302	2,828	4,467	661	0	-	341	-	-	5	
2001	8,227	2,861	4,433	644	0	-	283	-	-	5	
2002	8,529	2,986	4,649	647	0	0	242	-	-	5	
2003	8,341	3,044	4,588	470	1	0	235	-	0	3	
2004	8,633	3,077	4,787	512	0	0	251	-	0	6	
2005	8,226	2,993	4,521	462	1	0	239	1	0	8	
2006	7,725	2,794	4,210	465	4	-	241	1	1	8	
2007	8,031	2,851	4,339	597	45	-	147	20	24	9	
2008	7,496	2,681	4,154	329	68	0	175	39	41	10	
2009	7,914	2,887	4,345	230	84	0	229	45	86	10	
2010	8,035	2,914	4,334	285	74	0	236	98	85	9	
2011	7,983	2,873	4,300	245	46	1	307	108	94	10	
2012	8,364	2,963	4,535	185	39	1	370	172	89	10	
2013	8,784	3,102	4,655	214	57	1	433	222	92	10	
2014	9,133	3,181	4,839	178	42	0	542	246	96	10	
2015	10,557	3,652	5,841	183	30	-	446	281	116	8	
2016	11,425	4,020	6,156	203	13	-	594	309	121	9	
2017	11,823	4,370	6,195	265	10	-	512	339	123	10	
2018	12,238	4,504	6,452	203	10	-	584	350	127	9	
2019	12,697	4,870	6,479	196	9	-	626	380	127	9	
2020	9,809	4,145	4,914	99	4	-	219	324	97	7	
2021	10,983	4,714	5,401	193	3	-	194	369	101	8	

	Fuel Shares to Total								
	Gasoline	Diesel	Fuel Oil	Auto-LPG	Natural Gas	Aviation Fuel	Bioethanol	Biodiesel	Electricity
	34	55	8	-	-	3	-	-	-
	31	61	6	-	-	3	-	-	-
	30	61	7	-	-	3	-	-	-
	30	60	8	-	-	2	-	-	-
	31	59	8	-	-	3	-	-	-
	31	56	10	-	-	3	-	-	-
	30	55	11	-	-	4	-	-	0
	33	55	8	-	-	4	-	-	0
	34	52	11	-	-	3	-	-	0
	35	54	8	-	-	3	-	-	0
	34	54	8	0	-	4	-	-	0
	35	54	8	0	-	3	-	-	0
	35	55	8	0	0	3	-	-	0
	37	55	6	0	0	3	-	0	0
	36	55	6	0	0	3	-	0	0
	36	55	6	0	0	3	0	0	0
	36	54	6	0	-	3	0	0	0
	35	54	7	1	-	2	0	0	0
	36	55	4	1	0	2	1	1	0
	36	55	3	1	0	3	1	1	0
	36	54	4	1	0	3	1	1	0
	36	54	3	1	0	4	1	1	0
	35	54	2	0	0	4	2	1	0
	35	53	2	1	0	5	3	1	0
	35	53	2	0	0	6	3	1	0
	35	55	2	0	-	4	3	1	0
	35	54	2	0	-	5	3	1	0
	37	52	2	0	-	4	3	1	0
	37	53	2	0	-	5	3	1	0
	38	51	2	0	-	5	3	1	0
	42	50	1	0	-	2	3	1	0
	43	49	2	0	-	2	3	1	0

(Continuation)

Table 2. Total Final Energy Consumption in Transport, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Transport, Total									
	Rail	Gasoline	Diesel	Fuel Oil	Auto-LPG	Aviation Fuel	Bioethanol	Biodiesel	Electricity	
1990	2	-	2	-	-	-	-	-	-	
1991	2	-	2	-	-	-	-	-	-	
1992	2	-	2	-	-	-	-	-	-	
1993	2	-	2	-	-	-	-	-	-	
1994	2	-	2	-	-	-	-	-	-	
1995	2	-	2	-	-	-	-	-	-	
1996	4	-	2	-	-	-	-	-	2	
1997	5	-	2	-	-	-	-	-	2	
1998	5	-	2	-	-	-	-	-	2	
1999	5	-	2	-	-	-	-	-	3	
2000	6	-	1	-	-	-	-	-	5	
2001	6	-	1	-	-	-	-	-	5	
2002	5	-	0	-	-	-	-	-	5	
2003	3	-	0	-	-	-	-	-	3	
2004	6	-	1	-	-	-	-	-	6	
2005	13	-	5	-	-	-	-	-	8	
2006	9	-	0	-	-	-	-	-	8	
2007	10	-	0	-	-	-	-	0	9	
2008	10	-	0	-	-	-	-	0	10	
2009	10	-	0	-	-	-	-	0	10	
2010	12	-	2	-	-	-	-	0	9	
2011	14	-	5	-	-	-	-	0	10	
2012	17	-	7	-	-	-	-	0	10	
2013	19	-	9	-	-	-	-	0	10	
2014	21	-	11	-	-	-	-	0	10	
2015	10	-	2	-	-	-	-	0	8	
2016	11	-	2	-	-	-	-	0	9	
2017	12	-	2	-	-	-	-	0	10	
2018	11	-	2	-	-	-	-	0	9	
2019	11	-	2	-	-	-	-	0	9	
2020	8	-	1	-	-	-	-	0	7	
2021	10	-	2	-	-	-	-	0	8	

Road										
		Gasoline	Diesel	Fuel Oil	Auto-LPG	Natural Gas	Aviation Fuel	Bioethanol	Biodiesel	Electricity
	3,976	1,547	2,430	-	-	-	-	-	-	-
	3,836	1,331	2,505	-	-	-	-	-	-	-
	4,408	1,490	2,918	-	-	-	-	-	-	-
	4,922	1,666	3,256	-	-	-	-	-	-	-
	5,149	1,817	3,332	-	-	-	-	-	-	-
	5,909	2,143	3,766	-	-	-	-	-	-	-
	6,522	2,413	4,109	-	-	-	-	-	-	-
	6,608	2,611	3,996	-	-	-	-	-	-	-
	6,667	2,735	3,932	-	-	-	-	-	-	-
	6,813	2,813	4,000	-	-	-	-	-	-	-
	6,834	2,750	4,085	-	0	-	-	-	-	-
	6,861	2,781	4,081	-	0	-	-	-	-	-
	7,201	2,903	4,298	-	0	0	-	-	-	-
	7,175	2,961	4,213	-	1	0	-	-	0	-
	7,412	2,998	4,414	-	0	0	-	-	0	-
	7,088	2,923	4,163	-	1	0	-	1	0	-
	6,639	2,732	3,900	-	4	-	-	1	1	-
	6,934	2,789	4,056	-	45	-	-	20	24	-
	6,622	2,629	3,848	-	68	0	-	39	38	-
	7,066	2,838	4,016	-	84	0	-	45	82	-
	7,086	2,866	3,966	-	74	0	-	98	82	-
	6,990	2,826	3,917	-	46	1	-	108	92	-
	7,342	2,918	4,127	-	39	1	-	172	85	-
	7,696	3,084	4,244	-	57	1	-	222	87	-
	7,853	3,021	4,452	-	42	0	-	246	92	-
	9,076	3,494	5,165	-	30	-	-	281	107	-
	9,969	3,858	5,673	-	13	-	-	309	116	-
	10,338	4,205	5,667	-	10	-	-	339	117	-
	10,761	4,337	5,943	-	10	-	-	350	121	-
	11,161	4,699	5,952	-	9	-	-	380	121	-
	8,854	4,009	4,426	-	4	-	-	324	91	-
	9,935	4,566	4,903	-	3	-	-	369	94	-

(Continuation)

Table 2. Total Final Energy Consumption in Transport, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Transport, Total									
	Water	Gasoline	Diesel	Fuel Oil	Auto-LPG	Aviation Fuel	Bioethanol	Biodiesel	Electricity	
1990	560	44	159	357	-	-	-	-	-	
1991	455	40	169	246	-	-	-	-	-	
1992	587	44	197	346	-	-	-	-	-	
1993	731	47	225	458	-	-	-	-	-	
1994	744	50	227	467	-	-	-	-	-	
1995	1,055	55	282	717	-	-	-	-	-	
1996	1,304	58	347	899	-	-	-	-	-	
1997	1,131	63	437	631	-	-	-	-	-	
1998	1,375	71	409	896	-	-	-	-	-	
1999	1,143	77	409	657	-	-	-	-	-	
2000	1,120	78	381	661	-	-	-	-	-	
2001	1,077	81	352	644	-	-	-	-	-	
2002	1,080	83	351	647	-	-	-	-	-	
2003	928	83	375	470	-	-	-	-	-	
2004	964	79	373	512	-	-	-	-	-	
2005	885	69	354	462	-	-	-	-	-	
2006	836	62	309	465	-	-	-	-	-	
2007	941	61	282	597	-	-	-	0	-	
2008	690	52	306	329	-	-	-	3	-	
2009	610	48	329	230	-	-	-	4	-	
2010	702	48	365	285	-	-	-	4	-	
2011	672	47	378	245	-	-	-	2	-	
2012	636	45	401	185	-	-	-	4	-	
2013	637	17	402	214	-	-	-	4	-	
2014	716	159	375	178	-	-	-	4	-	
2015	1,025	158	675	183	-	-	-	10	-	
2016	851	162	482	203	-	-	-	5	-	
2017	962	165	526	265	-	-	-	6	-	
2018	883	167	508	203	-	-	-	6	-	
2019	899	171	526	196	-	-	-	6	-	
2020	728	137	486	99	-	-	-	6	-	
2021	844	148	497	193	-	-	-	6	-	

Domestic Air									
		Gasoline	Diesel	Fuel Oil	Auto-LPG	Aviation Fuel	Bioethanol	Biodiesel	Electricity
	147	-	-	-	-	147	-	-	-
	127	-	-	-	-	127	-	-	-
	131	-	-	-	-	131	-	-	-
	136	-	-	-	-	136	-	-	-
	189	-	-	-	-	189	-	-	-
	209	-	-	-	-	209	-	-	-
	286	-	-	-	-	286	-	-	-
	334	-	-	-	-	334	-	-	-
	256	-	-	-	-	256	-	-	-
	260	-	-	-	-	260	-	-	-
	341	-	-	-	-	341	-	-	-
	283	-	-	-	-	283	-	-	-
	242	-	-	-	-	242	-	-	-
	235	-	-	-	-	235	-	-	-
	251	-	-	-	-	251	-	-	-
	239	-	-	-	-	239	-	-	-
	241	-	-	-	-	241	-	-	-
	147	-	-	-	-	147	-	-	-
	175	-	-	-	-	175	-	-	-
	229	-	-	-	-	229	-	-	-
	236	-	-	-	-	236	-	-	-
	307	-	-	-	-	307	-	-	-
	370	-	-	-	-	370	-	-	-
	433	-	-	-	-	433	-	-	-
	542	-	-	-	-	542	-	-	-
	446	-	-	-	-	446	-	-	-
	594	-	-	-	-	594	-	-	-
	512	-	-	-	-	512	-	-	-
	584	-	-	-	-	584	-	-	-
	626	-	-	-	-	626	-	-	-
	219	-	-	-	-	219	-	-	-
	194	-	-	-	-	194	-	-	-

Details of Total Final Energy Consumption (TFEC)

Table 3. Total Final Energy Consumption in Industry, by Sub-sector
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total								
		Growth Rate (%)	Manufacturing						
			Growth Rate (%)	Food, beverages and tobacco					
						Beverages	Tobacco	Coco/ Vegetable Oil	
1990	4,136		3,690		1,292	61	24	83	
1991	3,406	(18)	3,068	(17)	1,220	59	19	81	
1992	3,529	4	3,163	3	1,315	57	24	93	
1993	4,090	16	3,706	17	1,453	58	31	106	
1994	3,970	(3)	3,668	(1)	1,433	62	24	96	
1995	4,974	25	4,580	25	1,568	63	29	128	
1996	4,855	(2)	4,492	(2)	1,619	66	26	119	
1997	5,491	13	5,145	15	1,573	190	25	118	
1998	5,176	(6)	4,847	(6)	1,736	228	31	128	
1999	5,073	(2)	4,751	(2)	1,552	174	25	72	
2000	4,537	(11)	4,252	(11)	1,446	168	22	67	
2001	4,509	(1)	4,256	0	1,484	190	24	71	
2002	4,300	(5)	4,056	(5)	1,512	188	19	56	
2003	4,825	12	4,603	13	1,599	192	21	65	
2004	4,749	(2)	4,529	(2)	1,582	196	23	60	
2005	4,952	4	4,748	5	1,628	197	24	56	
2006	5,036	2	4,833	2	1,621	167	23	51	
2007	5,262	4	5,027	4	1,653	189	25	53	
2008	5,778	10	5,538	10	1,737	234	28	65	
2009	5,369	(7)	5,083	(8)	1,727	256	31	38	
2010	5,948	11	5,640	11	1,812	241	36	31	
2011	5,948	(0)	5,570	(1)	1,797	207	33	31	
2012	5,806	(2)	5,380	(3)	1,771	187	31	32	
2013	6,312	9	5,848	9	1,808	172	23	33	
2014	6,529	3	6,060	4	1,871	167	22	30	
2015	6,750	3	6,233	3	1,855	140	21	27	
2016	7,449	10	6,932	11	2,120	164	20	28	
2017	7,925	6	7,342	6	2,085	110	22	33	
2018	7,523	(5)	6,976	(5)	2,071	172	24	42	
2019	7,306	(3)	6,706	(4)	2,106	161	24	49	
2020	6,335	(13)	5,638	(16)	1,719	165	20	45	
2021	6,819	8	6,060	7	1,834	200	20	49	

			Textiles, Apparel and Leather	Wood and wood products	Pulp, paper and print				
						Chemical and petrochemical			
	Sugar	Food Processing					Chemicals Except Fertilizer	Fertilizer	Lube Refining
	331	793	205	83	164	844	180	28	636
	301	760	189	70	138	383	163	23	196
	340	802	214	67	178	298	171	35	92
	361	896	249	66	200	456	184	31	242
	352	898	229	69	178	343	171	28	144
	387	960	275	68	272	715	196	36	483
	406	1,002	283	54	194	542	206	44	293
	375	865	288	47	161	1,029	206	40	783
	468	882	312	44	224	409	237	45	127
	448	833	277	44	252	670	309	40	321
	413	777	250	41	258	322	275	35	12
	425	774	245	42	229	327	268	28	31
	459	790	215	41	229	254	223	28	4
	466	855	222	44	247	290	253	33	5
	464	839	228	41	247	265	233	28	4
	475	875	230	41	252	269	227	37	4
	482	898	190	39	152	296	247	45	4
	484	903	159	48	172	292	250	38	4
	477	933	136	46	155	286	246	35	5
	486	917	132	46	154	295	257	33	5
	495	1,008	141	49	165	285	242	38	5
	503	1,023	140	48	161	264	221	38	5
	505	1,016	146	49	164	247	202	39	5
	523	1,057	253	51	178	226	201	20	5
	541	1,110	266	52	193	286	262	18	5
	560	1,105	173	61	189	326	303	17	6
	575	1,332	179	63	206	328	300	19	9
	583	1,337	191	66	228	373	348	18	6
	581	1,251	197	71	623	311	278	26	7
	588	1,284	212	72	295	299	265	27	7
	443	1,046	180	68	261	364	339	19	6
	458	1,107	197	66	295	287	257	23	7

(Continuation)

Table 3. Total Final Energy Consumption in Industry, by Sub-sector
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total									
	Manufacturing									
	Non-metallic minerals				Iron and steel	Machinery	Not elsewhere specified			
		Glass/ Glass Products	Cement	Other Non- Metallic Minerals				Rubber/ Rubber Products	Other Manufacturing	
1990	746	79	634	33	224	79	52	34	18	
1991	756	62	664	31	193	74	45	27	18	
1992	758	74	650	33	214	70	49	32	17	
1993	873	94	741	39	275	75	59	41	18	
1994	1,034	79	917	39	240	85	57	37	20	
1995	1,191	106	1,040	45	327	107	58	36	22	
1996	1,217	113	1,072	32	381	139	63	38	25	
1997	1,307	111	1,140	56	427	198	115	42	73	
1998	1,348	113	1,176	58	444	236	95	48	47	
1999	1,147	96	1,004	47	463	259	86	44	43	
2000	1,066	82	923	60	499	295	75	38	37	
2001	1,027	78	870	80	495	330	76	29	48	
2002	961	59	830	71	458	328	59	20	39	
2003	1,215	110	1,010	95	505	419	61	21	40	
2004	1,216	110	1,030	76	453	432	64	24	41	
2005	1,333	100	1,153	80	452	466	78	22	56	
2006	1,460	91	1,292	77	495	468	113	18	95	
2007	1,538	103	1,359	76	555	465	145	21	124	
2008	1,926	107	1,747	72	605	505	141	21	121	
2009	1,576	96	1,412	68	517	497	140	21	118	
2010	1,985	99	1,806	80	520	522	161	15	146	
2011	1,956	101	1,775	80	508	521	175	16	159	
2012	1,781	94	1,601	87	519	528	176	16	159	
2013	1,979	91	1,796	92	616	542	196	15	181	
2014	1,976	83	1,816	77	671	564	179	15	164	
2015	2,121	79	1,959	83	724	634	151	15	136	
2016	2,425	91	2,243	91	758	682	169	16	153	
2017	2,733	82	2,569	83	781	723	162	25	138	
2018	1,912	119	1,697	96	823	734	234	35	198	
2019	1,812	107	1,607	98	736	735	440	36	403	
2020	1,097	117	880	99	937	617	396	24	371	
2021	1,298	128	1,061	108	1,027	656	400	29	371	

					Sectoral Shares to Total (%)				
	Mining		Construction		Manufacturing			Mining	Construction
		Growth Rate (%)		Growth Rate (%)		Energy Intensive	Non-Energy Intensive		
	372		74		89	58	31	9	2
	260	(30)	78	5	90	67	23	8	2
	276	6	90	16	90	69	21	8	3
	280	1	105	16	91	67	24	7	3
	199	(29)	104	(0)	92	72	21	5	3
	240	21	154	49	92	66	26	5	3
	198	(17)	164	6	93	70	23	4	3
	159	(20)	186	14	94	61	32	3	3
	166	4	163	(13)	94	71	23	3	3
	137	(17)	185	14	94	70	23	3	4
	114	(17)	170	(8)	94	76	18	3	4
	79	(31)	173	2	94	75	19	2	4
	71	(11)	174	0	94	77	17	2	4
	71	0	151	(13)	95	78	18	1	3
	73	3	148	(2)	95	78	17	2	3
	74	1	131	(12)	96	79	17	1	3
	88	19	115	(12)	96	80	16	2	2
	97	10	138	20	96	80	16	2	3
	119	23	121	(12)	96	81	15	2	2
	150	26	136	12	95	79	16	3	3
	210	40	99	(27)	95	80	15	4	2
	262	25	116	16	94	79	14	4	2
	307	17	119	3	93	78	15	5	2
	341	11	123	3	93	78	15	5	2
	344	1	125	2	93	79	14	5	2
	363	6	154	23	92	81	11	5	2
	296	(18)	221	43	93	82	11	4	3
	329	11	254	15	93	83	10	4	3
	293	(11)	254	(0)	93	80	13	4	3
	327	11	273	7	92	75	16	4	4
	448	37	250	(8)	89	71	18	7	4
	409	(9)	350	40	89	71	18	6	5

Details of Total Final Energy Consumption (TFEC)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	4,136.04	525.73	-	384.88	1,828.19	5.21	21.31	515.77	-	854.94	
1991	3,406.10	655.51	-	341.82	1,040.48	5.54	26.35	533.39	-	803.01	
1992	3,529.41	538.12	-	395.66	1,249.12	6.23	26.88	551.67	-	761.74	
1993	4,089.81	601.82	-	454.18	1,620.13	6.79	28.44	570.63	-	807.82	
1994	3,970.22	697.90	-	398.28	1,328.96	7.13	28.99	590.31	-	918.66	
1995	4,973.80	733.51	-	442.14	2,210.34	7.22	28.36	610.72	-	941.53	
1996	4,854.68	753.69	-	416.77	1,992.14	9.79	31.39	631.90	-	1,019.00	
1997	5,490.51	845.07	-	463.53	2,397.75	11.73	41.07	653.89	-	1,077.48	
1998	5,175.90	719.80	-	444.88	2,212.46	9.44	34.13	676.70	-	1,078.50	
1999	5,073.27	685.53	-	510.46	2,058.85	9.44	38.58	700.37	-	1,070.03	
2000	4,536.59	700.70	-	474.47	1,410.12	51.48	40.62	724.94	-	1,134.26	
2001	4,508.72	693.32	-	473.11	1,248.51	64.82	35.85	750.44	-	1,242.67	
2002	4,300.21	685.12	-	475.42	1,105.33	52.86	32.79	776.91	-	1,171.79	
2003	4,825.09	848.11	-	507.84	1,174.45	145.78	38.56	804.39	-	1,305.96	
2004	4,749.19	896.58	-	475.46	1,190.80	31.91	30.73	832.91	-	1,290.80	
2005	4,952.36	1,056.46	12.11	467.71	1,105.87	69.29	28.01	862.51	-	1,350.40	
2006	5,036.12	1,175.08	52.11	468.05	990.24	72.83	18.43	893.25	-	1,366.13	
2007	5,261.59	1,330.91	76.70	465.09	940.20	81.67	16.64	925.15	4.62	1,420.61	
2008	5,777.83	1,745.66	69.77	565.51	872.01	89.01	8.02	958.28	5.18	1,464.39	
2009	5,369.39	1,469.28	69.71	476.15	787.10	76.10	20.03	992.67	9.36	1,469.00	
2010	5,948.44	1,841.18	69.31	502.02	816.57	64.56	19.23	1,028.38	9.92	1,597.27	
2011	5,947.65	1,838.44	76.57	575.65	615.62	105.74	19.70	1,047.32	6.19	1,662.42	
2012	5,805.97	1,670.82	57.59	600.84	547.15	107.77	17.49	1,066.63	11.89	1,725.79	
2013	6,312.36	2,082.42	62.08	655.00	496.96	110.96	15.27	1,098.87	12.92	1,777.88	
2014	6,528.87	2,260.87	76.89	535.49	526.86	127.88	16.05	1,131.07	11.22	1,842.53	
2015	6,750.05	2,217.92	49.79	586.82	637.18	140.89	17.59	1,151.99	12.02	1,935.85	
2016	7,449.22	2,677.04	64.80	655.89	652.71	130.18	18.76	1,163.51	12.66	2,073.67	
2017	7,925.11	3,007.98	52.51	750.23	613.28	85.20	21.62	1,180.96	14.41	2,198.91	
2018	7,523.33	2,410.92	59.39	692.91	577.66	196.29	1.97	1,198.68	13.42	2,372.08	
2019	7,305.83	2,217.09	61.53	754.09	452.81	172.59	1.87	1,207.07	14.54	2,424.25	
2020	6,335.82	1,629.21	37.20	830.17	527.55	178.36	16.60	905.30	13.12	2,198.31	
2021	6,819.16	1,949.62	0.35	888.13	447.67	199.64	19.89	923.27	15.40	2,375.17	

	Fuel Shares to Total Industry (%)								
	Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	12.71	-	9.31	44.20	0.13	0.52	12.47	-	20.67
	19.25	-	10.04	30.55	0.16	0.77	15.66	-	23.58
	15.25	-	11.21	35.39	0.18	0.76	15.63	-	21.58
	14.72	-	11.11	39.61	0.17	0.70	13.95	-	19.75
	17.58	-	10.03	33.47	0.18	0.73	14.87	-	23.14
	14.75	-	8.89	44.44	0.15	0.57	12.28	-	18.93
	15.52	-	8.58	41.04	0.20	0.65	13.02	-	20.99
	15.39	-	8.44	43.67	0.21	0.75	11.91	-	19.62
	13.91	-	8.60	42.75	0.18	0.66	13.07	-	20.84
	13.51	-	10.06	40.58	0.19	0.76	13.81	-	21.09
	15.45	-	10.46	31.08	1.13	0.90	15.98	-	25.00
	15.38	-	10.49	27.69	1.44	0.80	16.64	-	27.56
	15.93	-	11.06	25.70	1.23	0.76	18.07	-	27.25
	17.58	-	10.53	24.34	3.02	0.80	16.67	-	27.07
	18.88	-	10.01	25.07	0.67	0.65	17.54	-	27.18
	21.33	0.24	9.44	22.33	1.40	0.57	17.42	-	27.27
	23.33	1.03	9.29	19.66	1.45	0.37	17.74	-	27.13
	25.29	1.46	8.84	17.87	1.55	0.32	17.58	0.09	27.00
	30.21	1.21	9.79	15.09	1.54	0.14	16.59	0.09	25.35
	27.36	1.30	8.87	14.66	1.42	0.37	18.49	0.17	27.36
	30.95	1.17	8.44	13.73	1.09	0.32	17.29	0.17	26.85
	30.91	1.29	9.68	10.35	1.78	0.33	17.61	0.10	27.95
	28.78	0.99	10.35	9.42	1.86	0.30	18.37	0.20	29.72
	32.99	0.98	10.38	7.87	1.76	0.24	17.41	0.20	28.17
	34.63	1.18	8.20	8.07	1.96	0.25	17.32	0.17	28.22
	32.86	0.74	8.69	9.44	2.09	0.26	17.07	0.18	28.68
	35.94	0.87	8.80	8.76	1.75	0.25	15.62	0.17	27.84
	37.96	0.66	9.47	7.74	1.08	0.27	14.90	0.18	27.75
	32.05	0.79	9.21	7.68	2.61	0.03	15.93	0.18	31.53
	30.35	0.84	10.32	6.20	2.36	0.03	16.52	0.20	33.18
	25.71	0.59	13.10	8.33	2.82	0.26	14.29	0.21	34.70
	28.59	0.01	13.02	6.56	2.93	0.29	13.54	0.23	34.83

(Continuation)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
	Manufacturing										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	3,689.81	525.73	-	247.65	1,587.74	5.14	20.57	515.77	-	787.21	
1991	3,068.04	655.51	-	218.65	890.16	5.41	25.54	533.39	-	739.39	
1992	3,162.61	538.12	-	261.80	1,077.27	6.16	26.23	551.67	-	701.39	
1993	3,705.71	601.82	-	319.93	1,436.05	6.70	26.75	570.63	-	743.82	
1994	3,667.70	697.90	-	282.85	1,216.03	7.13	27.60	590.31	-	845.87	
1995	4,579.53	733.51	-	256.30	2,072.05	7.20	27.30	610.72	-	872.45	
1996	4,492.40	753.69	-	221.39	1,895.08	9.48	30.18	631.90	-	950.69	
1997	5,144.79	845.07	-	250.69	2,333.43	10.96	38.35	653.89	-	1,012.40	
1998	4,847.49	719.80	-	261.88	2,128.27	8.88	31.02	676.70	-	1,020.94	
1999	4,751.30	685.53	-	296.38	2,005.77	9.23	34.23	700.37	-	1,019.79	
2000	4,252.41	700.70	-	278.15	1,369.90	51.37	39.05	724.94	-	1,088.29	
2001	4,256.28	693.32	-	291.75	1,228.91	64.76	34.79	750.44	-	1,192.30	
2002	4,055.79	685.12	-	300.44	1,087.40	52.74	28.89	776.91	-	1,124.29	
2003	4,602.94	848.11	-	357.79	1,159.69	145.27	34.66	804.39	-	1,253.03	
2004	4,528.58	896.58	-	328.38	1,172.10	31.90	28.23	832.91	-	1,238.48	
2005	4,748.00	1,056.46	12.11	338.76	1,085.95	69.25	27.28	862.51	-	1,295.67	
2006	4,833.09	1,175.08	52.11	337.39	973.46	72.79	18.26	893.25	-	1,310.76	
2007	5,026.69	1,330.91	76.70	314.16	915.15	81.64	16.59	925.15	3.36	1,363.03	
2008	5,537.69	1,745.66	69.77	402.69	858.22	88.97	5.46	958.28	3.60	1,405.04	
2009	5,083.43	1,469.28	69.71	307.99	732.27	76.04	19.98	992.67	6.04	1,409.46	
2010	5,639.50	1,841.18	69.31	298.18	780.45	64.38	19.20	1,028.38	5.89	1,532.54	
2011	5,570.15	1,838.44	76.57	304.28	580.34	105.53	19.56	1,047.32	3.07	1,595.04	
2012	5,379.70	1,670.82	57.59	287.65	510.71	107.52	17.40	1,066.63	5.53	1,655.85	
2013	5,848.35	2,082.42	62.08	304.13	463.66	110.69	14.91	1,098.87	5.77	1,705.83	
2014	6,059.53	2,260.87	76.89	195.53	484.45	122.45	16.04	1,131.07	4.37	1,767.85	
2015	6,232.56	2,217.92	49.79	222.92	575.65	134.64	17.56	1,151.99	4.70	1,857.38	
2016	6,932.42	2,677.04	64.80	292.72	596.26	124.15	18.74	1,163.51	5.58	1,989.63	
2017	7,341.74	3,007.98	52.51	344.65	541.63	77.55	20.27	1,180.96	6.40	2,109.78	
2018	6,976.24	2,410.92	59.39	311.92	534.61	176.79	1.95	1,198.68	6.04	2,275.94	
2019	6,706.39	2,217.09	61.53	339.46	391.42	155.44	1.85	1,207.07	6.54	2,325.99	
2020	5,638.51	1,629.21	37.20	292.00	474.17	169.08	16.59	905.30	5.77	2,109.21	
2021	6,060.20	1,949.62	0.35	295.83	395.81	190.67	19.89	923.27	5.84	2,278.91	

	Beverages									
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	61.17	-	-	26.55	-	0.21	-	-	-	34.41
	58.69	-	-	26.12	-	0.25	-	-	-	32.32
	56.66	-	-	25.70	-	0.30	-	-	-	30.66
	58.14	-	-	25.27	-	0.35	-	-	-	32.52
	62.25	-	-	24.85	-	0.42	-	-	-	36.98
	63.40	-	-	24.42	-	0.50	-	-	-	38.48
	66.27	-	-	24.00	-	0.60	-	-	-	41.67
	190.08	-	-	25.36	120.06	0.45	0.78	-	-	43.43
	227.50	-	-	23.69	155.88	0.59	0.59	-	-	46.75
	174.46	-	-	20.76	112.65	0.83	0.20	-	-	40.02
	168.49	-	-	19.01	106.77	2.30	0.46	-	-	39.95
	189.71	-	-	20.00	122.38	2.57	0.99	-	-	43.77
	187.72	-	-	22.52	120.43	2.55	0.94	-	-	41.28
	192.36	-	-	29.80	108.69	6.80	1.07	-	-	46.00
	196.18	-	-	18.28	130.22	1.72	0.49	-	-	45.47
	197.49	6.06	-	16.51	124.54	2.50	0.30	-	-	47.57
	167.08	7.49	-	20.64	88.24	2.21	0.37	-	-	48.12
	188.98	7.48	-	18.45	111.75	0.80	0.38	-	0.08	50.04
	234.09	13.95	-	28.22	137.68	2.32	0.09	-	0.25	51.58
	255.76	12.89	-	30.12	159.10	0.32	1.00	-	0.58	51.74
	241.11	15.63	-	30.16	137.67	0.12	0.67	-	0.60	56.26
	207.02	15.63	-	35.12	96.71	0.12	0.61	-	0.27	58.56
	187.38	16.07	-	24.89	84.44	0.14	0.55	-	0.49	60.79
	171.71	15.63	-	18.42	73.99	0.09	0.60	-	0.36	62.62
	166.66	18.36	-	13.27	69.46	0.04	0.36	-	0.27	64.90
	140.36	10.87	-	12.43	48.11	0.05	0.45	-	0.25	68.19
	164.15	11.13	-	13.37	66.17	0.02	0.18	-	0.25	73.04
	110.13	12.45	-	20.12	0.03	-	0.07	-	-	77.46
	172.15	17.08	-	12.43	58.85	-	0.00	-	0.24	83.56
	160.97	22.26	-	13.52	39.53	-	0.00	-	0.26	85.39
	164.71	17.01	-	23.49	44.98	1.34	-	-	0.46	77.43
	199.54	33.20	-	34.21	46.93	0.85	0.02	-	0.68	83.66

(Continuation)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
	Manufacturing										
	Tobacco	Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	23.89	-	-	2.35	12.59	0.06	-	-	-	8.89	
1991	19.39	-	-	1.97	9.06	0.02	-	-	-	8.35	
1992	23.69	-	-	3.50	12.16	0.11	-	-	-	7.92	
1993	31.15	-	-	4.31	18.33	0.11	-	-	-	8.40	
1994	23.88	-	-	2.84	11.42	0.08	-	-	-	9.55	
1995	28.97	-	-	3.41	15.86	0.10	0.01	-	-	9.58	
1996	26.11	-	-	3.23	12.80	0.06	0.01	-	-	10.01	
1997	25.03	-	-	2.79	12.07	0.10	0.01	-	-	10.05	
1998	30.70	-	-	3.90	16.56	0.07	0.10	-	-	10.06	
1999	25.06	-	-	3.30	12.70	0.05	0.40	-	-	8.61	
2000	21.66	-	-	2.93	9.82	0.63	-	-	-	8.29	
2001	24.22	-	-	2.38	12.22	0.55	-	-	-	9.08	
2002	18.94	-	-	1.50	8.51	0.38	-	-	-	8.56	
2003	20.99	-	-	2.54	7.96	0.95	-	-	-	9.54	
2004	22.79	-	-	3.65	9.59	0.13	-	-	-	9.43	
2005	23.60	-	-	3.37	10.14	0.22	-	-	-	9.86	
2006	22.89	-	-	4.06	8.74	0.10	-	-	-	9.98	
2007	24.71	-	-	2.81	11.38	0.10	-	-	0.04	10.38	
2008	27.73	-	-	4.75	12.10	0.14	-	-	0.04	10.70	
2009	30.72	-	-	5.08	14.72	0.08	-	-	0.10	10.73	
2010	36.34	-	-	4.46	18.70	1.43	-	-	0.09	11.67	
2011	33.36	-	-	5.30	13.85	2.03	-	-	0.04	12.14	
2012	31.15	-	-	4.56	11.49	2.40	-	-	0.09	12.61	
2013	22.80	-	-	3.40	4.08	2.26	-	-	0.07	12.99	
2014	22.41	-	-	2.77	2.71	3.41	-	-	0.06	13.46	
2015	21.48	-	-	3.17	1.69	2.41	-	-	0.07	14.14	
2016	20.22	-	-	3.11	0.42	1.49	-	-	0.06	15.15	
2017	21.89	2.22	-	3.19	0.04	0.31	-	-	0.06	16.06	
2018	23.97	2.12	-	2.54	0.81	1.13	0.00	-	0.05	17.33	
2019	23.90	-	-	2.76	2.38	0.99	0.00	-	0.05	17.71	
2020	20.35	-	-	0.90	1.24	2.13	-	-	0.02	16.06	
2021	19.87	-	-	0.39	0.03	2.09	-	-	0.01	17.35	

Food and Food Processing										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	1,207.30	24.34	-	96.43	293.64	2.59	1.68	510.23	-	278.39
	1,141.91	40.72	-	86.77	221.25	2.10	1.97	527.63	-	261.48
	1,234.64	35.40	-	108.55	292.00	2.69	2.29	545.68	-	248.04
	1,363.96	32.67	-	110.64	388.60	2.77	1.84	564.40	-	263.05
	1,346.77	3.15	-	88.72	367.78	2.89	1.27	583.83	-	299.14
	1,475.65	3.15	-	92.00	499.03	2.50	1.10	603.98	-	273.88
	1,526.95	-	-	100.48	534.49	3.35	1.94	624.89	-	261.80
	1,358.24	1.04	-	90.06	373.67	3.11	2.05	646.60	-	241.71
	1,477.78	-	-	95.80	501.50	1.84	1.66	669.12	-	207.87
	1,352.76	-	-	102.59	377.16	2.07	1.27	692.49	-	177.18
	1,256.20	-	-	84.07	286.57	8.78	0.93	716.74	-	159.11
	1,270.29	-	-	82.30	261.12	10.22	0.42	741.92	-	174.31
	1,304.98	-	-	95.23	266.91	10.01	0.42	768.04	-	164.37
	1,385.48	-	-	118.87	263.50	24.12	0.62	795.16	-	183.19
	1,363.15	-	-	104.59	248.01	5.61	0.55	823.31	-	181.07
	1,406.55	-	-	108.47	241.93	13.32	0.88	852.54	-	189.43
	1,430.56	-	-	108.68	228.59	18.58	0.21	882.87	-	191.63
	1,439.12	14.90	-	98.92	189.14	21.03	0.44	914.36	1.05	199.28
	1,474.75	17.68	-	100.17	174.05	29.19	0.27	947.06	0.93	205.42
	1,440.79	17.55	-	67.66	145.46	21.61	0.13	981.00	1.32	206.06
	1,534.16	22.79	-	64.46	189.41	15.86	0.08	1,016.24	1.27	224.06
	1,556.38	20.98	-	67.73	165.69	33.23	0.07	1,034.94	0.53	233.19
	1,552.56	20.68	-	56.93	143.97	33.71	0.06	1,054.00	1.12	242.08
	1,613.14	59.07	-	58.83	117.18	41.62	0.06	1,085.83	1.16	249.39
	1,682.18	132.50	-	45.42	78.59	48.65	0.03	1,117.60	0.93	258.46
	1,692.73	111.46	-	51.95	64.46	53.96	0.03	1,138.25	1.07	271.55
	1,935.70	267.64	-	85.28	88.56	52.13	-	1,149.63	1.57	290.88
	1,952.81	300.34	-	82.28	61.79	31.46	0.00	1,166.88	1.62	308.45
	1,874.44	120.30	-	93.28	82.65	59.22	0.04	1,184.38	1.81	332.74
	1,920.65	179.27	-	101.52	53.06	52.07	0.04	1,192.67	1.96	340.06
	1,534.15	137.36	-	72.23	62.61	57.61	0.05	894.50	1.43	308.37
	1,614.15	151.28	0	80.15	65.84	69.88	0	912.25	1.58	333.18

(Continuation)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
	Manufacturing										
	Textiles, Apparel and Leather										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	205.26	-	-	7.51	106.32	0.38	0.65	-	-	90.40	
1991	189.18	-	-	6.64	96.13	0.74	0.76	-	-	84.91	
1992	213.77	-	-	8.33	123.39	0.50	1.00	-	-	80.55	
1993	248.60	-	-	7.74	154.10	0.44	0.91	-	-	85.42	
1994	228.55	-	-	5.08	124.63	0.49	1.21	-	-	97.14	
1995	274.54	-	-	5.79	168.95	0.57	1.10	-	-	98.13	
1996	283.33	-	-	5.83	172.45	0.53	1.32	-	-	103.19	
1997	287.56	-	-	5.83	175.06	0.44	1.81	-	-	104.42	
1998	311.90	-	-	4.89	207.83	0.24	0.95	-	-	98.00	
1999	277.47	-	-	5.13	180.55	0.20	0.90	-	-	90.70	
2000	250.36	-	-	3.99	157.14	0.56	0.76	-	-	87.91	
2001	245.32	-	-	3.47	144.38	0.63	0.53	-	-	96.31	
2002	215.45	-	-	2.86	120.66	0.68	0.44	-	-	90.82	
2003	222.22	-	-	2.71	115.84	1.89	0.56	-	-	101.21	
2004	228.09	-	-	2.08	125.05	0.53	0.39	-	-	100.04	
2005	230.11	-	-	2.32	121.98	0.81	0.35	-	-	104.66	
2006	190.31	-	-	1.89	81.81	0.48	0.25	-	-	105.88	
2007	158.65	-	-	1.77	46.14	0.44	0.18	-	0.01	110.10	
2008	136.06	-	-	2.26	20.01	0.23	0.04	-	0.02	113.49	
2009	132.46	-	-	0.98	16.21	1.30	0.10	-	0.02	113.85	
2010	141.41	-	-	1.31	13.77	2.45	0.06	-	0.03	123.79	
2011	140.45	-	-	1.08	7.04	3.45	0.03	-	0.01	128.84	
2012	145.62	-	-	2.18	5.93	3.67	0.04	-	0.04	133.75	
2013	253.46	106.26	-	1.72	5.63	2.03	-	-	0.03	137.79	
2014	266.45	113.72	-	0.60	8.36	0.95	-	-	0.01	142.80	
2015	173.09	9.22	-	0.67	12.30	0.86	-	-	0.01	150.03	
2016	179.11	8.13	-	0.71	8.76	0.79	-	-	0.01	160.71	
2017	190.95	8.72	-	0.81	10.61	0.38	-	-	0.02	170.42	
2018	197.03	8.56	-	0.81	0.64	3.16	-	-	0.02	183.84	
2019	212.37	20.06	-	0.88	0.74	2.78	-	-	0.02	187.88	
2020	179.66	8.02	-	0.48	0.68	0.11	-	-	0.01	170.37	
2021	197.13	11.99	-	0.39	0.48	0.18	-	-	0.01	184.08	

Wood and wood products										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	83.32	-	-	45.70	10.01	-	0.20	-	-	27.41
	69.70	-	-	39.15	4.78	-	0.02	-	-	25.74
	67.13	-	-	37.86	4.81	-	0.04	-	-	24.42
	66.04	-	-	32.31	7.81	-	0.02	-	-	25.90
	68.78	-	-	28.61	10.70	-	0.03	-	-	29.45
	67.92	-	-	28.07	10.05	-	0.02	-	-	29.79
	53.63	-	-	13.74	8.50	-	0.02	-	-	31.36
	46.90	-	-	11.49	3.61	-	0.02	-	-	31.78
	44.13	-	-	9.05	5.20	-	0.02	-	-	29.86
	44.11	-	-	9.00	7.42	-	0.02	-	-	27.67
	41.45	-	-	9.10	5.47	0.00	0.02	-	-	26.85
	42.02	-	-	8.32	4.21	0.02	0.05	-	-	29.42
	40.74	-	-	10.44	2.52	0.03	0.01	-	-	27.74
	43.50	-	-	10.14	2.41	0.00	0.03	-	-	30.92
	41.31	-	-	8.05	2.67	0.01	0.02	-	-	30.56
	40.55	-	-	6.72	1.79	0.05	0.02	-	-	31.97
	39.46	-	-	5.61	1.35	0.15	0.02	-	-	32.34
	47.85	-	-	8.05	6.01	0.08	0.01	-	0.08	33.63
	45.61	-	-	3.68	6.91	0.18	0.13	-	0.04	34.67
	45.80	-	-	3.99	6.89	0.03	0.03	-	0.08	34.78
	48.69	-	-	4.79	5.77	0.18	0.04	-	0.09	37.81
	47.87	-	-	3.07	0.80	3.89	-	-	0.75	39.36
	48.59	-	-	2.83	1.66	3.18	-	-	0.06	40.86
	51.00	-	-	3.08	2.52	3.25	-	-	0.06	42.09
	51.86	-	-	2.08	2.64	3.48	-	-	0.04	43.62
	60.83	-	-	4.25	6.86	3.81	-	-	0.09	45.83
	63.40	-	-	4.47	6.84	2.91	-	-	0.09	49.09
	65.88	-	-	5.75	6.20	1.76	-	-	0.11	52.06
	71.36	-	-	5.21	6.10	3.79	-	-	0.10	56.16
	72.34	-	-	5.67	5.84	3.34	-	-	0.11	57.39
	67.75	-	-	5.78	3.81	6.00	-	-	0.11	52.04
	66.18	-	-	1.68	0.70	7.53	-	-	0.03	56.23

(Continuation)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
	Manufacturing										
	Pulp, paper and print										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	164.09	-	-	9.52	125.80	0.21	0.07	-	-	28.49	
1991	137.81	-	-	9.42	101.36	0.20	0.06	-	-	26.76	
1992	177.62	-	-	5.39	146.60	0.19	0.06	-	-	25.39	
1993	199.63	-	-	2.30	170.17	0.19	0.05	-	-	26.92	
1994	178.10	-	-	1.37	145.88	0.18	0.05	-	-	30.62	
1995	272.03	-	-	2.70	233.56	0.20	0.06	-	-	35.52	
1996	193.58	-	-	2.39	147.74	0.11	0.46	-	-	42.88	
1997	161.22	-	-	3.27	107.51	0.12	0.49	-	-	49.83	
1998	224.36	-	-	2.02	168.05	0.09	0.51	-	-	53.70	
1999	251.75	-	-	2.70	190.81	0.08	1.08	-	-	57.07	
2000	258.35	-	-	2.32	190.84	0.29	1.38	-	-	63.52	
2001	228.92	-	-	2.58	155.51	0.44	0.81	-	-	69.59	
2002	228.66	-	-	2.22	159.80	0.35	0.68	-	-	65.62	
2003	247.46	-	-	3.01	169.72	0.56	1.05	-	-	73.13	
2004	246.81	-	-	2.52	171.32	0.13	0.57	-	-	72.28	
2005	251.62	6.33	-	2.47	166.64	0.26	0.30	-	-	75.62	
2006	152.00	6.33	-	4.87	63.86	0.28	0.16	-	-	76.50	
2007	171.72	59.14	-	2.74	29.43	0.37	0.45	-	0.03	79.55	
2008	155.43	56.60	-	2.77	13.48	0.38	0.15	-	0.02	82.01	
2009	153.62	52.80	-	4.03	14.09	0.16	0.20	-	0.08	82.26	
2010	164.87	52.08	-	5.50	17.70	0.00	0.02	-	0.11	89.45	
2011	160.60	52.08	-	6.24	8.98	0.14	0.02	-	0.05	93.10	
2012	163.52	54.18	-	5.05	7.36	0.15	0.03	-	0.09	96.64	
2013	177.60	67.47	-	4.30	6.02	0.13	0.03	-	0.08	99.56	
2014	193.29	81.65	-	2.30	5.78	0.31	0.02	-	0.05	103.18	
2015	188.55	74.25	-	1.92	3.26	0.62	0.07	-	0.04	108.41	
2016	206.45	84.83	-	1.66	3.30	0.49	0.02	-	0.03	116.13	
2017	227.60	100.17	-	1.62	1.76	0.86	0.02	-	0.03	123.14	
2018	622.96	482.60	-	1.49	3.68	2.32	-	-	0.03	132.84	
2019	294.85	152.84	-	1.62	2.56	2.04	-	-	0.03	135.76	
2020	261.32	132.06	-	1.75	3.12	1.25	0.01	-	0.03	123.11	
2021	295.26	152.40	-	5.20	3.33	1.20	0.02	-	0.10	133.01	

Chemical and petrochemical										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	843.61	38.24	-	17.66	691.83	0.03	9.66	-	-	86.18
	382.85	31.57	-	13.80	243.75	0.03	12.75	-	-	80.95
	298.23	29.07	-	20.45	156.64	0.02	15.26	-	-	76.79
	456.28	17.11	-	82.18	260.71	0.02	14.83	-	-	81.43
	342.87	10.37	-	86.58	137.52	0.01	15.79	-	-	92.61
	714.92	12.76	-	44.24	550.08	0.01	17.33	-	-	90.51
	542.32	11.95	-	18.88	396.68	0.70	22.04	-	-	92.08
	1,029.10	15.20	-	19.73	881.67	1.45	20.86	-	-	90.17
	408.95	5.88	-	19.53	284.10	1.25	16.28	-	-	81.92
	670.36	9.00	-	29.33	538.67	1.34	18.62	-	-	73.39
	321.55	6.92	-	43.21	170.12	8.67	23.75	-	-	68.88
	327.08	13.87	-	43.96	160.01	10.86	22.92	-	-	75.46
	254.43	16.78	-	38.65	100.91	5.45	21.48	-	-	71.16
	289.74	16.20	-	20.33	129.56	18.52	25.83	-	-	79.31
	264.51	12.59	-	21.08	127.70	3.18	21.58	-	-	78.39
	268.62	24.64	-	21.71	112.06	7.89	20.32	-	-	82.00
	296.11	24.03	-	24.68	140.55	8.61	15.27	-	-	82.96
	291.64	22.43	-	27.44	135.01	6.78	13.16	-	0.55	86.27
	285.59	16.55	-	46.40	117.83	11.97	3.49	-	0.42	88.93
	294.75	16.55	-	48.74	99.47	22.26	17.58	-	0.94	89.21
	285.33	18.34	-	53.82	97.41	0.86	16.84	-	1.06	97.00
	264.01	18.34	-	58.29	61.01	8.31	16.66	-	0.46	100.95
	246.79	18.67	-	49.23	52.40	6.26	14.44	-	1.00	104.80
	226.24	2.66	-	50.17	47.82	4.50	12.12	-	0.99	107.96
	286.23	9.00	-	38.19	108.22	4.60	13.56	-	0.78	111.89
	326.34	10.37	-	38.75	137.95	5.64	15.28	-	0.80	117.56
	328.37	11.71	-	44.76	121.15	6.75	17.21	-	0.87	125.93
	372.89	14.24	-	46.76	154.47	4.07	18.90	-	0.92	133.53
	311.27	18.93	-	36.74	99.93	9.13	1.79	-	0.71	144.05
	298.91	17.43	-	39.98	83.79	8.03	1.70	-	0.77	147.22
	364.29	38.93	-	43.60	114.81	18.03	14.56	-	0.86	133.49
	287.39	44.38	-	38.62	22.91	17.88	18.60	-	0.76	144.24

(Continuation)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
	Manufacturing										
	Non-metallic minerals										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	745.92	456.85	-	18.70	215.57	0.15	4.48	-	-	50.16	
1991	756.09	576.18	-	14.78	112.87	0.34	4.81	-	-	47.11	
1992	757.57	467.37	-	26.75	213.81	0.36	4.59	-	-	44.69	
1993	873.23	542.96	-	29.41	247.77	0.92	4.78	-	-	47.40	
1994	1,033.95	675.38	-	26.42	271.99	0.99	5.28	-	-	53.90	
1995	1,190.72	708.46	-	33.21	385.00	0.84	4.45	-	-	58.76	
1996	1,216.76	734.19	-	30.52	382.19	0.97	1.73	-	-	67.16	
1997	1,306.94	820.06	-	39.67	363.79	0.64	8.33	-	-	74.44	
1998	1,347.80	706.29	-	37.39	519.65	0.38	6.96	-	-	77.14	
1999	1,146.96	668.33	-	29.04	362.10	0.22	7.82	-	-	79.45	
2000	1,065.68	685.67	-	21.41	247.86	16.77	7.59	-	-	86.38	
2001	1,027.18	671.28	-	30.55	202.06	22.90	5.75	-	-	94.63	
2002	960.50	657.18	-	24.00	166.43	19.78	3.88	-	-	89.23	
2003	1,215.44	823.63	-	28.91	201.28	58.41	3.75	-	-	99.45	
2004	1,216.22	879.84	-	36.05	186.92	12.71	2.41	-	-	98.30	
2005	1,333.15	1,015.76	-	29.59	157.23	25.92	1.80	-	-	102.84	
2006	1,459.81	1,133.85	-	26.00	172.76	22.92	0.25	-	-	104.03	
2007	1,538.24	1,182.08	-	21.06	198.81	27.78	0.15	-	0.18	108.18	
2008	1,926.14	1,589.85	-	34.12	167.28	22.66	0.40	-	0.32	111.52	
2009	1,575.84	1,293.05	-	36.99	121.92	11.26	0.01	-	0.73	111.87	
2010	1,985.35	1,645.80	-	48.21	161.02	7.71	0.02	-	0.95	121.64	
2011	1,955.72	1,650.22	-	47.80	119.23	11.48	0.01	-	0.37	126.60	
2012	1,781.38	1,477.45	-	54.17	101.85	15.42	0.02	-	1.05	131.42	
2013	1,979.11	1,665.69	-	58.30	103.57	15.01	0.00	-	1.15	135.39	
2014	1,976.24	1,690.77	-	33.19	94.12	16.79	0.00	-	1.05	140.31	
2015	2,121.26	1,771.23	-	40.23	143.77	17.67	-	-	0.94	147.42	
2016	2,425.23	2,058.71	-	53.57	145.66	8.33	0.00	-	1.04	157.91	
2017	2,733.41	2,337.64	-	57.22	162.06	7.92	-	-	1.13	167.45	
2018	1,912.42	1,507.90	-	49.85	149.13	23.93	-	-	0.97	180.64	
2019	1,811.58	1,458.57	-	54.25	92.06	21.04	-	-	1.05	184.61	
2020	1,096.82	697.89	-	70.64	139.71	19.77	-	-	1.40	167.41	
2021	1,297.51	903.87	-	69.99	123.15	18.24	-	-	1.38	180.87	

	Iron and steel									
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	223.92	6.29	-	20.34	111.59	1.51	3.84	-	-	80.36
	193.42	7.04	-	17.49	86.58	1.73	5.11	-	-	75.47
	213.70	6.28	-	22.70	108.30	1.98	2.84	-	-	71.59
	275.01	9.09	-	22.93	160.98	1.90	4.19	-	-	75.93
	240.43	9.00	-	16.49	122.68	2.07	3.85	-	-	86.34
	326.71	9.14	-	20.30	187.24	2.49	3.02	-	-	104.52
	381.18	7.55	-	20.30	216.09	3.17	2.39	-	-	131.68
	426.73	8.76	-	39.36	211.06	4.10	3.78	-	-	159.66
	443.75	7.64	-	49.80	199.52	3.81	3.43	-	-	179.55
	462.82	8.20	-	78.63	170.25	3.77	2.86	-	-	199.11
	499.15	8.10	-	83.30	160.27	12.81	3.42	-	-	231.24
	495.35	8.17	-	79.47	135.88	16.08	2.39	-	-	253.34
	457.55	8.25	-	76.48	120.71	12.63	0.59	-	-	238.89
	505.31	8.29	-	69.68	127.15	33.04	0.91	-	-	266.24
	453.11	4.14	-	39.76	137.26	7.67	1.13	-	-	263.15
	452.04	3.47	-	37.52	115.91	17.74	2.09	-	-	275.31
	494.51	3.17	-	35.67	157.55	18.68	0.93	-	-	278.51
	555.30	44.67	-	63.98	135.95	19.81	0.52	-	0.75	289.62
	605.47	50.81	-	85.34	150.06	19.38	0.52	-	0.81	298.54
	516.87	76.20	-	42.00	83.85	14.06	0.45	-	0.83	299.48
	519.73	85.52	-	15.29	82.47	9.72	0.79	-	0.30	325.64
	508.31	80.99	-	13.40	60.35	12.91	1.63	-	0.11	338.92
	519.32	83.56	-	11.35	58.05	12.69	1.61	-	0.22	351.84
	615.60	161.25	-	15.42	62.55	12.42	1.19	-	0.30	362.46
	671.43	198.74	-	13.40	68.16	14.18	1.04	-	0.27	375.64
	723.60	217.54	-	16.00	77.55	16.73	0.79	-	0.33	394.66
	758.35	227.89	-	15.85	75.36	16.08	0.11	-	0.31	422.76
	780.90	213.71	-	27.88	80.08	10.37	0.01	-	0.55	448.29
	823.44	210.48	-	18.39	88.71	21.90	0.00	-	0.36	483.59
	736.07	109.67	-	20.01	92.52	19.26	0.00	-	0.39	494.23
	937.27	371.45	-	11.15	89.20	15.64	1.44	-	0.22	448.17
	1,026.57	378.88	-	13.11	131.45	18.14	0.51	-	0.26	484.22

(Continuation)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
	Manufacturing										
	Machinery										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	78.96	-	-	-	-	-	-	-	-	78.96	
1991	74.16	-	-	-	-	-	-	-	-	74.16	
1992	70.35	-	-	-	-	-	-	-	-	70.35	
1993	74.61	-	-	-	-	-	-	-	-	74.61	
1994	84.85	-	-	-	-	-	-	-	-	84.85	
1995	106.57	-	-	-	-	-	-	-	-	106.57	
1996	139.31	-	-	-	-	-	-	-	-	139.31	
1997	197.54	-	-	9.67	11.85	0.54	0.21	-	-	175.27	
1998	235.71	-	-	13.57	16.48	0.62	0.52	-	-	204.52	
1999	259.07	-	-	13.41	8.62	0.67	1.06	-	-	235.33	
2000	294.61	-	-	6.93	2.84	0.56	0.70	-	-	283.59	
2001	330.15	-	-	15.71	2.98	0.48	0.29	-	-	310.69	
2002	327.57	-	-	24.79	8.51	0.88	0.43	-	-	292.97	
2003	419.23	-	-	69.71	21.25	0.90	0.85	-	-	326.51	
2004	432.09	-	-	90.50	17.60	0.17	1.09	-	-	322.72	
2005	466.06	-	-	106.82	19.98	0.42	1.22	-	-	337.62	
2006	467.66	-	-	103.74	20.99	0.57	0.80	-	-	341.56	
2007	465.23	-	-	66.19	38.25	3.74	1.28	-	0.58	355.18	
2008	505.41	-	-	92.99	42.81	2.52	0.24	-	0.74	366.12	
2009	497.31	-	-	65.48	57.81	4.98	0.47	-	1.30	367.28	
2010	521.79	-	-	68.04	51.41	1.00	0.64	-	1.34	399.35	
2011	521.22	-	-	56.86	37.14	10.64	0.52	-	0.43	415.63	
2012	527.83	-	-	52.47	31.80	10.40	0.65	-	1.03	431.48	
2013	541.74	-	-	54.52	28.70	12.04	0.90	-	1.08	444.50	
2014	564.01	-	-	43.74	40.96	16.72	1.03	-	0.89	460.67	
2015	633.51	-	-	52.98	75.44	19.05	0.95	-	1.09	484.00	
2016	682.01	-	-	69.54	70.20	21.23	1.23	-	1.35	518.46	
2017	722.82	-	-	97.66	59.05	13.15	1.26	-	1.93	549.77	
2018	733.64	-	-	87.55	27.07	24.15	0.11	-	1.70	593.06	
2019	735.19	-	-	95.28	10.63	21.23	0.11	-	1.84	606.10	
2020	616.64	-	-	50.11	0.84	14.56	0.53	-	0.99	549.62	
2021	656.46	-	-	44.17	0.45	16.38	0.74	-	0.87	593.84	

Not elsewhere specified										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	52.37	-	-	2.88	20.39	-	0.01	5.54	-	23.55
	44.83	-	-	2.52	14.37	-	0.06	5.76	-	22.12
	49.25	-	-	2.57	19.55	-	0.16	5.99	-	20.98
	59.04	-	-	2.83	27.60	-	0.13	6.23	-	22.25
	57.27	-	-	1.91	23.44	-	0.13	6.48	-	25.31
	58.11	-	-	2.15	22.29	-	0.21	6.74	-	26.72
	62.97	-	-	2.01	24.13	-	0.26	7.01	-	29.55
	115.45	-	-	3.46	73.08	-	0.00	7.29	-	31.63
	94.90	-	-	2.25	53.49	-	0.00	7.58	-	31.58
	86.48	-	-	2.50	44.83	-	0.01	7.88	-	31.26
	74.89	-	-	1.88	32.18	-	0.05	8.20	-	32.58
	76.04	-	-	3.02	28.17	-	0.64	8.53	-	35.69
	59.24	2.90	-	1.76	12.02	0.00	0.02	8.87	-	33.66
	61.22	-	-	2.08	12.33	0.07	0.00	9.22	-	37.51
	64.31	-	-	1.83	15.77	0.04	0.00	9.59	-	37.08
	78.21	0.20	12.11	3.25	13.76	0.12	-	9.98	-	38.79
	112.70	0.20	52.11	1.55	9.01	0.20	-	10.38	-	39.24
	145.26	0.20	76.70	2.73	13.29	0.70	0.01	10.79	0.02	40.81
	141.42	0.23	69.77	2.00	15.99	-	0.12	11.22	0.02	42.06
	139.52	0.23	69.71	2.92	12.74	-	-	11.67	0.06	42.20
	160.73	1.02	69.31	2.14	5.12	25.05	0.02	12.14	0.04	45.88
	175.20	0.20	76.57	9.37	9.52	19.34	0.00	12.38	0.05	47.75
	175.58	0.21	57.59	23.98	11.76	19.49	-	12.63	0.34	49.57
	195.94	4.39	62.08	35.95	11.59	17.34	-	13.05	0.48	51.07
	178.77	16.13	76.89	0.57	5.45	13.33	-	13.47	0.01	52.92
	150.82	12.99	49.79	0.59	4.27	13.84	-	13.74	0.01	55.61
	169.43	6.99	64.80	0.41	9.84	13.95	-	13.88	0.01	59.56
	162.46	18.50	52.51	1.37	5.53	7.27	-	14.08	0.03	63.16
	233.56	42.95	59.39	3.63	17.03	28.06	-	14.30	0.07	68.14
	439.55	257.00	61.53	3.95	8.30	24.67	-	14.40	0.08	69.63
	395.55	226.49	37.20	11.86	13.18	32.65	-	10.80	0.23	63.14
	400.13	273.62	0.35	7.93	0.54	38.29	-	11.03	0.16	68.22

(Continuation)

Table 4. Total Final Energy Consumption in Industry, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Industry, Total										
	Mining										
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity	
1990	372.24	-	-	92.00	233.48	0.07	0.29	-	-	46.40	
1991	260.19	-	-	75.27	141.03	0.13	0.20	-	-	43.58	
1992	276.46	-	-	72.04	162.86	0.07	0.15	-	-	41.34	
1993	279.58	-	-	69.05	166.56	0.04	0.10	-	-	43.84	
1994	198.52	-	-	47.29	101.37	-	0.00	-	-	49.85	
1995	239.81	-	-	75.46	116.00	-	0.00	-	-	48.35	
1996	198.44	-	-	73.93	75.42	0.28	0.01	-	-	48.80	
1997	159.27	-	-	61.98	49.34	0.51	0.04	-	-	47.41	
1998	165.59	-	-	50.91	71.47	0.45	0.04	-	-	42.72	
1999	136.69	-	-	53.08	44.79	0.13	0.74	-	-	37.95	
2000	114.06	-	-	46.73	31.94	0.08	0.00	-	-	35.31	
2001	79.08	-	-	28.16	12.17	0.05	0.01	-	-	38.69	
2002	70.74	-	-	28.82	5.34	0.03	0.07	-	-	36.48	
2003	70.87	-	-	25.50	4.18	0.46	0.07	-	-	40.66	
2004	72.99	-	-	26.93	5.83	0.02	0.02	-	-	40.19	
2005	73.73	-	-	29.52	2.13	0.04	0.00	-	-	42.04	
2006	88.04	-	-	41.49	3.97	0.03	0.00	-	-	42.53	
2007	96.66	-	-	44.97	6.79	0.02	0.00	-	0.65	44.23	
2008	119.01	-	-	70.37	2.41	0.03	0.01	-	0.60	45.59	
2009	150.23	-	-	83.04	19.80	0.01	0.00	-	1.65	45.74	
2010	209.59	-	-	124.82	32.58	-	0.00	-	2.47	49.73	
2011	261.85	-	-	183.58	24.07	0.00	0.02	-	2.43	51.76	
2012	307.47	-	-	222.56	26.68	0.01	0.01	-	4.48	53.73	
2013	341.29	-	-	253.10	27.67	-	0.02	-	5.15	55.35	
2014	343.88	-	-	243.31	38.23	-	0.00	-	4.97	57.37	
2015	363.33	-	-	243.46	54.59	-	-	-	5.01	60.27	
2016	296.22	-	-	179.66	48.49	-	-	-	3.50	64.56	
2017	329.15	-	-	195.72	61.11	-	-	-	3.86	68.46	
2018	293.37	-	-	176.63	39.46	-	0.01	-	3.42	73.85	
2019	326.71	-	-	192.22	55.30	-	0.01	-	3.71	75.48	
2020	447.76	-	-	326.12	50.04	-	-	-	3.16	68.44	
2021	409.01	-	-	282.87	48.73	-	-	-	3.46	73.95	

	Construction									
		Coal	Natural Gas	Diesel	Fuel Oil	LPG	Kerosene	Biomass	Biodiesel	Electricity
	73.99	-	-	45.23	6.97	-	0.45	-	-	21.34
	77.87	-	-	47.90	9.30	0.01	0.62	-	-	20.04
	90.34	-	-	61.81	9.00	0.01	0.50	-	-	19.01
	104.52	-	-	65.20	17.52	0.05	1.58	-	-	20.16
	104.00	-	-	68.13	11.56	(0.00)	1.38	-	-	22.93
	154.46	-	-	110.37	22.29	0.01	1.06	-	-	20.73
	163.84	-	-	121.45	21.64	0.03	1.21	-	-	19.51
	186.45	-	-	150.86	14.98	0.27	2.67	-	-	17.67
	162.82	-	-	132.09	12.72	0.11	3.07	-	-	14.84
	185.28	-	-	161.00	8.30	0.08	3.61	-	-	12.29
	170.12	-	-	149.60	8.28	0.02	1.56	-	-	10.66
	173.37	-	-	153.20	7.42	0.01	1.06	-	-	11.68
	173.67	-	-	146.16	12.59	0.08	3.83	-	-	11.01
	151.29	-	-	124.55	10.58	0.05	3.83	-	-	12.27
	147.62	-	-	120.15	12.87	0.00	2.47	-	-	12.13
	130.63	-	-	99.43	17.78	0.00	0.73	-	-	12.69
	114.99	-	-	89.17	12.81	0.01	0.17	-	-	12.84
	138.24	-	-	105.95	18.27	0.00	0.05	-	0.62	13.35
	121.13	-	-	92.45	11.39	-	2.55	-	0.98	13.76
	135.72	-	-	85.11	35.04	0.04	0.04	-	1.68	13.80
	99.35	-	-	79.02	3.54	0.19	0.03	-	1.56	15.01
	115.66	-	-	87.80	11.21	0.21	0.13	-	0.69	15.62
	118.80	-	-	90.62	9.76	0.24	0.09	-	1.88	16.22
	122.73	-	-	97.78	5.63	0.27	0.34	-	2.01	16.71
	125.46	-	-	96.65	4.17	5.43	0.01	-	1.88	17.31
	154.15	-	-	120.44	6.94	6.25	0.03	-	2.31	18.19
	220.58	-	-	183.51	7.96	6.03	0.02	-	3.58	19.49
	254.22	-	-	209.86	10.55	7.65	1.35	-	4.14	20.66
	253.72	-	-	204.36	3.59	19.50	0.02	-	3.96	22.29
	272.73	-	-	222.40	6.10	17.14	0.02	-	4.29	22.78
	249.55	-	-	212.06	3.34	9.28	0.02	-	4.19	20.66
	349.96	-	-	309.43	3.13	8.97	0.00	-	6.11	22.32

Details of Total Final Energy Consumption (TFEC)

Table 5 Total Final Energy Consumption in Households, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Households, Total							
		Growth Rate (%)	Electricity	Biomass	Charcoal	Fuelwood	Others	
1990	8,847.74		482.29	7,586.08	858.92	5,821.14	906.02	
1991	8,668.60	-2.02	537.32	7,360.63	779.48	5,614.93	966.22	
1992	8,520.93	-1.70	520.46	7,135.18	700.04	5,408.73	1,026.41	
1993	8,414.27	-1.25	547.55	6,909.72	620.59	5,202.53	1,086.60	
1994	8,346.29	-0.81	626.14	6,684.27	541.15	4,996.32	1,146.80	
1995	8,356.36	0.12	707.05	6,458.81	461.71	4,790.12	1,206.99	
1996	8,309.05	-0.57	786.76	6,240.75	469.59	4,648.87	1,122.28	
1997	8,297.18	-0.14	900.90	6,022.69	477.48	4,507.63	1,037.58	
1998	8,243.96	-0.64	1,026.32	5,804.63	485.37	4,366.39	952.87	
1999	8,124.58	-1.45	1,021.06	5,586.57	493.25	4,225.14	868.17	
2000	7,905.69	-2.69	1,108.68	5,368.50	501.14	4,083.90	783.47	
2001	7,654.47	-3.18	1,164.87	5,150.44	509.03	3,942.65	698.76	
2002	7,450.73	-2.66	1,179.31	4,932.38	516.91	3,801.41	614.06	
2003	7,257.22	-2.60	1,320.43	4,714.32	524.80	3,660.17	529.35	
2004	7,151.35	-1.46	1,368.87	4,496.25	532.69	3,518.92	444.65	
2005	7,072.32	-1.11	1,378.45	4,635.02	571.46	3,601.77	461.79	
2006	7,095.03	0.32	1,361.15	4,773.78	610.24	3,684.61	478.93	
2007	7,251.02	2.20	1,408.05	4,912.54	649.02	3,767.46	496.07	
2008	7,376.73	1.73	1,431.15	5,051.31	687.79	3,850.30	513.21	
2009	7,632.69	3.47	1,505.05	5,190.07	726.57	3,933.14	530.36	
2010	7,878.44	3.22	1,619.35	5,328.83	765.34	4,015.99	547.50	
2011	7,991.18	1.43	1,607.36	5,467.59	804.12	4,098.83	564.64	
2012	8,171.33	2.25	1,693.46	5,576.86	848.29	4,158.08	570.50	
2013	8,385.69	2.62	1,772.46	5,733.43	899.11	4,245.75	588.57	
2014	8,488.40	1.22	1,803.00	5,823.30	945.65	4,289.76	587.89	
2015	8,731.34	2.86	1,955.89	5,802.40	973.47	4,258.81	570.11	
2016	9,034.90	3.48	2,203.89	5,708.59	1,027.02	4,131.05	550.52	
2017	9,192.49	1.74	2,302.84	5,731.04	1,067.36	4,118.66	545.02	
2018	9,430.66	2.59	2,429.99	5,746.07	1,110.49	4,106.53	529.05	
2019	9,710.81	2.97	2,626.97	5,771.90	1,156.69	4,100.28	514.93	
2020	10,028.09	3.27	2,948.55	5,841.88	1,208.90	4,121.39	511.59	
2021	10,178.56	1.50	3,007.80	5,904.36	1,262.72	4,135.52	506.12	

			Fuel Shares to Total (%)						
	LPG	Kerosene	Electricity	Biomass			LPG	Kerosene	
					Charcoal	Fuelwood	Others		
	333.75	445.61	5.45	85.74	9.71	65.79	10.24	3.77	5.04
	345.31	425.34	6.20	84.91	8.99	64.77	11.15	3.98	4.91
	397.75	467.54	6.11	83.74	8.22	63.48	12.05	4.67	5.49
	450.52	506.49	6.51	82.12	7.38	61.83	12.91	5.35	6.02
	524.32	511.56	7.50	80.09	6.48	59.86	13.74	6.28	6.13
	667.97	522.52	8.46	77.29	5.53	57.32	14.44	7.99	6.25
	734.68	546.87	9.47	75.11	5.65	55.95	13.51	8.84	6.58
	776.14	597.46	10.86	72.59	5.75	54.33	12.51	9.35	7.20
	813.93	599.09	12.45	70.41	5.89	52.96	11.56	9.87	7.27
	901.47	615.49	12.57	68.76	6.07	52.00	10.69	11.10	7.58
	890.53	537.98	14.02	67.91	6.34	51.66	9.91	11.26	6.80
	867.32	471.84	15.22	67.29	6.65	51.51	9.13	11.33	6.16
	908.71	430.34	15.83	66.20	6.94	51.02	8.24	12.20	5.78
	840.17	382.31	18.19	64.96	7.23	50.43	7.29	11.58	5.27
	940.34	345.88	19.14	62.87	7.45	49.21	6.22	13.15	4.84
	802.48	256.37	19.49	65.54	8.08	50.93	6.53	11.35	3.63
	757.01	203.08	19.18	67.28	8.60	51.93	6.75	10.67	2.86
	748.44	181.98	19.42	67.75	8.95	51.96	6.84	10.32	2.51
	742.04	152.24	19.40	68.48	9.32	52.20	6.96	10.06	2.06
	799.10	138.47	19.72	68.00	9.52	51.53	6.95	10.47	1.81
	803.10	127.16	20.55	67.64	9.71	50.97	6.95	10.19	1.61
	804.50	111.74	20.11	68.42	10.06	51.29	7.07	10.07	1.40
	796.29	104.72	20.72	68.25	10.38	50.89	6.98	9.74	1.28
	775.67	104.13	21.14	68.37	10.72	50.63	7.02	9.25	1.24
	769.26	92.84	21.24	68.60	11.14	50.54	6.93	9.06	1.09
	888.08	84.97	22.40	66.45	11.15	48.78	6.53	10.17	0.97
	1,043.12	79.30	24.39	63.18	11.37	45.72	6.09	11.55	0.88
	1,083.26	75.35	25.05	62.34	11.61	44.80	5.93	11.78	0.82
	1,175.88	78.71	25.77	60.93	11.78	43.54	5.61	12.47	0.83
	1,239.64	72.31	27.05	59.44	11.91	42.22	5.30	12.77	0.74
	1,186.64	51.02	29.40	58.26	12.06	41.10	5.10	11.83	0.51
	1,214.98	51.42	29.55	58.01	12.41	40.63	4.97	11.94	0.51

Details of Total Final Energy Consumption (TFEC)

Table 6 Total Final Energy Consumption in Services, by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Services, Total								
		Growth Rate (%)	Electricity	Biomass			LPG	Diesel	
					Charcoal	Fuelwood	Others		
1990	815.73		403.70	301.10	110.44	125.36	65.30	49.04	-
1991	837.56	2.68	416.77	297.29	112.21	126.62	58.47	51.44	-
1992	856.26	2.23	422.18	294.24	114.00	127.88	52.35	57.60	-
1993	855.22	-0.12	406.28	291.87	115.83	129.16	46.88	64.68	-
1994	969.92	13.41	504.30	290.12	117.69	130.45	41.98	72.95	-
1995	1,041.19	7.35	546.26	288.92	119.57	131.76	37.59	93.29	-
1996	1,115.51	7.14	608.08	288.22	121.49	133.08	33.66	96.32	-
1997	1,257.81	12.76	689.02	287.98	123.43	134.41	30.14	127.39	68.14
1998	1,436.36	14.20	750.24	288.15	125.41	135.75	26.99	162.26	100.91
1999	1,556.14	8.34	765.37	288.69	127.42	137.11	24.17	186.69	159.69
2000	1,684.41	8.24	817.92	289.58	129.46	138.48	21.64	190.89	208.34
2001	1,851.90	9.94	868.30	290.77	131.53	139.86	19.38	193.97	299.61
2002	1,867.22	0.83	874.61	292.25	133.64	141.26	17.35	211.89	241.48
2003	1,903.89	1.96	954.95	293.99	135.78	142.67	15.54	224.91	212.18
2004	1,868.52	-1.86	1,013.33	295.97	137.95	144.10	13.91	203.21	166.01
2005	1,852.99	-0.83	1,052.92	298.16	140.16	145.54	12.46	190.51	124.47
2006	1,927.20	4.00	1,090.20	300.56	142.41	147.00	11.15	173.99	169.12
2007	1,989.16	3.22	1,158.25	303.14	144.69	148.47	9.99	197.72	180.14
2008	2,043.54	2.73	1,215.48	305.90	147.01	149.95	8.94	162.25	187.15
2009	2,412.95	18.08	1,268.81	308.82	149.36	151.45	8.01	198.92	453.92
2010	2,662.83	10.36	1,398.16	312.57	151.75	152.97	7.85	215.33	548.92
2011	2,738.94	2.86	1,429.39	317.90	154.18	156.03	7.69	208.02	625.87
2012	2,829.56	3.31	1,528.57	323.34	156.65	159.15	7.54	203.63	632.18
2013	3,037.57	7.35	1,573.84	327.50	159.16	161.27	7.07	228.36	776.45
2014	3,397.07	11.84	1,613.14	331.90	161.71	163.51	6.68	266.50	1,053.22
2015	3,369.73	-0.80	1,726.98	336.55	164.30	165.89	6.36	309.83	843.45
2016	3,864.77	14.69	1,871.90	339.91	165.94	167.54	6.43	373.78	1,057.83
2017	4,404.46	13.96	1,957.69	345.01	168.43	170.06	6.52	531.69	1,396.57
2018	4,668.13	5.99	2,065.03	350.19	170.96	172.61	6.62	506.61	1,567.99
2019	4,935.75	5.73	2,190.53	352.64	172.15	173.82	6.67	495.11	1,706.44
2020	4,611.10	-6.58	1,782.21	325.07	154.94	165.13	5.00	463.61	1,876.96
2021	4,847.88	5.14	1,815.89	329.63	157.16	167.42	5.06	480.20	2,027.44

			Fuel Shares to Total (%)								
	Fuel Oil	Biodiesel	Electricity	Biomass			LPG	Diesel	Fuel Oil	Biodiesel	
					Charcoal	Fuelwood					Others
	61.90	-	49.49	36.91	13.54	15.37	8.00	6.01	-	7.59	-
	72.06	-	49.76	35.49	13.40	15.12	6.98	6.14	-	8.60	-
	82.23	-	49.31	34.36	13.31	14.94	6.11	6.73	-	9.60	-
	92.39	-	47.51	34.13	13.54	15.10	5.48	7.56	-	10.80	-
	102.56	-	51.99	29.91	12.13	13.45	4.33	7.52	-	10.57	-
	112.72	-	52.46	27.75	11.48	12.65	3.61	8.96	-	10.83	-
	122.88	-	54.51	25.84	10.89	11.93	3.02	8.63	-	11.02	-
	85.29	-	54.78	22.90	9.81	10.69	2.40	10.13	5.42	6.78	-
	134.81	-	52.23	20.06	8.73	9.45	1.88	11.30	7.03	9.39	-
	155.70	-	49.18	18.55	8.19	8.81	1.55	12.00	10.26	10.01	-
	177.69	-	48.56	17.19	7.69	8.22	1.28	11.33	12.37	10.55	-
	199.24	-	46.89	15.70	7.10	7.55	1.05	10.47	16.18	10.76	-
	246.99	-	46.84	15.65	7.16	7.57	0.93	11.35	12.93	13.23	-
	217.87	-	50.16	15.44	7.13	7.49	0.82	11.81	11.14	11.44	-
	190.00	-	54.23	15.84	7.38	7.71	0.74	10.88	8.88	10.17	-
	186.92	-	56.82	16.09	7.56	7.85	0.67	10.28	6.72	10.09	-
	193.33	-	56.57	15.60	7.39	7.63	0.58	9.03	8.78	10.03	-
	148.74	1.16	58.23	15.24	7.27	7.46	0.50	9.94	9.06	7.48	0.06
	169.86	2.90	59.48	14.97	7.19	7.34	0.44	7.94	9.16	8.31	0.14
	173.61	8.88	52.58	12.80	6.19	6.28	0.33	8.24	18.81	7.19	0.37
	177.00	10.85	52.51	11.74	5.70	5.74	0.29	8.09	20.61	6.65	0.41
	145.08	12.68	52.19	11.61	5.63	5.70	0.28	7.59	22.85	5.30	0.46
	129.32	12.52	54.02	11.43	5.54	5.62	0.27	7.20	22.34	4.57	0.44
	116.10	15.32	51.81	10.78	5.24	5.31	0.23	7.52	25.56	3.82	0.50
	112.68	19.64	47.49	9.77	4.76	4.81	0.20	7.84	31.00	3.32	0.58
	138.44	14.49	51.25	9.99	4.88	4.92	0.19	9.19	25.03	4.11	0.43
	200.71	20.63	48.43	8.80	4.29	4.34	0.17	9.67	27.37	5.19	0.53
	145.94	27.56	44.45	7.83	3.82	3.86	0.15	12.07	31.71	3.31	0.63
	147.94	30.37	44.24	7.50	3.66	3.70	0.14	10.85	33.59	3.17	0.65
	158.14	32.90	44.38	7.14	3.49	3.52	0.14	10.03	34.57	3.20	0.67
	126.22	37.03	38.65	7.05	3.36	3.58	0.11	10.05	40.71	2.74	0.80
	154.71	40.00	37.46	6.80	3.24	3.45	0.10	9.91	41.82	3.19	0.83

Details of Total Final Energy Consumption (TFEC)

Table 7. Total Final Energy Consumption in Agriculture, by Subsector and by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Agriculture, Total							
		Growth Rate (%)	Electricity	Gasoline	Diesel	Fuel Oil	Kerosene	
1990	133.78		83.06	2.31	30.34	14.64	3.42	
1991	127.89	-4.40	81.86	1.92	26.52	14.66	2.93	
1992	112.67	-11.91	70.77	2.22	23.28	13.54	2.87	
1993	102.91	-8.66	61.99	3.11	20.54	13.82	3.45	
1994	101.60	-1.27	65.52	2.09	18.23	12.36	3.41	
1995	131.08	29.01	91.75	1.64	16.29	18.37	3.03	
1996	139.09	6.11	98.00	1.93	14.68	21.41	3.06	
1997	493.52	254.82	106.50	1.99	334.19	47.55	3.29	
1998	422.12	-14.47	77.85	1.74	307.78	32.09	2.66	
1999	406.79	-3.63	76.59	2.60	300.41	23.70	3.48	
2000	364.28	-10.45	77.54	1.76	262.32	21.04	1.63	
2001	353.78	-2.88	84.89	1.49	240.42	24.90	2.08	
2002	381.04	7.71	90.42	1.85	262.73	23.20	2.84	
2003	400.25	5.04	88.76	1.69	274.10	33.65	2.04	
2004	401.47	0.31	111.08	1.65	254.71	32.24	1.80	
2005	380.50	-5.22	93.40	1.37	263.08	21.83	0.83	
2006	355.25	-6.64	101.31	1.89	234.92	16.82	0.32	
2007	340.28	-4.22	131.89	2.20	187.11	17.03	1.15	
2008	366.01	7.56	110.45	1.75	236.76	14.82	0.36	
2009	330.03	-9.83	121.46	3.73	192.22	8.27	0.55	
2010	347.10	5.17	127.85	7.53	200.19	6.72	0.85	
2011	301.94	-13.01	114.80	4.01	175.05	5.90	0.81	
2012	318.13	5.36	133.34	6.87	168.80	4.67	1.10	
2013	352.16	10.70	159.85	2.13	181.73	3.93	0.93	
2014	353.83	0.48	178.46	4.58	165.23	1.81	0.38	
2015	400.57	13.21	203.25	8.02	182.50	2.60	0.44	
2016	450.44	12.45	217.69	7.48	212.44	8.08	0.60	
2017	515.62	14.47	219.94	11.95	270.48	7.49	0.41	
2018	439.55	-14.75	227.65	7.06	199.88	0.69	0.40	
2019	473.48	7.72	239.93	9.03	217.53	2.42	0.38	
2020	436.81	-7.75	221.98	9.75	198.41	2.22	0.52	
2021	660.91	51.31	413.16	15.38	225.72	1.72	0.48	

		Fuel Shares to Total (%)					
	Biodiesel	Electricity	Gasoline	Diesel	Fuel Oil	Kerosene	Biodiesel
	-	62.09	1.73	22.68	10.94	2.56	-
	-	64.00	1.50	20.74	11.46	2.29	-
	-	62.81	1.97	20.66	12.02	2.54	-
	-	60.24	3.02	19.96	13.43	3.35	-
	-	64.49	2.05	17.94	12.17	3.35	-
	-	69.99	1.25	12.43	14.01	2.31	-
	-	70.46	1.39	10.55	15.40	2.20	-
	-	21.58	0.40	67.72	9.63	0.67	-
	-	18.44	0.41	72.91	7.60	0.63	-
	-	18.83	0.64	73.85	5.83	0.86	-
	-	21.29	0.48	72.01	5.77	0.45	-
	-	23.99	0.42	67.96	7.04	0.59	-
	-	23.73	0.49	68.95	6.09	0.75	-
	-	22.18	0.42	68.48	8.41	0.51	-
	-	27.67	0.41	63.44	8.03	0.45	-
	-	24.55	0.36	69.14	5.74	0.22	-
	-	28.52	0.53	66.13	4.73	0.09	-
	0.89	38.76	0.65	54.99	5.00	0.34	0.26
	1.87	30.18	0.48	64.69	4.05	0.10	0.51
	3.80	36.80	1.13	58.24	2.51	0.17	1.15
	3.96	36.84	2.17	57.67	1.94	0.25	1.14
	1.36	38.02	1.33	57.98	1.95	0.27	0.45
	3.34	41.91	2.16	53.06	1.47	0.35	1.05
	3.59	45.39	0.60	51.60	1.12	0.26	1.02
	3.38	50.43	1.29	46.70	0.51	0.11	0.95
	3.76	50.74	2.00	45.56	0.65	0.11	0.94
	4.14	48.33	1.66	47.16	1.79	0.13	0.92
	5.34	42.66	2.32	52.46	1.45	0.08	1.04
	3.87	51.79	1.61	45.47	0.16	0.09	0.88
	4.19	50.67	1.91	45.94	0.51	0.08	0.89
	3.92	50.82	2.23	45.42	0.51	0.12	0.90
	4.45	62.51	2.33	34.15	0.26	0.07	0.67

(Continuation)

Table 7. Total Final Energy Consumption in Agriculture, by Subsector and by Fuel
in thousand tons of oil equivalent (kTOE)

FY	Agriculture, Total							
	Crop Production							
		Electricity	Gasoline	Diesel	Fuel Oil	Kerosene	Biodiesel	
1990	19.45	18.90	-	-	-	0.55	-	
1991	19.16	18.63	-	-	-	0.54	-	
1992	16.67	16.10	-	-	-	0.57	-	
1993	14.71	14.11	-	-	-	0.60	-	
1994	15.50	14.91	-	-	-	0.59	-	
1995	20.83	20.29	-	-	-	0.55	-	
1996	21.46	20.96	-	-	-	0.50	-	
1997	60.00	21.95	0.92	36.50	-	0.63	-	
1998	36.45	15.40	0.39	20.14	-	0.52	-	
1999	33.86	14.48	0.47	18.13	-	0.78	-	
2000	26.34	13.96	0.21	11.91	-	0.25	-	
2001	37.34	15.29	0.14	21.52	-	0.39	-	
2002	36.20	16.28	0.26	18.75	-	0.91	-	
2003	38.39	15.98	0.24	21.25	-	0.91	-	
2004	40.32	20.00	0.15	19.66	-	0.51	-	
2005	35.89	16.82	0.14	18.87	-	0.07	-	
2006	35.52	18.24	0.14	17.10	-	0.04	-	
2007	35.32	23.75	0.07	11.40	-	0.03	0.06	
2008	33.93	19.89	0.06	13.64	-	0.20	0.13	
2009	38.29	21.87	0.21	15.86	-	0.02	0.32	
2010	40.96	23.02	0.02	17.57	-	-	0.35	
2011	40.14	20.67	0.02	19.28	-	-	0.17	
2012	48.75	24.01	0.02	24.23	-	-	0.48	
2013	62.45	28.79	0.14	32.78	-	0.10	0.65	
2014	63.22	32.14	0.90	29.58	-	-	0.60	
2015	71.33	36.60	1.59	32.47	-	-	0.67	
2016	74.17	39.20	2.41	31.93	-	-	0.62	
2017	93.08	39.61	5.10	47.43	-	-	0.94	
2018	78.43	41.00	2.20	34.25	-	0.33	0.66	
2019	84.31	43.21	2.81	37.27	-	0.31	0.72	
2020	65.41	39.97	2.55	22.09	-	0.36	0.44	
2021	99.53	74.40	1.23	23.05	-	0.39	0.45	

Livestock and Poultry							
		Electricity	Gasoline	Diesel	Fuel Oil	Kerosene	Biodiesel
	46.04	40.78	-	0.48	4.77	-	-
	45.47	40.19	-	0.56	4.72	-	-
	40.03	34.74	-	0.64	4.65	-	-
	35.74	30.44	-	0.73	4.56	-	-
	37.48	32.17	-	0.84	4.47	-	-
	53.17	47.86	-	0.97	4.33	-	-
	59.48	54.09	-	1.12	4.27	-	-
	68.72	61.94	0.03	1.40	5.36	-	-
	55.80	47.51	0.03	1.73	6.54	-	-
	55.04	48.86	0.03	1.54	4.61	-	-
	56.92	51.53	0.02	1.15	4.22	-	-
	62.88	56.41	0.02	2.25	4.21	-	-
	66.58	60.09	0.01	2.60	3.88	-	-
	67.00	58.98	0.01	4.27	3.74	-	-
	81.80	73.81	0.00	4.49	3.50	-	-
	69.68	62.06	0.01	4.62	2.99	-	-
	73.92	67.32	0.01	2.94	3.65	-	-
	95.40	87.65	0.01	1.62	6.09	0.03	0.02
	79.30	73.39	0.01	0.95	4.88	0.05	0.01
	82.87	80.71	0.00	0.63	1.51	-	0.01
	85.06	84.96	-	0.09	-	-	0.00
	76.65	76.29	0.00	0.36	-	-	0.00
	88.80	88.61	0.00	0.18	-	-	0.00
	106.25	106.22	-	0.03	-	-	0.00
	118.59	118.59	-	0.00	-	-	0.00
	135.11	135.06	-	0.05	-	-	0.00
	151.51	144.66	-	1.53	5.30	-	0.03
	146.33	146.15	-	0.17	-	-	0.00
	153.41	151.27	0.00	1.90	0.20	-	0.04
	161.64	159.43	0.00	2.06	0.10	-	0.04
	189.91	147.51	4.40	37.18	0.09	-	0.73
	371.09	274.55	12.35	82.40	0.16	-	1.63

(Continuation)

**Table 7. Total Final Energy Consumption in Agriculture,
by Subsector and by Fuel**
in thousand tons of oil equivalent (kTOE)

FY	Agriculture, Total							
	Agri-Services							
		Electricity	Gasoline	Diesel	Fuel Oil	Kerosene	Biodiesel	
1990	8.02	3.64	-	2.49	1.61	0.28	-	
1991	8.04	3.58	-	2.54	1.65	0.26	-	
1992	7.55	3.10	-	2.59	1.62	0.24	-	
1993	7.33	2.71	-	2.64	1.75	0.23	-	
1994	7.47	2.87	-	2.69	1.70	0.21	-	
1995	8.47	3.87	-	2.74	1.66	0.19	-	
1996	8.59	3.97	-	2.80	1.65	0.17	-	
1997	7.86	4.13	0.01	2.38	1.21	0.13	-	
1998	7.39	2.87	0.01	2.44	1.95	0.12	-	
1999	9.04	2.68	0.03	4.52	1.63	0.18	-	
2000	7.80	2.56	0.02	3.75	1.30	0.16	-	
2001	7.39	2.81	0.01	2.45	2.06	0.06	-	
2002	6.12	2.99	0.01	1.84	1.23	0.04	-	
2003	13.83	2.94	0.01	7.81	3.04	0.04	-	
2004	8.23	3.67	0.00	3.30	1.24	0.02	-	
2005	6.03	3.09	0.00	1.65	1.28	0.00	-	
2006	9.36	3.35	-	4.40	1.59	0.03	-	
2007	15.34	4.36	0.01	9.47	1.45	0.03	0.01	
2008	17.03	3.65	-	11.71	1.54	0.01	0.11	
2009	6.98	4.02	-	1.75	1.18	-	0.03	
2010	7.50	4.23	-	2.01	1.23	-	0.04	
2011	6.65	3.80	-	1.36	1.48	-	0.01	
2012	7.24	4.41	-	1.46	1.34	-	0.03	
2013	5.89	5.29	-	0.18	0.42	-	0.00	
2014	5.90	5.90	-	-	-	-	-	
2015	6.72	6.72	-	-	-	-	-	
2016	7.50	7.20	-	0.30	-	-	0.01	
2017	7.27	7.27	-	-	-	-	-	
2018	7.53	7.53	-	-	-	-	-	
2019	7.94	7.94	-	-	-	-	-	
2020	7.34	7.34	-	-	-	-	-	
2021	13.67	13.67	-	-	-	-	-	

	Fishery						
		Electricity	Gasoline	Diesel	Fuel Oil	Kerosene	Biodiesel
	27.92	19.36	2.31	-	3.67	2.57	-
	27.24	19.08	1.92	-	4.11	2.12	-
	24.24	16.50	2.22	-	3.48	2.04	-
	24.20	14.45	3.11	-	4.03	2.61	-
	22.99	15.27	2.09	-	3.03	2.59	-
	32.75	19.33	1.64	-	9.49	2.28	-
	35.77	18.58	1.93	-	12.87	2.38	-
	315.70	18.10	0.65	279.14	15.34	2.47	-
	312.68	11.81	1.14	274.13	23.57	2.02	-
	298.61	10.33	1.98	266.40	17.40	2.50	-
	268.62	9.27	1.49	241.14	15.50	1.22	-
	244.34	10.14	1.32	212.66	18.58	1.63	-
	269.63	10.81	1.57	237.27	18.08	1.89	-
	275.57	10.61	1.38	236.01	26.49	1.09	-
	265.47	13.27	1.43	221.99	27.50	1.28	-
	266.23	11.16	1.22	235.54	17.55	0.76	-
	232.85	12.11	1.66	207.25	11.58	0.25	-
	190.65	15.76	2.04	161.53	9.49	1.06	0.77
	230.86	13.20	1.61	205.97	8.40	0.10	1.58
	200.82	14.52	3.50	173.28	5.58	0.52	3.42
	211.95	15.28	7.46	179.32	5.49	0.85	3.54
	177.33	13.72	3.90	153.30	4.42	0.81	1.18
	172.36	15.94	6.70	142.46	3.34	1.10	2.82
	176.76	19.10	1.94	148.44	3.51	0.83	2.93
	165.05	21.33	3.55	135.22	1.81	0.38	2.76
	186.65	24.29	6.28	149.94	2.60	0.44	3.09
	216.47	26.02	4.97	178.61	2.78	0.60	3.48
	262.36	26.28	6.76	221.28	3.26	0.41	4.37
	199.14	27.21	4.79	163.41	0.49	0.08	3.17
	218.46	28.67	6.13	177.84	2.31	0.07	3.43
	172.72	26.53	2.78	138.38	2.13	0.17	2.73
	175.36	49.38	1.79	120.19	1.55	0.09	2.37

(Continuation)

**Table 7. Total Final Energy Consumption in Agriculture,
by Subsector and by Fuel**
in thousand tons of oil equivalent (kTOE)

FY	Agriculture, Total						
	Forestry	Electricity	Gasoline	Diesel	Fuel Oil	Kerosene	Biodiesel
1990	32.35	0.38	-	27.37	4.58	0.01	-
1991	27.99	0.38	-	23.43	4.17	0.01	-
1992	24.18	0.33	-	20.05	3.79	0.01	-
1993	20.94	0.28	-	17.16	3.48	0.01	-
1994	18.17	0.30	-	14.69	3.17	0.01	-
1995	15.86	0.39	-	12.58	2.88	0.01	-
1996	13.78	0.39	-	10.77	2.62	0.01	-
1997	41.24	0.39	0.38	14.78	25.63	0.06	-
1998	9.79	0.26	0.17	9.35	0.02	-	-
1999	10.23	0.24	0.10	9.82	0.06	0.02	-
2000	4.62	0.22	0.01	4.38	0.01	-	-
2001	1.83	0.24	-	1.54	0.05	-	-
2002	2.52	0.26	-	2.26	-	-	-
2003	5.45	0.25	0.05	4.76	0.38	0.01	-
2004	5.65	0.31	0.06	5.27	-	-	-
2005	2.67	0.26	-	2.40	-	-	-
2006	3.60	0.29	0.08	3.24	-	0.01	-
2007	3.57	0.37	0.07	3.09	-	-	0.04
2008	4.90	0.31	0.06	4.49	-	-	0.04
2009	1.08	0.34	0.02	0.70	-	-	0.01
2010	1.63	0.36	0.05	1.19	-	-	0.02
2011	1.17	0.32	0.09	0.76	-	-	0.01
2012	0.99	0.38	0.15	0.46	-	-	0.01
2013	0.81	0.45	0.05	0.30	-	-	0.01
2014	1.08	0.50	0.13	0.44	-	-	0.01
2015	0.75	0.57	0.15	0.03	-	-	0.00
2016	0.78	0.62	0.10	0.07	-	-	0.00
2017	6.58	0.62	0.09	1.60	4.24	-	0.03
2018	1.04	0.64	0.07	0.32	-	0.00	0.01
2019	1.13	0.68	0.09	0.35	-	0.00	0.01
2020	1.42	0.63	0.02	0.76	-	-	0.01
2021	1.27	1.17	0.01	0.09	-	-	0.00

Details of Total Final Energy Consumption (TFEC)

Table 8. Sectoral Energy Intensity

FY	Total Final Energy Consumption in thousand tons of oil equivalent (kTOE)					
		Transport	Industry	Households	Services	Agriculture
1990	18,618.70	4,685.41	4,136.04	8,847.74	815.73	133.78
1991	17,459.72	4,419.57	3,406.10	8,668.60	837.56	127.89
1992	18,146.84	5,127.58	3,529.41	8,520.93	856.26	112.67
1993	19,253.18	5,790.96	4,089.81	8,414.27	855.22	102.91
1994	19,470.96	6,082.92	3,970.22	8,346.29	969.92	101.60
1995	21,676.96	7,174.54	4,973.80	8,356.36	1,041.19	131.08
1996	22,534.26	8,115.93	4,854.68	8,309.05	1,115.51	139.09
1997	23,616.53	8,077.51	5,490.51	8,297.18	1,257.81	493.52
1998	23,581.15	8,302.80	5,175.90	8,243.96	1,436.36	422.12
1999	23,382.02	8,221.25	5,073.27	8,124.58	1,556.14	406.79
2000	22,792.93	8,301.96	4,536.59	7,905.69	1,684.41	364.28
2001	22,595.86	8,226.99	4,508.72	7,654.47	1,851.90	353.78
2002	22,528.42	8,529.21	4,300.21	7,450.73	1,867.22	381.04
2003	22,727.39	8,340.93	4,825.09	7,257.22	1,903.89	400.25
2004	22,803.60	8,633.08	4,749.19	7,151.35	1,868.52	401.47
2005	22,484.02	8,225.85	4,952.36	7,072.32	1,852.99	380.50
2006	22,138.47	7,724.87	5,036.12	7,095.03	1,927.20	355.25
2007	22,873.50	8,031.46	5,261.59	7,251.02	1,989.16	340.28
2008	23,060.55	7,496.43	5,777.83	7,376.73	2,043.54	366.01
2009	23,659.20	7,914.14	5,369.39	7,632.69	2,412.95	330.03
2010	24,872.30	8,035.50	5,948.44	7,878.44	2,662.83	347.10
2011	24,962.51	7,982.80	5,947.65	7,991.18	2,738.94	301.94
2012	25,489.19	8,364.20	5,805.97	8,171.33	2,829.56	318.13
2013	26,871.75	8,783.96	6,312.36	8,385.69	3,037.57	352.16
2014	27,900.99	9,132.81	6,528.87	8,488.40	3,397.07	353.83
2015	29,808.98	10,557.29	6,750.05	8,731.34	3,369.73	400.57
2016	32,224.23	11,424.90	7,449.22	9,034.90	3,864.77	450.44
2017	33,860.97	11,823.30	7,925.11	9,192.49	4,404.46	515.62
2018	34,299.75	12,238.08	7,523.33	9,430.66	4,668.13	439.55
2019	35,122.88	12,697.01	7,305.83	9,710.81	4,935.75	473.48
2020	31,220.38	9,808.57	6,335.82	10,028.09	4,611.10	436.81
2021	33,489.47	10,982.95	6,819.16	10,178.56	4,847.88	660.91

^a gross-value added for Transport and Storage in the national accounts

^b gross value-added for Industry, excluding electricity, gas and water supply (EGWS) in the national accounts

^c gross value added for the Services sector in the National Accounts excluding transport and storage

(Continuation)

Table 8. Sectoral Energy Intensity

FY	Gross-Value Added (in million pesos, 2018 prices)				Household Final Consumption Expenditure (in million pesos, 2000 prices)	
	Transport ^a	Industry ^b	Services ^c	Agriculture		
1990	166,407	1,740,359	2,616,763	882,507	1,801,360	
1991	167,511	1,696,935	2,624,350	895,479	1,846,373	
1992	169,876	1,688,626	2,651,295	898,629	1,906,135	
1993	174,284	1,717,526	2,717,758	917,566	1,954,322	
1994	181,620	1,816,047	2,830,637	940,282	2,011,291	
1995	191,757	1,934,300	2,965,482	945,593	2,071,341	
1996	205,871	2,057,153	3,150,667	980,115	2,150,473	
1997	222,909	2,182,132	3,317,792	1,008,943	2,243,650	
1998	236,515	2,124,077	3,412,728	938,600	2,362,391	
1999	246,356	2,094,359	3,568,569	1,029,174	2,457,554	
2000	267,104	2,233,332	3,688,046	1,064,005	5,356,412	
2001	272,322	2,263,213	3,830,053	1,105,117	5,567,577	
2002	284,266	2,346,383	3,974,521	1,144,991	5,851,522	
2003	296,270	2,462,871	4,185,436	1,197,371	6,166,308	
2004	308,335	2,571,406	4,532,562	1,257,109	6,530,391	
2005	303,941	2,701,285	4,771,971	1,301,069	6,820,633	
2006	316,532	2,802,099	5,078,027	1,360,678	7,105,899	
2007	332,279	2,940,675	5,468,818	1,433,747	7,447,652	
2008	342,342	3,101,574	5,686,952	1,482,352	7,734,582	
2009	341,026	3,057,652	5,881,774	1,480,207	7,930,379	
2010	349,294	3,358,023	6,326,037	1,499,801	8,215,063	
2011	375,907	3,411,809	6,652,996	1,550,555	8,671,175	
2012	405,425	3,674,110	7,144,045	1,598,312	9,260,725	
2013	442,870	3,924,519	7,684,933	1,645,192	9,799,607	
2014	498,422	4,218,872	8,201,169	1,676,006	10,366,461	
2015	548,048	4,493,390	8,809,174	1,688,344	11,034,535	
2016	604,328	4,861,342	9,529,249	1,672,085	11,823,461	
2017	648,153	5,202,582	10,230,262	1,743,134	12,527,828	
2018	697,839	5,582,525	10,920,048	1,762,616	13,250,084	
2019	742,347	5,887,869	11,711,027	1,783,855	14,027,456	
2020	515,149	5,115,316	10,642,137	1,780,391	12,911,357	
2021	547,542	5,549,484	11,213,211	1,775,358	13,456,532	

^a gross-value added for Transport and Storage in the national accounts^b gross value-added for Industry, excluding electricity, gas and water supply (EGWS) in the national accounts^c gross value added for the Services sector in the National Accounts excluding transport and storage

Sectoral Energy Intensity (TOE/Php100,000)					
	Transport	Industry	Households	Services	Agriculture
	2.82	0.24	0.49	0.03	0.02
	2.64	0.20	0.47	0.03	0.01
	3.02	0.21	0.45	0.03	0.01
	3.32	0.24	0.43	0.03	0.01
	3.35	0.22	0.41	0.03	0.01
	3.74	0.26	0.40	0.04	0.01
	3.94	0.24	0.39	0.04	0.01
	3.62	0.25	0.37	0.04	0.05
	3.51	0.24	0.35	0.04	0.04
	3.34	0.24	0.33	0.04	0.04
	3.11	0.20	0.15	0.05	0.03
	3.02	0.20	0.14	0.05	0.03
	3.00	0.18	0.13	0.05	0.03
	2.82	0.20	0.12	0.05	0.03
	2.80	0.18	0.11	0.04	0.03
	2.71	0.18	0.10	0.04	0.03
	2.44	0.18	0.10	0.04	0.03
	2.42	0.18	0.10	0.04	0.02
	2.19	0.19	0.10	0.04	0.02
	2.32	0.18	0.10	0.04	0.02
	2.30	0.18	0.10	0.04	0.02
	2.12	0.17	0.09	0.04	0.02
	2.06	0.16	0.09	0.04	0.02
	1.98	0.16	0.09	0.04	0.02
	1.83	0.15	0.08	0.04	0.02
	1.93	0.15	0.08	0.04	0.02
	1.89	0.15	0.08	0.04	0.03
	1.82	0.15	0.07	0.04	0.03
	1.75	0.13	0.07	0.04	0.02
	1.71	0.12	0.07	0.04	0.03
	1.90	0.12	0.08	0.04	0.02
	2.01	0.12	0.08	0.04	0.04

5 Energy and Economics

Table 1. GDP and Major Energy Related Indicators

FY	GDP (in billion pesos: at constant 2018 prices)*	Total Primary Energy Demand (in MTOE)	Total Primary Oil Demand (in MB)	Total Power Generation (in TWh)	Population (in million)	
1990	5,239.63	27.17	82.52	26.33	60.94	
1991	5,216.76	26.82	80.76	25.65	62.36	
1992	5,238.55	27.65	91.39	25.87	63.82	
1993	5,352.85	29.00	101.35	26.58	65.32	
1994	5,586.97	29.92	104.03	30.46	66.84	
1995	5,845.38	32.28	122.79	33.55	68.41	
1996	6,187.93	33.75	127.35	36.71	70.01	
1997	6,508.87	35.99	138.88	39.80	71.65	
1998	6,475.41	36.98	137.28	41.58	75.36	
1999	6,692.10	38.11	128.80	41.43	76.99	
2000	6,985.38	38.81	120.68	45.29	77.02	
2001	7,198.38	37.33	119.32	47.04	78.59	
2002	7,465.89	37.20	113.88	48.47	80.28	
2003	7,845.68	37.58	113.44	52.94	81.88	
2004	8,361.08	38.23	115.37	55.96	83.56	
2005	8,774.32	38.22	105.59	56.57	85.26	
2006	9,240.80	37.57	96.14	56.78	86.97	
2007	9,843.24	38.25	98.38	59.61	88.71	
2008	10,270.88	39.84	94.41	60.82	89.44	
2009	10,419.63	40.14	100.30	61.93	91.02	
2010	11,183.86	40.95	105.03	67.74	92.60	
2011	11,615.36	41.69	98.86	69.18	94.18	
2012	12,416.47	43.02	103.31	72.92	96.50	
2013	13,254.64	45.02	109.37	75.27	98.19	
2014	14,096.05	47.38	117.75	77.26	99.88	
2015	14,990.91	51.26	135.19	82.41	101.56	
2016	16,062.68	54.51	145.77	90.80	103.24	
2017	17,175.98	57.75	154.64	94.37	104.92	
2018	18,265.19	59.32	156.03	99.76	106.60	
2019	19,382.75	60.63	160.37	106.04	108.27	
2020	17,537.84	56.96	137.77	101.76	109.03	
2021	18,538.05	59.91	149.99	106.11	110.20	

MTOE - million tons of oil equivalent
MB - thousand barrels

TWh - terrawatt hour
MWh - megawatt hour

BBL - barrels

	Intensity			Elasticity		
	Energy to GDP (TOE/Php 1M)	Oil to GDP (BBL/ Php 100,000)	Electricity to GDP (Wh/Php)	Energy to GDP	Oil to GDP	Electricity to GDP
	5.18	1.57	5.02	-	-	-
	5.14	1.55	4.92	2.96	4.88	5.90
	5.28	1.74	4.94	7.46	31.52	2.06
	5.42	1.89	4.97	2.23	4.99	1.26
	5.35	1.86	5.45	0.72	0.60	3.34
	5.52	2.10	5.74	1.71	3.90	2.20
	5.45	2.06	5.93	0.78	0.63	1.60
	5.53	2.13	6.11	1.28	1.75	1.62
	5.71	2.12	6.42	5.35	2.24	8.71
	5.70	1.92	6.19	0.92	1.85	0.11
	5.56	1.73	6.48	0.42	1.44	2.12
	5.19	1.66	6.53	1.25	0.37	1.27
	4.98	1.53	6.49	0.10	1.23	0.82
	4.79	1.45	6.75	0.20	0.08	1.81
	4.57	1.38	6.69	0.26	0.26	0.87
	4.36	1.20	6.45	0.01	1.71	0.22
	4.07	1.04	6.14	0.32	1.68	0.07
	3.89	1.00	6.06	0.28	0.36	0.76
	3.88	0.92	5.92	0.96	0.93	0.47
	3.85	0.96	5.94	0.53	4.31	1.26
	3.66	0.94	6.06	0.27	0.64	1.28
	3.59	0.85	5.96	0.47	1.52	0.55
	3.46	0.83	5.87	0.46	0.65	0.79
	3.40	0.83	5.68	0.69	0.87	0.48
	3.36	0.84	5.48	0.82	1.21	0.42
	3.42	0.90	5.50	1.29	2.33	1.05
	3.39	0.91	5.65	0.89	1.09	1.42
	3.36	0.90	5.49	0.86	0.88	0.57
	3.25	0.85	5.46	0.43	0.14	0.90
	3.13	0.83	5.47	0.37	0.45	1.03
	3.25	0.79	5.80	0.64	1.48	0.42
	3.23	0.81	5.72	0.91	1.55	0.75

(Continuation)

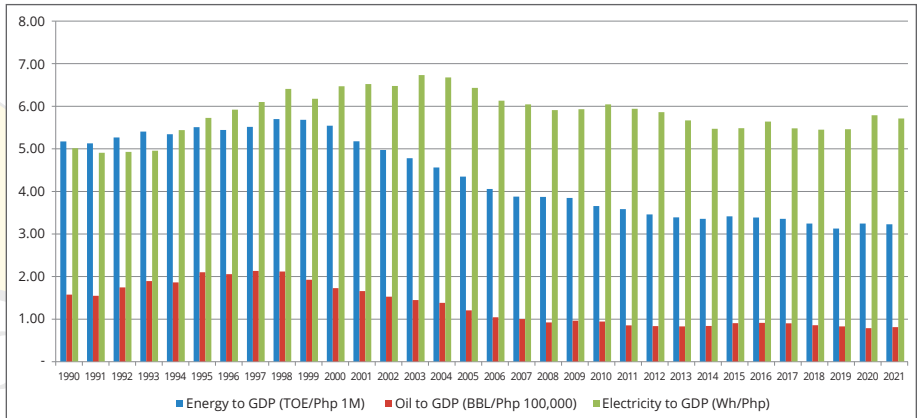
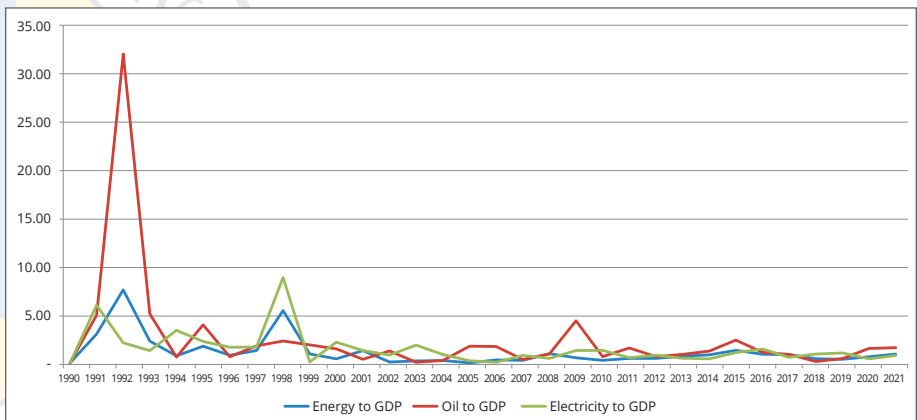
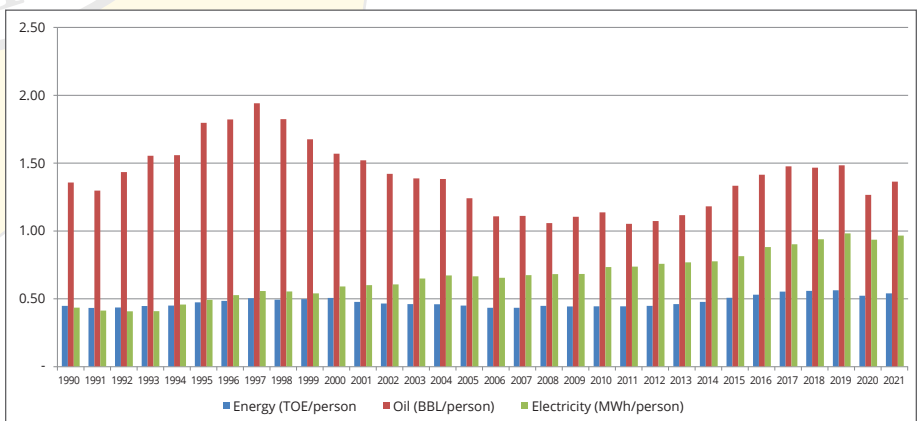
Table 1. GDP and Major Energy Related Indicators

FY	Per Capita			Energy Self-Sufficiency (%)
	Energy (TOE/person)	Oil (BBL/person)	Electricity (MWh/person)	
1990	0.45	1.35	0.43	60.68
1991	0.43	1.30	0.41	56.70
1992	0.43	1.43	0.41	53.68
1993	0.44	1.55	0.41	55.94
1994	0.45	1.56	0.46	50.52
1995	0.47	1.79	0.49	46.26
1996	0.48	1.82	0.52	45.14
1997	0.50	1.94	0.56	43.51
1998	0.49	1.82	0.55	45.04
1999	0.50	1.67	0.54	48.47
2000	0.50	1.57	0.59	48.97
2001	0.48	1.52	0.60	48.11
2002	0.46	1.42	0.60	52.05
2003	0.46	1.39	0.65	53.29
2004	0.46	1.38	0.67	54.86
2005	0.45	1.24	0.66	55.79
2006	0.43	1.11	0.65	57.52
2007	0.43	1.11	0.67	58.61
2008	0.45	1.06	0.68	58.97
2009	0.44	1.10	0.68	61.62
2010	0.44	1.13	0.73	60.24
2011	0.44	1.05	0.73	61.42
2012	0.45	1.07	0.76	60.31
2013	0.46	1.11	0.77	56.61
2014	0.47	1.18	0.77	56.62
2015	0.50	1.33	0.81	52.43
2016	0.53	1.41	0.88	53.86
2017	0.55	1.47	0.90	50.92
2018	0.56	1.46	0.94	50.20
2019	0.56	1.48	0.98	51.64
2020	0.52	1.26	0.93	52.45
2021	0.54	1.36	0.96	51.15

MTOE - million tons of oil equivalent
MB - thousand barrels

TWh - terrawatt hour
MWh - megawatt hour

BBL - barrels

Figure 1. GDP Intensity of Energy**Figure 2. Elasticity of Energy to GDP****Figure 3. Per Capita Energy**

Energy and Economics

Table 2. National Accounts

in million pesos at constant 2018 prices

Year	Gross National Income	Net Primary Income from Rest of the World	Gross Domestic Product	By Expenditure Shares				
				Household Consumption	Government Consumption	Capital Formation	Exports of Goods and Services	
2000	7,674,162	688,779	6,985,383	5,356,412	828,733	1,133,524	1,770,015	
2001	7,912,636	714,252	7,198,384	5,567,577	817,760	1,365,844	1,731,638	
2002	8,206,954	741,060	7,465,894	5,851,522	787,837	1,457,470	1,815,538	
2003	8,618,012	772,334	7,845,677	6,166,308	821,028	1,451,519	1,983,171	
2004	9,173,162	812,084	8,361,078	6,530,391	838,402	1,540,626	2,112,897	
2005	9,655,472	881,147	8,774,325	6,820,633	863,359	1,473,798	2,376,969	
2006	10,112,809	872,005	9,240,804	7,105,899	968,395	1,321,763	2,616,025	
2007	10,752,241	909,001	9,843,239	7,447,652	1,037,212	1,431,930	2,690,900	
2008	11,252,407	981,530	10,270,878	7,734,582	1,042,500	1,815,254	2,575,182	
2009	11,662,803	1,243,170	10,419,633	7,930,379	1,157,604	1,706,367	2,453,934	
2010	12,486,043	1,302,182	11,183,861	8,215,063	1,205,917	2,226,121	2,952,272	
2011	12,903,221	1,287,861	11,615,360	8,671,175	1,228,900	2,169,604	2,929,219	
2012	13,814,303	1,397,837	12,416,466	9,260,725	1,419,240	2,287,335	3,061,251	
2013	14,840,826	1,586,182	13,254,644	9,799,607	1,489,353	2,709,183	3,121,669	
2014	15,758,084	1,662,037	14,096,047	10,366,461	1,543,341	2,933,448	3,500,548	
2015	16,722,293	1,731,386	14,990,907	11,034,535	1,665,462	3,326,756	3,849,448	
2016	17,862,678	1,800,003	16,062,676	11,823,461	1,821,367	4,018,375	4,203,846	
2017	19,084,224	1,908,246	17,175,978	12,527,828	1,939,880	4,456,328	4,935,390	
2018	20,212,349	1,947,159	18,265,190	13,250,084	2,199,637	4,959,105	5,518,573	
2019	21,299,032	1,916,282	19,382,751	14,027,456	2,399,867	5,132,349	5,664,043	
2020	18,858,016	1,320,173	17,537,843	12,911,357	2,651,875	3,375,833	4,749,668	
2021	19,180,569	642,515	18,538,054	13,456,532	2,839,962	4,060,997	5,128,006	

Source: Philippine Statistics Authority (PSA)
as of April 2022
Details may not add up due to rounding

		By Industrial Origin					
	Imports of Goods and Services	Agriculture	Industry	of which:			
				Mining & Quarrying	Manufacturing	Electricity, Gas and Water Supply	Construction
	2,103,301	1,064,005	2,233,332	56,452	1,572,789	227,752	376,339
	2,284,435	1,105,117	2,263,213	54,421	1,615,141	236,233	357,418
	2,446,473	1,144,991	2,346,383	81,125	1,675,907	240,081	349,270
	2,576,349	1,197,371	2,462,871	91,679	1,744,161	260,148	366,883
	2,661,239	1,257,109	2,571,406	86,933	1,816,030	280,210	388,234
	2,760,434	1,301,069	2,701,285	99,343	1,933,017	284,095	384,830
	2,771,279	1,360,678	2,802,099	95,543	1,987,874	293,444	425,237
	2,764,455	1,433,747	2,940,675	109,046	2,045,235	310,705	475,689
	2,896,640	1,482,352	3,101,574	107,284	2,151,220	331,050	512,019
	2,828,651	1,480,207	3,057,652	122,121	2,058,619	327,945	548,967
	3,415,513	1,499,801	3,358,023	133,399	2,214,486	360,982	649,157
	3,383,538	1,550,555	3,411,809	133,388	2,297,192	365,610	615,620
	3,612,086	1,598,312	3,674,110	128,011	2,427,619	387,840	730,640
	3,865,168	1,645,192	3,924,519	130,910	2,538,760	409,650	845,198
	4,247,752	1,676,006	4,218,872	149,511	2,732,860	428,437	908,065
	4,885,294	1,688,344	4,493,390	148,589	2,874,284	458,766	1,011,751
	5,804,373	1,672,085	4,861,342	156,807	3,070,939	500,472	1,133,124
	6,683,447	1,743,134	5,202,582	160,065	3,317,641	523,161	1,201,714
	7,662,209	1,762,616	5,582,525	163,322	3,488,331	557,030	1,373,841
	7,840,965	1,783,855	5,887,869	168,857	3,620,456	591,312	1,507,244
	6,150,890	1,780,391	5,115,316	137,493	3,266,302	589,213	1,122,308
	6,947,443	1,775,358	5,549,484	144,431	3,554,737	615,505	1,234,811

(Continuation)

Table 2. National Accounts*in million pesos at constant 2018 prices*

Year	Services	of which:					
		Wholesale and retail trade; repair of motor vehicles and motorcycles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities	
2000	3,688,046	1,260,150	267,104	141,725	100,928	341,020	
2001	3,830,053	1,318,539	272,322	148,208	122,760	357,884	
2002	3,974,521	1,361,602	284,266	152,229	143,507	379,994	
2003	4,185,436	1,425,298	296,270	158,954	173,673	407,907	
2004	4,532,562	1,525,888	308,335	171,224	210,347	444,300	
2005	4,771,971	1,603,594	303,941	173,819	241,021	489,868	
2006	5,078,027	1,697,235	316,532	179,606	256,346	555,549	
2007	5,468,818	1,837,414	332,279	195,211	288,411	618,667	
2008	5,686,952	1,861,553	342,342	196,691	308,093	637,228	
2009	5,881,774	1,877,191	341,026	197,729	317,327	680,187	
2010	6,326,037	2,030,314	349,294	213,466	326,583	757,901	
2011	6,652,996	2,093,913	375,907	226,108	342,111	806,878	
2012	7,144,045	2,245,453	405,425	242,024	363,733	883,974	
2013	7,684,933	2,381,082	442,870	254,206	386,420	1,006,839	
2014	8,201,169	2,506,535	498,422	271,023	402,219	1,092,038	
2015	8,809,174	2,670,294	548,048	297,279	436,741	1,171,994	
2016	9,529,249	2,861,060	604,328	332,612	462,876	1,275,687	
2017	10,230,262	3,057,552	648,153	371,234	483,683	1,382,521	
2018	10,920,048	3,237,304	697,839	403,289	515,925	1,498,147	
2019	11,711,027	3,489,299	742,347	425,692	557,007	1,676,448	
2020	10,642,137	3,275,537	515,149	231,811	585,185	1,769,952	
2021	11,213,211	3,414,326	547,542	248,457	639,123	1,853,154	

Source: Philippine Statistics Authority (PSA)
as of April 2022
Details may not add up due to rounding

By Industrial Origin

	Real estate and ownership of dwellings	Professional and business services	Public administration and defense; compulsory social activities	Education	Human health and social work activities	Other services
	487,874	145,095	330,372	355,852	119,269	138,659
	482,152	152,779	337,865	365,907	128,426	143,212
	488,546	162,916	342,312	377,257	136,310	145,583
	505,750	185,819	355,604	385,564	143,311	147,285
	530,337	236,460	383,920	404,964	154,636	162,153
	558,682	267,003	388,029	415,194	166,000	164,820
	586,053	305,719	403,505	433,128	170,605	173,748
	627,478	346,143	410,968	447,032	176,546	188,669
	664,607	408,663	421,177	472,362	177,245	196,991
	655,393	469,401	448,635	499,506	183,289	212,088
	701,533	519,966	476,856	506,999	189,570	253,555
	754,008	581,517	488,025	520,351	198,838	265,339
	820,210	617,263	518,184	528,524	211,468	307,787
	897,280	689,095	534,465	547,291	221,737	323,648
	945,984	789,923	558,605	557,395	252,506	326,518
	1,022,316	875,745	567,797	589,602	270,168	359,190
	1,068,415	1,011,910	610,575	627,112	290,083	384,590
	1,129,083	1,117,257	666,393	671,837	309,316	393,233
	1,189,673	1,159,265	767,706	731,607	308,268	411,025
	1,238,469	1,182,159	871,564	766,089	323,261	438,691
	1,031,275	1,068,769	911,188	687,610	306,903	258,758
	1,053,944	1,135,218	962,824	744,503	350,268	263,851

Energy and Economics

Table 3. Population, Labor and Prices
Total Philippines

Year	Population (millions)	Labor Force (thousands)	Unemployed Rate (% of labor force)	Consumer Price Index (2012=100)	General Retail Price Index (2010=100)	General Wholesale Price Index (1998=100)	
				All Items	All Items	All Items	
1990	60.9	22,741	8.1				
1991	62.4	23,483	9.0				
1992	63.8	24,245	8.6				
1993	65.3	24,965	8.9				
1994	66.8	25,630	8.4	39.45			
1995	68.4	26,343	8.4	41.93			
1996	70.0	26,996	7.4	44.80			
1997	71.6	27,686	7.8	47.81			
1998	75.4	28,506	9.4	52.78			
1999	77.0	29,219	9.4	56.28			
2000	77.0	29,953	11.2	60.16			
2001	78.6	30,755	11.0	63.71			
2002	80.3	33,936	11.4	65.83	106.5	126.2	
2003	81.9	34,571	11.4	67.45	108.5	132.5	
2004	83.6	35,862	11.8	70.28	113.7	143.6	
2005	85.3	35,287	7.8	74.64	121.2	159.8	
2006	87.0	35,464	8.0	78.62	127.4	173.2	
2007	88.7	36,213	7.3	80.88	131.3	178.7	
2008	89.4	36,805	7.4	85.61	140.0	199.9	
2009	91.0	37,892	7.5	89.23	142.8	191.6	
2010	92.6	38,893	7.4	92.47	147.3	202.9	
2011	94.2	40,006	7.0	96.48	152.9	220.5	
2012**	96.5	40,426	7.0	100.00	156.0	100.0	
2013	98.2	41,022	7.1	102.70	160.2	101.7	
2014	99.9	41,379	6.6	105.40	164.6	105.3	
2015	101.6	41,343	6.3	106.50	166.5	107.0	
2016	103.2	43,361	5.4	108.20	170.3	108.0	
2017	104.9	42,775	5.7	110.80	176.3	110.1	
2018*	106.6	43,462	5.3	115.40	114.5	112.2	
2019	108.3	44,692	5.1	119.10	113.0	114.0	
2020***	109.0	39,379	10.3	123.30	114.4	116.8	
2021	110.2	46,274	7.1	128.80	116.7	120.3	

Data Sources:
Philippine Statistical Yearbook (PSY)
Philippine Statistics Authority (PSA)

* General Retail Price Index (2012=100) from 2018 - 2021
** General Wholesale Price Index (2012=100) from 2012-2021
*** Producer Price Index (2018=100) from 2020 - 2021

	Producer's Price Index for Manufacturing (2000=100)	Crude Oil Prices (US\$/barrel)	Peso per Dollar (average)	Average Pump Prices (Php/Liter)		
	Total			Gasoline	Diesel	LPG
			24.31	8.25	5.51	3.92
			27.48	14.54	7.56	5.46
			25.51	11.00	7.08	5.26
			27.12	10.00	7.00	5.26
			26.42	9.71	7.13	5.38
			25.71	9.00	7.00	5.26
			26.22	9.79	7.21	6.10
			29.47	11.41	7.84	7.02
			40.89	11.97	8.25	6.07
			39.09	12.69	8.91	7.66
			44.19	16.29	12.16	9.90
		22.8	50.99	17.86	13.96	10.55
		23.8	51.60	17.52	13.89	10.38
		26.8	54.20	20.43	15.72	12.29
		33.6	56.04	25.73	20.10	15.37
		49.3	55.09	32.53	28.74	18.35
		61.5	51.31	40.07	34.48	21.42
		68.4	46.15	40.82	34.77	22.86
	175.3	93.6	44.47	47.20	42.37	26.29
	172.8	61.7	47.64	40.23	28.08	26.25
	164.3	78.0	45.11	43.51	33.89	32.74
	165.8	106.2	43.31	54.29	44.32	38.21
	100.0	109.0	42.23	54.34	44.45	41.02
	152.4	105.0	42.45	51.96	42.06	40.22
	151.0	97.0	44.40	52.15	41.64	39.65
	140.9	50.9	45.50	42.23	27.54	30.20
	134.7	42.2	47.49	39.80	25.36	28.80
	131.9	54.2	50.39	45.89	32.14	30.45
	132.9	69.4	52.77	54.41	43.02	34.04
	136.0	66.8	50.77	53.11	42.44	33.57
	93.1	49.8	48.06	48.20	36.63	34.75
	91.5	69.24	50.25	54.60	43.89	48.46

6 Energy Surveys

Household Energy Consumption Survey (HECS)

The Department of Energy (DOE), in collaboration with the then National Statistics Office (NSO), launched the 2011 Household Energy Consumption Survey (HECS) in September 2011. The 2011 HECS is the fourth in the series of collaborative efforts between the DOE and the NSO, succeeding the 2004, 1995 and 1989 surveys. It is a nationwide survey aimed to generate comprehensive and reliable data/information and analysis on end-use energy consumption in the residential sector that is vital in the effective formulation and implementation of energy policies and programs. Both the 2004 and 2011 HECS adopted the 2003 new Master Sample (MS) consisting of 2,826 primary sampling units (PSUs). The entire MS with approximately 50,000 sample households was divided into four sub-samples or independent replicates. The survey, being a half-sample, covered not less than 25,000 households nationwide, with the following reference periods: October 2003 to September 2004 for the 2004 HECS; and March to August 2011 for the 2011 HECS.

All HECS collected data items from households on type and quantity of energy products consumed (such as consumption of electricity, petroleum products, fuelwood, charcoal, biomass residues and other renewable energy forms); average fuel prices; energy efficiency, conservation and safety measures/practices; awareness on certain energy issues; fuel preferences; and socio-economic conditions that may affect energy use.

Survey of Energy Consumption of Establishments (SECE)

The 2010 Survey of Energy Consumption of Establishments (SECE) is the first-ever survey of establishments on energy consumption. Being the counterpart of the Household Energy Consumption Survey (HECS), it was conducted in collaboration with the DOE, with its attached agencies consulted in the determination of data items to be collected and the indicators to be generated.

The data gathered from the 2010 SECE aimed to provide benchmark information on the country's energy utilization patterns of industries, generate indicators of energy intensities of industries, measured as energy consumption per unit output and highlight energy-producers and energy-intensive users among the country's industries. Among others, the survey also generates data on: quantity of fuels purchased by type such as petroleum, other fossil and biomass fuels classified according to usage; quantity and value of electricity purchased by source; quantity of electricity generated for own-use and quantity of fuels consumed; quantity and value of electricity produced, and the quantity and value of fuels consumed by electricity generating establishments; energy consumed by transport vehicles; electricity consumption of air-conditioning units, lighting fixtures, appliances, and equipment/machineries energy related information about the establishments such as total production and floor area; and beginning and ending inventories by type of fuels.

1. Statistical Tables from the Energy Consumption Surveys

Household Energy Consumption Survey (HECS): 2004 vs 2011

Table 1. Number of Households and Total Consumption of Fuels:
Type of Fuel and Region: 2004 vs 2011

Region/Type of Fuel	2004 ^a			2011 ^b		
	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household
PHILIPPINES						
Electricity	13,337	22,606,215	1,695	18,282	10,266,229	562
Liquified Petroleum Gas (LPG)	8,842	872,394	99	8,631	407,015	47
Kerosene	9,525	474,046	50	7,201	104,829	15
Gasoline	1,986	2,152,897	1,084	4,951	1,639,186	331
Diesel	567	998,328	1,760	1,021	739,674	725
Fuelwood	9,357	10,693,888	1,143	11,356	12,456,212	1,097
Charcoal	5,811	88,372	153	7,631	1,341,051	176
Biomass Residue	3,177	1,351,263	425	4,682	1,715,922	367
NCR - National Capital Region						
Electricity	2,332	6,629,876	2,843	2,675	2,759,275	1,032
Liquified Petroleum Gas (LPG)	1,997	211,202	106	2,254	129,096	57
Kerosene	615	64,116	104	301	19,931	66
Gasoline	204	292,745	1,435	550	400,703	729
Diesel	95	123,528	1,303	142	172,595	1,219
Fuelwood	169	64,943	385	239	72,397	1,097
Charcoal	700	41,596	59	1,047	117,747	176
Biomass Residue	28	10,871	392	50	7,375	367
CAR - Cordillera Administrative Region						
Electricity	203	252,532	1,244	326	136,468	419
Liquified Petroleum Gas (LPG)	195	21,815	112	237	12,569	53
Kerosene	126	4,364	35	88	932	11
Gasoline	17	15,229	889	50	18,669	377
Diesel	18	50,052	2,746	37	48,279	1,322
Fuelwood	188	248,755	1,324	226	329,407	1,456
Charcoal	33	4,023	122	38	4,913	130
Biomass Residue	7	5,423	745	15	3,635	237

Units: electricity in kWh; LPG, diesel, gasoline and kerosene in Liters; fuelwood, charcoal and biomass residue in kilograms

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

^a For 2004: consumption reported is for one (1) year

^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS):
2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

**Table 1. Number of Households and Total Consumption of Fuels:
Type of Fuel and Region: 2004 vs 2011**

Region/Type of Fuel	2004 ^a			2011 ^b		
	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household
REGION I - Ilocos						
Electricity	775	982,700	1,268	1,096	508,727	464
Liquified Petroleum Gas (LPG)	577	55,174	96	586	25,568	44
Kerosene	382	12,790	33	160	2,194	14
Gasoline	126	104,060	823	312	97,556	313
Diesel	34	29,620	882	46	29,386	638
Fuelwood	629	1,099,225	1,747	847	989,438	1,168
Charcoal	287	55,472	193	336	50,496	150
Biomass Residue	56	14,865	265	101	25,524	252
REGION II - Cagayan Valley						
Electricity	454	440,834	971	702	241,340	344
Liquified Petroleum Gas (LPG)	355	29,470	83	324	12,952	40
Kerosene	341	10,064	30	336	2,135	6
Gasoline	78	78,348	1,006	221	81,002	367
Diesel	27	49,959	1,821	101	71,213	706
Fuelwood	483	817,439	1,692	668	1,065,307	1,594
Charcoal	85	29,679	349	179	35,535	198
Biomass Residue	103	44,621	435	207	48,868	236
REGION III - Central Luzon						
Electricity	1,726	2,723,628	1,578	2,202	1,297,713	589
Liquified Petroleum Gas (LPG)	1,406	146,876	104	1,458	68,402	47
Kerosene	731	40,951	56	349	5,910	17
Gasoline	261	368,814	1,411	789	211,537	268
Diesel	79	288,095	3,642	133	83,073	627
Fuelwood	818	629,584	770	1,057	642,189	608
Charcoal	690	65,417	95	977	115,417	118
Biomass Residue	65	21,713	333	120	31,320	260

Units: electricity in kWh; LPG, diesel, gasoline and kerosene in Liters; fuelwood, charcoal and biomass residue in kilograms

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

^a For 2004: consumption reported is for one (1) year

^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS):
2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

**Table 1. Number of Households and Total Consumption of Fuels:
Type of Fuel and Region: 2004 vs 2011**

Region/Type of Fuel	2004 ^a			2011 ^b		
	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household
REGION IV-A - CALABARZON						
Electricity	2,130	4,091,730	1,921	2,559	1,671,145	653
Liquified Petroleum Gas (LPG)	1,706	167,384	98	1,722	73,898	43
Kerosene	877	45,677	52	460	7,598	17
Gasoline	264	299,005	1,133	670	229,750	343
Diesel	105	153,777	1,460	155	98,646	635
Fuelwood	759	895,704	1,180	936	614,928	657
Charcoal	918	167,169	182	1,286	158,955	124
Biomass Residue	237	85,887	363	223	37,098	166
REGION IV-B - MIMAROPA						
Electricity	272	292,672	1,076	522	135,683	260
Liquified Petroleum Gas (LPG)	163	13,806	85	114	4,209	37
Kerosene	460	22,884	50	476	4,894	10
Gasoline	72	44,209	612	207	39,352	190
Diesel	19	27,334	1,436	59	12,397	210
Fuelwood	345	225,565	655	458	448,119	978
Charcoal	278	46,208	166	355	125,115	353
Biomass Residue	126	35,991	286	204	41,972	206
REGION V - Bicol						
Electricity	657	681,966	1,038	971	316,710	326
Liquified Petroleum Gas (LPG)	335	31,873	95	253	11,876	47
Kerosene	777	28,652	37	640	7,846	12
Gasoline	105	68,949	659	231	56,182	243
Diesel	16	29,326	1,871	22	18,233	840
Fuelwood	644	587,901	913	757	766,235	1,012
Charcoal	396	79,951	202	548	152,233	278
Biomass Residue	314	154,703	493	376	126,394	337

Units: electricity in kWh; LPG, diesel, gasoline and kerosene in Liters; fuelwood, charcoal and biomass residue in kilograms

^a For 2004: consumption reported is for one (1) year

^b For 2011: consumption reported is for six (6) months

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

Source: Household Energy Consumption Survey (HECS):
2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

**Table 1. Number of Households and Total Consumption of Fuels:
Type of Fuel and Region: 2004 vs 2011**

Region/Type of Fuel	2004 ^a			2011 ^b		
	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household
REGION VI - Western Visayas						
Electricity	920	895,160	973	1,453	600,445	413
Liquified Petroleum Gas (LPG)	365	31,873	95	243	9,076	37
Kerosene	999	28,652	37	815	7,034	9
Gasoline	137	68,949	659	337	77,942	231
Diesel	35	29,326	1,871	80	30,769	385
Fuelwood	1,003	1,067,740	1,064	1,242	1,770,077	1,426
Charcoal	650	150,306	231	830	224,682	271
Biomass Residue	397	200,086	504	793	217,920	275
REGION VII - Central Visayas						
Electricity	915	1,283,745	1,403	1,284	676,877	527
Liquified Petroleum Gas (LPG)	404	69,784	91	368	14,969	41
Kerosene	731	36,573	50	569	10,056	18
Gasoline	192	155,782	812	370	104,028	281
Diesel	15	31,273	2,075	60	31,936	535
Fuelwood	887	869,218	980	1,043	1,169,165	1,121
Charcoal	256	22,267	87	408	48,672	119
Biomass Residue	461	145,418	315	561	254,893	454
REGION VIII - Eastern Visayas						
Electricity	521	563,201	1,081	826	304,280	368
Liquified Petroleum Gas (LPG)	268	26,382	99	263	11,661	44
Kerosene	649	28,679	44	646	7,295	11
Gasoline	88	63,256	721	232	56,597	244
Diesel	20	26,225	1,283	32	17,017	530
Fuelwood	572	588,188	1,029	590	447,538	758
Charcoal	316	54,291	172	334	63,080	189
Biomass Residue	320	103,594	324	457	175,032	383

Units: electricity in kWh; LPG, diesel, gasoline and kerosene in Liters; fuelwood, charcoal and biomass residue in kilograms

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

^a For 2004: consumption reported is for one (1) year

^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS):
2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

**Table 1. Number of Households and Total Consumption of Fuels:
Type of Fuel and Region: 2004 vs 2011**

Region/Type of Fuel	2004 ^a			2011 ^b		
	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household
REGION IX - Zamboanga Peninsula						
Electricity	327	413,982	1,266	546	203,255	372
Liquified Petroleum Gas (LPG)	132	11,390	86	106	4,541	43
Kerosene	472	22,739	48	437	5,347	12
Gasoline	68	40,591	601	156	38,598	247
Diesel	8	13,633	1,747	11	3,635	331
Fuelwood	398	552,359	1,387	508	777,129	1,531
Charcoal	147	27,219	186	219	59,210	270
Biomass Residue	254	200,442	788	280	185,291	662
REGION X - Northern Mindanao						
Electricity	554	891,940	1,610	780	373,204	479
Liquified Petroleum Gas (LPG)	255	25,062	98	198	8,453	43
Kerosene	504	18,613	37	412	4,429	11
Gasoline	93	62,120	667	204	66,727	328
Diesel	27	34,137	1,274	36	51,172	1,416
Fuelwood	578	928,903	1,607	635	524,415	826
Charcoal	182	9,163	50	132	9,043	68
Biomass Residue	219	95,532	437	507	261,346	515
REGION XI - Davao						
Electricity	596	979,824	1,644	803	456,727	569
Liquified Petroleum Gas (LPG)	277	24,686	89	227	8,249	36
Kerosene	588	25,596	44	360	5,158	14
Gasoline	112	93,114	832	229	69,147	302
Diesel	18	40,417	2,195	35	30,091	869
Fuelwood	591	705,178	1,193	598	828,317	1,384
Charcoal	349	34,041	97	195	48,110	247
Biomass Residue	176	59,615	338	236	112,004	476

Units: electricity in kWh; LPG, diesel, gasoline and kerosene in Liters; fuelwood, charcoal and biomass residue in kilograms

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

^a For 2004: consumption reported is for one (1) year

^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS):
2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

**Table 1. Number of Households and Total Consumption of Fuels:
Type of Fuel and Region: 2004 vs 2011**

Region/Type of Fuel	2004 ^a			2011 ^b		
	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household	Total Households (In '000)	Total HH Consumption (In '000)	Average Consumption Per Household
REGION XII - SOCCSKSARGEN						
Electricity	471	714,978	1,518	715	282,591	395
Liquified Petroleum Gas (LPG)	187	15,460	83	99	3,373	34
Kerosene	527	20,617	39	399	3,772	9
Gasoline	69	39,551	572	197	37,451	190
Diesel	23	16,101	710	41	8,437	208
Fuelwood	534	597,769	1,120	607	508,466	838
Charcoal	252	60,523	240	369	72,269	196
Biomass Residue	154	72,091	467	275	117,544	428
ARMM - Autonomous Region in Muslim Mindanao						
Electricity	177	370,815	2,095	362	109,265	302
Liquified Petroleum Gas (LPG)	89	12,236	137	72	3,890	54
Kerosene	467	41,091	88	488	8,661	18
Gasoline	58	244,110	4,223	65	20,374	314
Diesel	6	11,092	1,744	16	12,265	759
Fuelwood	426	546,700	1,284	510	959,475	1,883
Charcoal	158	28,240	179	231	46,983	203
Biomass Residue	140	63,495	454	103	23,053	223
CARAGA						
Electricity	307	396,337	1,291	459	192,523	419
Liquified Petroleum Gas (LPG)	129	11,310	87	108	4,233	39
Kerosene	281	11,713	42	265	1,637	6
Gasoline	43	30,984	713	134	33,572	251
Diesel	22	24,054	1,105	17	20,530	1,213
Fuelwood	334	268,718	804	437	543,611	1,244
Charcoal	115	12,805	111	146	8,592	59
Biomass Residue	120	36,911	307	174	46,654	268

Units: electricity in kWh; LPG, diesel, gasoline and kerosene in Liters; fuelwood, charcoal and biomass residue in kilograms

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

^a For 2004: consumption reported is for one (1) year

^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS):
2004 and 2011

Department of Energy and Philippine Statistics Authority

Household Energy Consumption Survey (HECS): 2004 vs 2011

Table 2. Number of Households using Electricity, Percentage to Total Electricity Consumption, and Average Consumption of Electricity Per Household by End-Use and Region: 2004 vs 2011

Region/End-Use	2004 ^a			2011 ^b		
	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)
Philippines	13,337	100.0	1,695	18,282	100.0	562
Lighting	13,318	10.7	179	18,271	9.3	60
Cooking/Food Preparation	2,335	3.2	306	3,884	3.5	108
Water Heating	337	1.5	970	833	3.4	484
Recreation	11,977	17.9	335	16,226	17.6	128
Refrigeration	5,985	28.6	1,071	7,614	25.1	390
Space Cooling/Air Conditioning	9,950	28.4	638	13,319	31.1	277
Ironing	7,653	3.2	95	8,894	2.8	37
Laundry	3,997	1.8	100	5,615	1.7	36
Water Pumping	449	2.5	1,246	638	3.4	623
Computer Activity	671	0.5	159	2,867	2.0	84
Other Appliances	985	1.7	395	11,715	0.2	2
NCR - National Capital Region	2,332	100.0	2,843	2,675	100.0	1,158
Lighting	2,332	8.3	237	2,675	7.7	90
Cooking/Food Preparation	675	4.2	415	875	3.9	138
Water Heating	106	1.8	1,111	152	1.9	391
Recreation	2,169	12.1	371	2,565	13.2	160
Refrigeration	1,341	24.3	1,200	1,463	24.0	507
Space Cooling/Air Conditioning	2,301	40.7	1,172	2,642	41.6	488
Ironing	1,805	3.1	114	1,917	2.4	39
Laundry	1,050	1.9	121	1,451	1.8	38
Water Pumping	105	1.4	881	60	1.0	527
Computer Activity	208	0.7	233	788	2.2	88
Other Appliances	90	1.4	1,052	1,869	0.1	2
CAR - Cordillera Administrative Region	203	100.0	1,244	326	100.0	483
Lighting	203	18.8	231	326	12.3	59
Cooking/Food Preparation	45	5.6	312	65	5.7	137
Water Heating	13	3.1	606	31	12.8	656
Recreation	179	19.8	276	278	18.6	105
Refrigeration	90	38.8	1,074	139	37.3	422
Space Cooling/Air Conditioning	52	3.5	168	73	5.0	108
Ironing	90	3.5	97	105	1.4	21
Laundry	61	2.4	96	118	2.2	29
Water Pumping	2	0.7	1,045	5	1.1	321
Computer Activity	19	1.3	168	65	3.5	84
Other Appliances	28	2.6	230	235	0.3	2

^a For 2004: consumption reported is for one (1) year

^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS): 2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

Table 2. Number of Households using Electricity, Percentage to Total Electricity Consumption, and Average Consumption of Electricity Per Household by End-Use and Region: 2004 vs 2011

Region/End-Use	2004 ^a			2011 ^b		
	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)
REGION I - Ilocos	775	100.0	1,268	1,096	100.0	571
Lighting	775	13.0	165	1,096	9.1	52
Cooking/Food Preparation	91	2.0	219	119	1.7	91
Water Heating	9	0.2	214	23	2.9	786
Recreation	716	18.4	252	1,018	19.9	122
Refrigeration	330	34.9	1,041	462	29.6	401
Space Cooling/Air Conditioning	590	19.6	327	874	22.0	157
Ironing	362	3.3	89	422	2.3	35
Laundry	181	1.4	76	243	1.4	36
Water Pumping	42	4.9	1,146	71	9.9	878
Computer Activity	19	0.2	116	128	1.1	52
Other Appliances	30	2.0	641	717	0.1	1
REGION II - Cagayan Valley	454	100.0	971	702	100.0	467
Lighting	452	15.4	149	702	12.0	56
Cooking/Food Preparation	35	1.3	164	71	2.3	107
Water Heating	5	0.4	351	16	4.1	838
Recreation	382	21.1	242	629	21.3	111
Refrigeration	143	30.6	933	225	19.5	285
Space Cooling/Air Conditioning	314	18.4	256	517	30.3	192
Ironing	203	3.3	71	269	2.6	32
Laundry	108	1.8	74	168	1.5	29
Water Pumping	16	6.2	1,679	28	5.1	609
Computer Activity	7	0.1	96	75	1.1	47
Other Appliances	14	1.2	369	354	0.1	1
REGION III - Central Luzon	1,726	100.0	1,578	2,202	100.0	706
Lighting	1,718	10.0	158	2,202	7.5	53
Cooking/Food Preparation	261	2.0	214	541	3.7	106
Water Heating	28	0.8	770	67	2.4	546
Recreation	1,629	17.1	286	2,069	17.8	134
Refrigeration	747	28.5	1,038	842	21.5	397
Space Cooling/Air Conditioning	1,563	28.7	501	1,976	32.3	254
Ironing	1,120	3.8	92	1,389	3.4	38
Laundry	782	2.4	85	1,089	2.6	37
Water Pumping	68	5.8	2,303	120	6.6	853
Computer Activity	71	0.4	147	377	2.1	86
Other Appliances	63	0.4	188	1,759	0.2	2

^a For 2004: consumption reported is for one (1) year^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS): 2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

Table 2. Number of Households using Electricity, Percentage to Total Electricity Consumption, and Average Consumption of Electricity Per Household by End-Use and Region: 2004 vs 2011

Region/End-Use	2004 ^a			2011 ^b		
	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)
REGION IV-A - CALABARZON	2,130	100.0	1,921	2,559	100.0	719
Lighting	2,129	9.8	188	2,559	7.9	57
Cooking/Food Preparation	458	2.4	213	648	2.7	78
Water Heating	61	1.3	847	134	2.5	344
Recreation	1,976	15.9	328	2,397	15.6	120
Refrigeration	1,097	32.7	1,217	1,264	28.1	409
Space Cooling/Air Conditioning	1,855	26.3	580	2,237	29.8	245
Ironing	1,574	3.1	81	1,711	3.5	38
Laundry	923	2.3	101	1,192	2.1	33
Water Pumping	101	3.7	1,487	120	5.0	765
Computer Activity	161	0.4	107	538	2.5	84
Other Appliances	87	2.2	1,039	2,041	0.2	2
REGION IV-B - MIMAROPA	272	100.0	1,076	522	100.0	300
Lighting	271	12.9	138	521	11.6	35
Cooking/Food Preparation	37	1.9	151	59	2.2	59
Water Heating	9	0.7	211	11	0.6	86
Recreation	231	19.5	245	391	22.0	88
Refrigeration	105	33.1	909	135	25.7	297
Space Cooling/Air Conditioning	190	17.6	269	325	25.3	122
Ironing	157	5.3	99	219	4.1	30
Laundry	87	2.6	89	119	2.9	39
Water Pumping	14	4.8	1,017	27	3.6	211
Computer Activity	13	0.6	129	41	1.3	51
Other Appliances	14	0.9	192	364	0.6	3
REGION V - Bicol	657	100.0	1,038	971	100.0	353
Lighting	656	14.0	144	971	12.0	42
Cooking/Food Preparation	68	2.4	236	99	1.8	64
Water Heating	13	2.4	1,185	29	1.5	177
Recreation	565	25.1	300	817	25.1	105
Refrigeration	204	28.4	937	280	21.4	262
Space Cooling/Air Conditioning	448	17.7	267	668	30.2	155
Ironing	321	2.7	57	330	2.3	24
Laundry	86	0.9	72	134	1.2	30
Water Pumping	10	1.2	755	12	2.1	576
Computer Activity	19	0.4	146	97	2.3	82
Other Appliances	67	4.8	482	599	0.2	1

^a For 2004: consumption reported is for one (1) year^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS): 2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

Table 2. Number of Households using Electricity, Percentage to Total Electricity Consumption, and Average Consumption of Electricity Per Household by End-Use and Region: 2004 vs 2011

Region/End-Use	2004 ^a			2011 ^b		
	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)
REGION VI - Western Visayas	920	100.0	973	1,453	100.0	410
Lighting	913	14.4	139	1,446	10.2	42
Cooking/Food Preparation	116	4.0	299	229	3.0	77
Water Heating	17	1.6	826	60	2.4	236
Recreation	848	25.1	261	1,252	24.9	118
Refrigeration	344	30.9	794	505	24.6	290
Space Cooling/Air Conditioning	592	17.2	257	935	27.1	172
Ironing	411	3.7	79	546	2.6	29
Laundry	108	0.9	72	167	0.8	27
Water Pumping	33	1.5	387	64	2.4	223
Computer Activity	26	0.4	123	133	1.5	65
Other Appliances	60	0.4	63	778	0.7	5
REGION VII - Central Visayas	915	100.0	1,403	1,284	100.0	593
Lighting	915	11.7	163	1,284	9.7	58
Cooking/Food Preparation	124	3.7	379	342	4.0	88
Water Heating	11	0.3	355	70	3.0	326
Recreation	816	22.2	347	1,115	17.7	121
Refrigeration	364	25.6	900	515	24.4	360
Space Cooling/Air Conditioning	547	28.9	676	825	33.7	311
Ironing	354	3.2	116	461	2.1	35
Laundry	107	0.9	105	165	0.9	40
Water Pumping	7	0.3	506	28	2.0	560
Computer Activity	46	0.5	146	205	2.4	88
Other Appliances	114	2.7	308	453	0.2	3
REGION VIII - Eastern Visayas	521	100.0	1,081	826	100.0	408
Lighting	520	14.4	153	826	10.8	44
Cooking/Food Preparation	38	2.3	334	128	2.9	75
Water Heating	6	1.2	1,117	43	4.1	317
Recreation	403	27.8	340	657	22.3	115
Refrigeration	171	27.3	883	275	21.7	267
Space Cooling/Air Conditioning	270	20.7	422	516	29.7	194
Ironing	181	2.5	77	282	3.0	36
Laundry	67	1.1	94	134	1.5	39
Water Pumping	11	0.9	469	25	2.1	284
Computer Activity	13	0.4	191	78	1.7	73
Other Appliances	240	4.3	100	508	0.2	1

^a For 2004: consumption reported is for one (1) year^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS): 2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

Table 2. Number of Households using Electricity, Percentage to Total Electricity Consumption, and Average Consumption of Electricity Per Household by End-Use and Region: 2004 vs 2011

Region/End-Use	2004 ^a			2011 ^b		
	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)
REGION IX - Zamboanga Peninsula	327	100.0	1,266	546	100.0	520
Lighting	327	12.8	156	546	9.5	50
Cooking/Food Preparation	54	3.5	255	99	3.8	110
Water Heating	7	0.3	190	42	14.3	961
Recreation	271	27.6	407	428	19.1	127
Refrigeration	136	33.9	998	209	26.0	353
Space Cooling/Air Conditioning	158	10.7	271	248	19.8	227
Ironing	138	5.0	145	163	1.9	33
Laundry	49	1.0	84	65	0.7	31
Water Pumping	2	0.2	468	11	2.6	666
Computer Activity	7	0.1	83	37	2.1	157
Other Appliances	63	4.8	300	171	0.1	1
REGION X - Northern Mindanao	554	100.0	1,610	780	100.0	710
Lighting	554	11.4	182	780	9.1	65
Cooking/Food Preparation	90	4.0	396	159	4.0	141
Water Heating	12	4.1	3,058	57	9.5	916
Recreation	492	23.7	427	674	16.9	139
Refrigeration	260	30.0	1,023	380	26.3	384
Space Cooling/Air Conditioning	262	205.0	685	334	27.1	449
Ironing	239	3.1	117	269	2.5	51
Laundry	116	1.3	103	169	1.4	45
Water Pumping	4	0.4	746	16	0.7	256
Computer Activity	21	0.3	110	101	2.2	119
Other Appliances	55	1.2	199	572	0.3	3

^a For 2004: consumption reported is for one (1) year^b For 2011: consumption reported is for six (6) monthsSource: Household Energy Consumption Survey (HECS): 2004 and 2011
Department of Energy and Philippine Statistics Authority

(Continuation)

Table 2. Number of Households using Electricity, Percentage to Total Electricity Consumption, and Average Consumption of Electricity Per Household by End-Use and Region: 2004 vs 2011

Region/End-Use	2004 ^a			2011 ^b		
	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)
REGION XI - Davao	596	100.0	1,644	803	100.0	570
Lighting	596	10.8	177	803	10.3	59
Cooking/Food Preparation	120	2.6	210	154	3.9	114
Water Heating	14	1.7	1,160	24	2.8	525
Recreation	511	22.7	433	677	21.1	143
Refrigeration	298	32.4	1,061	392	34.8	407
Space Cooling/Air Conditioning	355	23.5	644	436	21.2	222
Ironing	265	2.4	89	268	2.1	37
Laundry	117	1.6	130	159	1.2	36
Water Pumping	8	1.0	1,324	10	0.5	205
Computer Activity	16	0.2	95	90	2.1	107
Other Appliances	12	1.2	949	325	0.1	1
REGION XII - SOCCSKSARGEN	471	100.0	1,518	715	100.0	492
Lighting	471	11.1	168	714	11.9	59
Cooking/Food Preparation	69	4.0	407	144	4.2	103
Water Heating	16	2.5	1,144	24	4.7	678
Recreation	395	21.0	379	613	22.5	129
Refrigeration	200	29.3	1,041	271	27.1	352
Space Cooling/Air Conditioning	259	23.2	639	391	17.8	160
Ironing	238	3.0	89	267	2.6	34
Laundry	96	1.1	79	135	1.2	32
Water Pumping	22	3.2	1,019	32	7.0	776
Computer Activity	18	0.4	149	66	1.0	51
Other Appliances	14	1.3	668	459	0.2	1

^a For 2004: consumption reported is for one (1) year^b For 2011: consumption reported is for six (6) months

Source: Household Energy Consumption Survey (HECS): 2004 and 2011

Department of Energy and Philippine Statistics Authority

(Continuation)

Table 2. Number of Households using Electricity, Percentage to Total Electricity Consumption, and Average Consumption of Electricity Per Household by End-Use and Region: 2004 vs 2011

Region/End-Use	2004 ^a			2011 ^b		
	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)	Total Households (In '000)	Percentage to Total Consumption	Average Consumption Per Household (In kWh)
ARMM - Autonomous Region in Muslim Mindanao	177	100.0	2,095	362	100.0	464
Lighting	177	19.9	255	360	33.9	158
Cooking/Food Preparation	16	5.7	809	74	12.4	282
Water Heating	4	3.8	2,115	28	7.5	455
Recreation	138	43.3	709	268	22.7	142
Refrigeration	27	14.2	1,200	57	10.0	295
Space Cooling/Air Conditioning	54	7.3	307	119	6.7	95
Ironing	65	4.1	143	101	5.8	96
Laundry	9	0.9	243	11	0.5	70
Water Pumping	-	-	-	2	0.3	252
Computer Activity	1	-	42	4	0.1	51
Other Appliances	3	0.6	438	182	0.2	2
CARAGA	307	100.0	1,291	459	100.0	528
Lighting	307	14.0	179	459	10.2	54
Cooking/Food Preparation	37	2.1	223	77	3.8	121
Water Heating	5	0.3	215	22	7.5	811
Recreation	257	27.9	424	379	19.1	122
Refrigeration	129	30.8	936	200	25.3	307
Space Cooling/Air Conditioning	139	18.1	509	203	27.2	324
Ironing	130	2.4	73	174	2.4	34
Laundry	53	1.0	72	96	1.5	38
Water Pumping	4	0.5	539	7	1.1	377
Computer Activity	6	0.2	110	44	1.6	89
Other Appliances	30	2.8	372	331	0.2	2

^a For 2004: consumption reported is for one (1) year^b For 2011: consumption reported is for six (6) monthsSource: Household Energy Consumption Survey (HECS): 2004 and 2011
Department of Energy and Philippine Statistics Authority

Household Energy Consumption Survey (HECS): 2004 vs 2011

Table 3. Number of Households Using Petroleum Products by Type of Fuel and End-Use, by Region: 2004 vs 2011

2011 ^a							
Type of Fuel/End-Use	Philippines	NCR	CAR	I	II	III	IVA
Any Fuel	16,275	2,469	321	781	649	1,842	2,168
LPG	8,631	2,254	237	586	324	1,458	1,722
Cooking/heating water for bathing	8,630	2,253	237	586	324	1,458	1,722
Lighting	4	-	*	-	1	-	-
Other Uses	9	6	-	-	-	1	-
Kerosene	7,201	301	88	160	336	349	460
Cooking/heating water for bathing	453	222	2	5	3	48	43
Lighting	6,348	63	86	151	329	283	306
Fire Starting	2,021	32	2	13	59	59	233
Other Uses	55	2	-	3	-	-	-
Gasoline	4,951	550	50	312	221	789	670
Transportation	4,907	550	45	311	213	789	664
Power Generation & Other Uses	96	-	5	2	23	4	10
Diesel	1,021	142	37	46	101	133	155
Transportation	852	140	34	46	72	130	155
Power Generation & Other Uses	188	1	2	-	39	3	-
2004 ^b							
Type of Fuel/End-Use	Philippines	NCR	CAR	I	II	III	IVA
Any Fuel	16,973	2,297	272	797	555	1,763	2,143
LPG	8,842	1,997	195	577	355	1,406	1,706
Cooking/heating water for bathing	8,837	1,997	195	577	355	1,405	1,706
Lighting	23	2	2	3	2	3	2
Other Uses	11	0	0	0	0	0	2
Kerosene	9,525	615	126	382	341	731	877
Cooking/heating water for bathing	1464	489	4	23	11	259	233
Lighting	7,363	80	120	343	329	470	386
Fire Starting	3,807	125	16	71	61	204	543
Other Uses	13	1	1	1	0	0	1
Gasoline	1,986	204	17	126	78	261	264
Transportation	1,950	203	16	122	75	257	262
Power Generation & Other Uses	58	2	2	6	4	6	4
Diesel	567	95	18	34	27	79	105
Transportation	497	94	17	31	24	72	102
Power Generation & Other Uses	83	1	1	4	4	10	3

^a For 2011: consumption reported is for six (6) months

^b For 2004: consumption reported is for one (1) year

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

	2011 ^a										
	IVB	V	VI	VII	VIII	IX	X	XI	XII	Caraga	ARMM
	617	899	1,169	1,056	828	581	662	672	617	409	536
	114	253	243	368	263	106	198	227	99	108	72
	114	253	243	368	263	106	198	227	99	108	72
	-	1	-	-	1	-	-	-	-	-	1
	-	-	-	1	-	-	-	-	-	-	-
	476	640	815	569	646	437	412	360	399	265	488
	2	8	3	58	5	2	12	23	1	2	14
	463	553	783	496	606	418	392	314	389	256	459
	149	328	215	83	244	94	68	83	41	53	265
	-	8	2	4	21	4	2	-	-	2	6
	207	231	337	370	232	156	204	229	197	134	65
	203	228	333	370	222	156	204	229	197	133	62
	7	6	13	-	16	1	-	1	2	2	4
	59	22	80	60	32	11	36	35	41	17	16
	23	15	40	52	24	10	36	31	23	10	11
	39	7	40	8	11	1	-	4	19	7	7

	2004 ^b										
	IVB	V	VI	VII	VIII	IX	X	XI	XII	Caraga	ARMM
	506	919	1,174	1,041	743	550	674	749	645	372	495
	163	335	365	404	268	132	255	277	187	129	89
	163	335	365	403	268	132	254	277	187	128	89
	2	1	1	0	1	1	1	0	0	2	1
	0	1	0	1	1	0	2	0	0	5	0
	460	777	999	731	649	472	504	588	527	381	467
	17	25	13	127	35	18	40	84	22	23	43
	434	660	934	566	604	418	461	412	459	251	436
	209	575	381	135	374	167	82	322	210	85	247
	0	0	0	0	6	0	0	0	0	4	1
	72	105	137	192	88	68	93	112	69	43	58
	71	98	136	191	80	67	91	112	69	43	58
	2	9	2	3	11	2	3	0	0	1	1
	19	16	35	15	20	8	27	18	23	22	6
	13	2	31	15	13	6	25	16	12	11	3
	8	5	4	0	9	2	3	3	11	12	3

Household Energy Consumption Survey (HECS): 2004 vs 2011

Table 4. Number of Households Using Renewable Energy Sources by Type of Fuel and End-Use, by Region: 2004 vs 2011

2011: By Region ^a	Usage of Fuelwood					
	Total Households	Cooking/ Food Preparation	Water Heating for Bathing	Space Warming	Other Uses	
Philippines	11,356	11,331	4,207	69	26	
NCR - National Capital Region	239	238	94	1	-	
CAR - Cordillera Administrative Region	226	223	115	39	6	
REGION I - Ilocos	847	846	291	-	-	
REGION II - Cagayan Valley	668	664	377	2	3	
REGION III - Central Luzon	1,057	1,051	510	1	1	
REGION IV-A - CALABARZON	936	932	413	5	5	
REGION IV-B - MIMAROPA	458	457	156	-	1	
REGION V - Bicol	757	756	336	3	4	
REGION VI - Western Visayas	1,242	1,240	516	1	-	
REGION VII - Central Visayas	1,043	1,043	100	-	1	
REGION VIII - Eastern Visayas	590	588	268	1	-	
REGION IX - Zamboanga Peninsula	508	508	318	-	-	
REGION X - Northern Mindanao	635	635	169	-	4	
REGION XI - Davao	598	598	116	-	-	
REGION XII - SOCCSKSARGEN	607	607	115	-	1	
ARMM - Autonomous Region in Muslim Mindanao	510	509	293	15	-	
CARAGA	437	437	20	-	-	

2004: By Region ^b	Usage of Fuelwood					
	Total Households	Cooking/ Food Preparation	Water Heating for Bathing	Space Warming	Other Uses	
Philippines	9,357	9,323	987	28	80	
NCR - National Capital Region	169	165	41	-	4	
CAR - Cordillera Administrative Region	188	187	47	21	4	
REGION I - Ilocos	629	625	216	-	4	
REGION II - Cagayan Valley	483	479	111	-	1	
REGION III - Central Luzon	818	814	179	-	3	
REGION IV-A - CALABARZON	759	755	137	-	2	
REGION IV-B - MIMAROPA	345	343	13	1	11	
REGION V - Bicol	644	642	88	-	5	
REGION VI - Western Visayas	1,003	999	26	-	3	
REGION VII - Central Visayas	887	887	-	-	1	
REGION VIII - Eastern Visayas	572	571	50	1	3	
REGION IX - Zamboanga Peninsula	398	397	24	1	5	
REGION X - Northern Mindanao	578	578	4	-	1	
REGION XI - Davao	591	591	3	1	13	
REGION XII - SOCCSKSARGEN	534	534	39	-	6	
ARMM - Autonomous Region in Muslim Mindanao	426	426	6	-	1	
CARAGA	334	331	1	4	13	

^a For 2011: consumption reported is for six (6) months

^b For 2004: consumption reported is for one (1) year

Note: A household may report more than one type of fuel used.

* - Less than 1,000 households

Usage of Charcoal						Usage of Biomass				
Total Households	Cooking/ Food Preparation	Water Heating for Bathing	Ironing	Other Uses		Total Households	Cooking/ Food Preparation	Water Heating for Bathing	Ironing	Other Uses
7,631	7,399	2,339	651	47		4,682	4,219	1,294	54	646
1,047	1,034	268	8	21		50	48	23	-	1
38	33	18	1	*		15	13	8	-	6
336	333	78	4	1		101	87	42	-	12
179	176	71	12	-		207	206	114	4	2
977	965	275	26	6		120	120	61	-	-
1,286	1,272	542	32	5		223	123	49	6	98
355	349	139	34	1		204	90	28	2	116
548	537	210	40	2		376	342	150	6	42
830	761	254	253	2		793	702	233	2	175
408	387	19	54	-		561	557	30	3	94
334	313	89	38	4		457	389	211	4	68
219	211	137	32	-		280	274	150	2	10
132	124	4	14	-		507	500	86	4	3
195	193	32	2	5		236	228	38	10	4
369	362	54	28	-		275	272	51	7	2
231	207	142	70	-		103	100	18	2	1
146	141	6	5	-		174	166	2	1	13

Usage of Charcoal						Usage of Biomass				
Total Households	Cooking/ Food Preparation	Water Heating for Bathing	Ironing	Other Uses		Total Households	Cooking/ Food Preparation	Water Heating for Bathing	Ironing	Other Uses
5,811	5,122	389	1,084	146		3,177	2,731	157	95	433
700	633	22	10	63		28	28	7	-	-
33	28	4	4	1		7	6	2	-	-
287	253	51	39	10		56	32	6	-	24
85	72	20	15	1		103	92	17	-	5
690	673	74	13	11		65	62	23	-	3
918	863	84	45	29		237	199	28	4	37
278	241	17	71	1		126	95	1	8	35
396	369	58	91	1		314	301	31	9	14
650	533	8	308	4		397	365	7	1	42
256	166	1	107	11		461	331	5	22	129
316	276	28	83	6		320	266	23	-	50
147	123	6	37	-		254	242	9	13	8
182	145	-	44	1		219	187	3	1	32
349	321	1	51	-		176	153	-	18	12
252	240	14	28	-		154	134	4	16	13
158	82	-	123	-		140	139	2	2	1
115	103	-	15	7		120	99	-	-	26

Survey of Energy Consumption of Establishments (SECE): 2010

Table 5. Number of Establishments and Quantity of Energy Consumed by Industry Category and Major Sector of Energy: Philippines 2010
Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Total Energy	53,890	6,726	11,351	35,813
Fossil Fuels	6,917	3,063	2,303	1,551
Petroleum Products	23,601	3,373	4,662	15,565
Coal	1,116	-	1,116	-
Natural Gas				
Renewable				
Fuelwood	691	-	10	682
Charcoal	60	-	27	33
Other Biomass	18,367	3	1,977	16,387
Power Sector	3,137	287	1,255	1,595

Table 6. Number of Establishments and Quantity of Energy Purchased by Industry Category and Major Sector of Energy, Philippines: 2010
Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Total Energy	50,123	6,982	8,305	34,837
Fossil Fuels				
Petroleum Products	6,982	3,105	2,315	1,562
Coal	20,061	3,588	1,613	14,860
Natural Gas	1,115	-	1,115	-
Renewable				
Fuelwood	781	-	9	771
Charcoal	59	-	26	33
Other Biomass	17,989	2	1,972	16,015
Power Sector	3,137	287	1,255	1,595

Table 7. Number of Establishments, Quantity of Petroleum Products Consumed and Purchased by Industry Category and Energy Use, Philippines: 2010
Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Quantity Consumed	6,917	3,063	2,303	1,551
Quantity Purchased:	6,982	3,105	2,315	1,562
Used to Run Machineries and Equipment	3,936	2,319	745	871
Used to Run Transport Equipment	2,218	28	1,523	667
Used as Raw Materials and Other Non-Energy Use	828	758	46	24

Table 8. Number of Establishments, Quantity of Coal Consumed and Purchased by Industry Category and Energy Use, Philippines: 2010

Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Quantity Consumed	23,601	3,373	4,662	15,565
Quantity Purchased:	20,061	3,588	1,613	14,860
Used to Run Machineries and Equipment	19,782	3,588	1,357	14,837
Used to Run Transport Equipment	n/a	n/a	n/a	n/a
Used as Raw Materials and Other Non-Energy Use	279	-	256	23

Table 9. Number of Establishments, Quantity of Natural Gas Consumed and Purchased by Industry Category and Energy Use, Philippines: 2010

Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Quantity Consumed	1,116	-	1,116	-
Quantity Purchased:	1,115	-	1,115	-
Used to Run Machineries and Equipment	-	-	-	-
Used to Run Transport Equipment	1,115	-	1,115	-
Used as Raw Materials and Other Non-Energy Use	-	-	-	-

Table 10. Number of Establishments, Quantity of Fuelwood Consumed and Purchased by Industry Category and Energy Use, Philippines: 2010

Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Quantity Consumed	691	-	10	682
Quantity Purchased:	781	-	9	771
Used to Run Machineries and Equipment	781	-	9	771
Used to Run Transport Equipment	n/a	n/a	n/a	n/a
Used as Raw Materials and Other Non-Energy Use	-	-	-	-

Table 11. Number of Establishments, Quantity of Charcoal Consumed and Purchased by Industry Category and Energy Use, Philippines: 2010
Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Quantity Consumed	60	-	27	33
Quantity Purchased:	59	-	26	33
Used to Run Machineries and Equipment	59	-	26	33
Used to Run Transport Equipment	n/a	n/a	n/a	n/a
Used as Raw Materials and Other Non-Energy Use	-	-	-	-

Table 12. Number of Establishments, Quantity of Other Biomass Consumed and Purchased by Industry Category and Energy Use, Philippines: 2010
Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Quantity Consumed	18,367	3	1,977	16,387
Quantity Purchased:	17,989	2	1,972	16,015
Used to Run Machineries and Equipment	17,989	2	1,972	16,015
Used to Run Transport Equipment	n/a	n/a	n/a	n/a
Used as Raw Materials and Other Non-Energy Use	-	-	-	-

Table 13. Number of Establishments, Quantity of Electricity Purchased by Industry Category and Energy Use, Philippines: 2010
Energy purchased and consumed in thousand tons of oil equivalent (kTOE)

	Philippines	Energy Producing Industries	Energy-Intensive Industries	Other Energy-Consuming Industries
Number of Establishments	144,156	341	34,393	109,422
Total	3,137	287	1,255	1,595
By Source of Electricity				
Distribution Utilities/ Electric Cooperatives	2,494	153	986	1,356
Wholesale Electricity Spot Market (WESM)	179	15	118	46
Self-Generated	420	118	124	177
Others	44	1	27	16

7 Energy Outlook

Key Assumptions, Parameters and Methodologies

1. Macroeconomic Targets

The Energy Outlook 2020-2040 incorporates the revised growth targets consistent with the updated Philippine Development Plan (PDP) 2017-2022, cognizant of the reforms instituted, as well as the recovery programs and pillars that will govern economic expansion post-COVID19 (PEP 2020-2040 Figure 90). The country expects the economy to return to its pre-pandemic or 2019 output levels by 2022 with an 8 percent escalation in gross domestic product (GDP). Reaping the benefits of reforms instituted, the country maintains its robust trajectory until 2040 with a 7.4 percent growth in economic output.

Other macro-economic variables such as population, inflation rates, peso-dollar exchange rates and oil prices were sourced from the (a) 2015 Census of Population (POPCEN) of the Philippine Statistics Authority (PSA), (b) Development Budget Coordinating Council (DBCC), (c) International Monetary Fund (IMF) and (d) World Oil Outlook (WOO) 2045 of the Organization of Petroleum Exporting Countries (OPEC).

2. Energy Supply and Demand Assumptions

2.1 Scenario Building

The Energy Outlook presents the impact of Reference Scenario (REF) or the Business-As-Usual and the Clean Energy Scenario (CES) to the country's energy portfolio based on the assumptions stated in *Table 1*. As in the previous Outlook, regional targets on energy intensity reduction and increased RE share capacity are also taken into consideration, as well as commitment to the Sustainable Development Goals (SDG) Goal 7 to ensure access to affordable, reliable, sustainable and modern energy for all. 2020 is the base year for this Outlook update, with 2021 as the first projection year.

Table 1. DEMAND AND SUPPLY TARGETS FOR ENERGY OUTLOOK 2020-2040

	Scenario Assumptions	
	Reference Scenario (<i>Business as Usual</i>)	Clean Energy Scenario (<i>Alternative Scenario</i>)
Energy Demand	- Supports an accelerated economic expansion post-COVID19 (i.e. High GDP scenario) - Maintains current blending schedule for biofuels (2% biodiesel and 10% bioethanol) until 2040 5% penetration rate of electric vehicles for road transport (motorcycles, cars, jeepneys) by 2040 - Current efforts on EE&C as a way of life continues until 2040	10% penetration rate of electric vehicles for road transport (motorcycles, cars, jeepneys) by 2040 1.5% increase in aggregate natural gas consumption from the Transport and Industry sectors between 2020 and 2040 5% blending for biodiesel starting 2022 - Up to 5% energy savings on oil products and electricity by 2040
Energy Supply	- Present development trends and strategies continue - Existing power plant as of December 2019 and committed power projects as of September 2020 35% RE share in generation mix by 2040 25% reserve margin 70% load factor for the total Philippines - Indigenous production targets: Coal - 282 million metric tons (MMT) at 14.8 MMT/year; Oil - 64 million barrels (MMB) at 3.4 MMB/year; Natural Gas - 4 trillion standard cubic feet (SCF) at 4.8 billion SCF/year - LNG imports to come in starting in 2022 at 349 billion SCF/year to augment supply from Malampaya gas field	- Assumptions under the Reference, as well as the following: - Up to 50% RE share in generation mix by 2040 - Achieve at least 12% reduction in the GHG emission for NDC

2.2 Methodologies and Energy Models Used

The Energy Outlook uses various internationally accepted energy modeling methodologies and tools to come up with energy demand and supply projections for the 2020-2040 period. Modelling software include a) Simple Econometric Simulation System, Expanded (Simple E2, version 14), an add-in application in Microsoft Excel developed by the Institute of Energy Economics, Japan (IEEJ); Low Emissions Analysis Platform (previously the Long-range Energy Alternatives Planning System) (LEAP) developed by Stockholm Environment Institute; and PLEXOS®, a Power Sector Planning and Market Simulation Software developed by Energy Exemplar.

Final Energy Consumption

The projection for the final energy consumption uses Simple E and utilizes the transport energy demand model (for the transport sector energy consumption) developed by the Economic Consulting Associates (ECA) using energy data from the DOE. The demand forecast considers sectoral roadmaps including explanatory variables/indicators and information that affect or influence energy consumption of the different sectors, specifically:

- **Transport** model accounts the consumption of each of the four (4) modes of transportation – road, rail, air and water. The road transport model considers the number of vehicles as a function of GDP and the estimation of vehicle fleet using the Winfrey Survival Model combined with average passenger and vehicle-kilometer traveled and fuel economy to estimate energy consumption. The rail transport model utilizes the number of passengers of the Philippine National Railways (PNR) and Metro Rail Transit/Light Rail Transit (MRT/LRT) lines and urban population as indicators. On the other hand, water and air transport models include the indicators on the number of passengers, kilometer/ton-kilometer flown, cargo throughput, and sub-sectoral value-added. The outlook likewise incorporates the expansion plans and new projects/programs of the Department of Transportation (DOTr), as well as the developments in other related sectors, notably local tourism.
- **Industry** energy demand consists of energy-intensive and less-energy intensive industries. The energy-intensive industry model covers food processing, sugar, paper and pulp, cement manufacturing, chemicals, basic metal and machinery, and equipment sub-sectors. Other manufacturing industries, mining, and construction fall under less-energy intensive industries. Other variables used as indicators are gross value added (GVA), commodity prices, production targets, and population for the energy demand model of these sub-sectors.
- **Household** energy demand model employs socioeconomic indicators, such as household final consumption expenditure (HFCE) and household population sourced from the Philippine Statistics Authority (PSA) and the results of the 2011 Household Energy Consumption Survey (HECS) for determining the level of biomass demand.
- **Services and Agriculture** energy demand models make use of GVA for trade and services, and agriculture, fishery and forestry (AFF), respectively.

Power Demand and Supply

For the power outlook, the DOE builds on the Capacity Expansion Model (CEM) using the PLEXOS to simulate the power generating capacity mix for the country, given the assumptions on electricity demand forecast, technology cost and performance, fuel prices, and the corresponding policies and regulations within the industry. *Table 69* presents the specific assumptions for the power outlook.

Table 69. POWER DEMAND AND SUPPLY OUTLOOK ASSUMPTIONS

Particulars	Inputs
Electricity Demand	• GDP growth for the annual peak demand forecast.
Generator Parameters	• Existing power plants as of 31 December 2020, with no derating and retirement considered. • Committed power plants as of 30 September 2020. • Operating technical parameters of existing power plants. • Forced and Maintenance Outage Rates. • Reserve provision classified as regulating, contingency, and dispatchable reserves.
New Build Options	• Existing power plant technologies (i.e., coal, oil, gas turbines, geothermal, hydro, biomass, solar, wind), excluding Battery Energy Storage System (BESS), Nuclear, Hydrogen, Fuel Cell and Ocean technology • Cost parameters developed by the DOE with inputs from the National Renewable Energy Board (NREB). • Competitive Renewable Energy Zone (CREZ) technical parameters. • New power plants can provide ancillary services. • Minimum 25.0 percent reserve margin per grid.

The electricity sales forecast for the three (3) main grids combines the grid-connected distribution utilities (DUs), composed of the private investor-owned utilities (PIOUs), electric cooperatives (ECs) and local government-owned utilities (LGUOUS), and non-utility and power generator customers of the National Grid Corporation of the Philippines (NGCP). The electricity sales forecast for grid-connected DUs uses the derived elasticity of electricity consumption to gross regional domestic product (GRDP), which results in 0.8 for Luzon, and 1.0 for Visayas and Mindanao. Electricity sales is the volume of energy sold by the DUs to its customers, which also covers those directly connected customers. On the other hand, electricity consumption is derived by adding transmission and distribution losses (system losses) and own-use of power plants, and transmission and distribution networks to the total energy sales.

Gross power generation comprises of electricity sales forecast, plant use, and transmission losses, while the peak demand forecast is obtained from the sales forecast and load factors (*Table 70*).

Table 70. PARAMETERS FOR PEAK DEMAND FORECAST

Grid	Plant Use and Transmission Losses ¹ (%)	Load Factor (%) ²
Luzon	8.63	70.25
Visayas	10.63	72.00
Mindanao	12.14	67.69

Primary Energy Supply

The *LEAP* software consolidates the final energy consumption and energy supply (including power demand and supply) simulation results to generate the overall energy outlook projections. To come up with an energy demand and supply outlook, the sectoral fuel demand including electricity demand, total installed capacity, process efficiency, capacity factor, and other parameters serve as exogenous variables. The resulting GHG emission of the scenarios uses the default emission factor with global warming potentials at 100-years of integration by the Intergovernmental Panel on Climate Change (IPCC).

¹ Luzon and Mindanao are based on actual 2019 values, while Visayas is based on the actual 2018 value.

² Actual load factor in 2019

Energy Outlook

Table 1. Total Primary Energy Supply, by Fuel: 1990-2040
in thousand tons of oil equivalent (kTOE)

FY	Total Primary Energy Supply (TPES)									
		Oil	Coal	Natural Gas	Renewable	Geothermal	Hydro	Solar and Wind	Biomass	
1990	25,772	9,736	1,255	-	14,780	4,700	1,509	-	8,571	
1991	26,866	10,904	1,539	-	14,423	4,951	1,281	-	8,191	
1992	28,383	13,042	1,354	-	13,988	4,901	1,105	-	7,981	
1993	27,014	11,614	1,503	-	13,897	4,873	1,252	-	7,772	
1994	30,458	14,466	1,529	5	14,458	5,434	1,459	-	7,565	
1995	32,340	16,506	1,644	4	14,185	5,275	1,551	-	7,358	
1996	33,483	16,731	2,215	7	14,529	5,618	1,750	-	7,161	
1997	35,059	17,618	2,739	5	14,698	6,223	1,511	-	6,965	
1998	36,186	17,511	2,969	8	15,699	7,664	1,266	-	6,769	
1999	37,641	16,612	3,387	6	17,637	9,109	1,952	-	6,576	
2000	38,857	15,903	4,624	9	18,321	9,997	1,941	-	6,383	
2001	36,865	15,301	4,510	115	16,939	8,979	1,768	-	6,192	
2002	37,328	15,093	4,227	1,449	16,559	8,807	1,751	-	6,002	
2003	37,409	14,680	4,303	2,208	16,218	8,446	1,959	-	5,813	
2004	37,247	14,071	4,532	2,039	16,605	8,841	2,139	-	5,625	
2005	38,059	13,640	5,317	2,701	16,401	8,515	2,088	2	5,796	
2006	37,817	12,802	5,039	2,529	17,447	8,999	2,474	5	5,968	
2007	38,480	12,944	5,391	3,033	17,112	8,783	2,132	5	6,141	
2008	40,457	12,826	6,356	3,192	18,083	9,220	2,450	5	6,315	
2009	39,904	12,650	6,067	3,215	17,973	8,877	2,437	6	6,496	
2010	41,046	13,609	7,031	3,028	17,379	8,538	1,943	5	6,679	
2011	41,851	12,787	7,726	3,269	18,068	8,549	2,414	8	6,874	
2012	43,524	13,605	8,085	3,134	18,700	8,813	2,552	7	7,035	
2013	44,989	13,754	10,003	2,887	18,345	8,258	2,494	6	7,237	
2014	46,990	14,420	10,642	3,036	18,891	8,863	2,275	14	7,356	
2015	51,274	17,211	11,615	2,854	19,594	9,496	2,157	76	7,431	
2016	54,590	18,547	13,086	3,270	19,687	9,519	2,019	178	7,494	

Base Year for Projections: 2020

Start of Projections: 2021 - **Business as Usual (BAU) Scenario**

		Shares to TPES (%)								
		Oil	Coal	Natural Gas	Renewable					
	Biofuels					Geothermal	Hydro	Solar and Wind	Biomass	Biofuels
	-	37.78	4.87	-	57.35	18.24	5.86	-	33.26	-
	-	40.59	5.73	-	53.69	18.43	4.77	-	30.49	-
	-	45.95	4.77	-	49.28	17.27	3.89	-	28.12	-
	-	42.99	5.56	-	51.44	18.04	4.64	-	28.77	-
	-	47.50	5.02	0.01	47.47	17.84	4.79	-	24.84	-
	-	51.04	5.08	0.01	43.86	16.31	4.80	-	22.75	-
	-	49.97	6.62	0.02	43.39	16.78	5.23	-	21.39	-
	-	50.25	7.81	0.01	41.92	17.75	4.31	-	19.87	-
	-	48.39	8.20	0.02	43.38	21.18	3.50	-	18.71	-
	-	44.13	9.00	0.02	46.85	24.20	5.19	-	17.47	-
	-	40.93	11.90	0.02	47.15	25.73	5.00	-	16.43	-
	-	41.51	12.23	0.31	45.95	24.35	4.80	-	16.80	-
	-	40.43	11.32	3.88	44.36	23.59	4.69	-	16.08	-
	0	39.24	11.50	5.90	43.35	22.58	5.24	-	15.54	0.00
	0	37.78	12.17	5.47	44.58	23.74	5.74	-	15.10	0.00
	2	35.84	13.97	7.10	43.09	22.37	5.49	0.00	15.23	0.00
	2	33.85	13.32	6.69	46.14	23.79	6.54	0.01	15.78	0.01
	51	33.64	14.01	7.88	44.47	22.82	5.54	0.01	15.96	0.13
	92	31.70	15.71	7.89	44.70	22.79	6.06	0.01	15.61	0.23
	158	31.70	15.20	8.06	45.04	22.25	6.11	0.01	16.28	0.40
	214	33.15	17.13	7.38	42.34	20.80	4.73	0.01	16.27	0.52
	224	30.55	18.46	7.81	43.17	20.43	5.77	0.02	16.42	0.53
	293	31.26	18.57	7.20	42.96	20.25	5.86	0.02	16.16	0.67
	350	30.57	22.23	6.42	40.78	18.36	5.54	0.01	16.09	0.78
	382	30.69	22.65	6.46	40.20	18.86	4.84	0.03	15.66	0.81
	434	33.57	22.65	5.57	38.21	18.52	4.21	0.15	14.49	0.85
	477	33.97	23.97	5.99	36.06	17.44	3.70	0.33	13.73	0.87

(Continuation)

Table 1. Total Primary Energy Supply, by Fuel: 1990-2040
in thousand tons of oil equivalent (kTOE)

FY	Total Primary Energy Supply (TPES)									
		Oil	Coal	Natural Gas	Renewable	Geothermal	Hydro	Solar and Wind	Biomass	
2017	57,958	19,669	15,475	3,226	19,588	8,831	2,393	197	7,651	
2018	59,717	19,994	16,349	3,601	19,772	8,973	2,336	207	7,725	
2019	59,852	19,054	17,482	3,626	19,690	9,192	1,998	197	7,736	
2020	56,577	16,453	17,546	3,288	19,290	9,249	1,790	206	7,563	
2021	59,243	17,653	18,913	2,820	19,857	9,184	2,287	236	7,611	
2022	62,752	17,835	19,924	3,614	21,378	10,995	2,190	266	7,400	
2023	65,095	18,794	20,930	3,615	21,757	10,995	2,195	615	7,390	
2024	67,789	19,911	21,966	3,625	22,288	11,024	2,214	977	7,470	
2025	71,448	21,180	22,935	3,744	23,588	11,934	2,207	1,323	7,473	
2026	75,458	22,438	23,939	3,861	25,220	13,157	2,207	1,681	7,482	
2027	79,211	23,973	25,001	4,014	26,222	13,442	2,444	2,103	7,492	
2028	83,129	25,798	25,533	4,729	27,069	13,442	2,963	2,361	7,503	
2029	87,362	27,806	26,111	5,581	27,864	13,442	3,324	2,725	7,509	
2030	91,975	29,705	26,714	6,670	28,886	13,442	3,951	3,041	7,525	
2031	96,716	31,850	27,198	8,090	29,577	13,442	4,351	3,280	7,509	
2032	101,930	33,970	27,771	9,687	30,502	13,442	5,097	3,445	7,455	
2033	107,337	36,316	28,432	11,370	31,219	13,442	5,510	3,762	7,366	
2034	113,046	38,744	29,009	13,192	32,101	13,442	6,294	3,967	7,182	
2035	119,056	41,229	29,623	15,117	33,087	13,442	7,212	4,144	6,999	
2036	125,380	43,998	30,262	17,049	34,071	13,440	8,078	4,356	6,817	
2037	132,224	46,823	30,931	19,291	35,180	13,439	9,073	4,565	6,637	
2038	139,453	49,769	31,630	21,563	36,491	13,495	10,248	4,734	6,457	
2039	147,199	52,854	32,309	23,978	38,058	13,799	11,461	4,870	6,279	
2040	155,624	56,397	33,058	26,497	39,672	13,915	12,833	5,003	6,173	

Base Year for Projections: 2020

Start of Projections: 2021 - Business as Usual (BAU) Scenario

		Shares to TPES (%)								
		Oil	Coal	Natural Gas	Renewable	Geothermal	Hydro	Solar and Wind	Biomass	Biofuels
	Biofuels									
	517	33.94	26.70	5.57	33.80	15.24	4.13	0.34	13.20	0.89
	532	33.48	27.38	6.03	33.11	15.03	3.91	0.35	12.94	0.89
	567	31.84	29.21	6.06	32.90	15.36	3.34	0.33	12.92	0.95
	481	29.08	31.01	5.81	34.09	16.35	3.16	0.36	13.37	0.85
	539	29.80	31.92	4.76	33.52	15.50	3.86	0.40	12.85	0.91
	527	28.42	31.75	5.76	34.07	17.52	3.49	0.42	11.79	0.84
	562	28.87	32.15	5.55	33.42	16.89	3.37	0.94	11.35	0.86
	604	29.37	32.40	5.35	32.88	16.26	3.27	1.44	11.02	0.89
	652	29.64	32.10	5.24	33.02	16.70	3.09	1.85	10.46	0.91
	693	29.74	31.72	5.12	33.42	17.44	2.92	2.23	9.91	0.92
	742	30.27	31.56	5.07	33.10	16.97	3.09	2.66	9.46	0.94
	800	31.03	30.71	5.69	32.56	16.17	3.56	2.84	9.03	0.96
	864	31.83	29.89	6.39	31.89	15.39	3.80	3.12	8.60	0.99
	927	32.30	29.05	7.25	31.41	14.61	4.30	3.31	8.18	1.01
	995	32.93	28.12	8.37	30.58	13.90	4.50	3.39	7.76	1.03
	1,064	33.33	27.25	9.50	29.92	13.19	5.00	3.38	7.31	1.04
	1,139	33.83	26.49	10.59	29.08	12.52	5.13	3.51	6.86	1.06
	1,215	34.27	25.66	11.67	28.40	11.89	5.57	3.51	6.35	1.08
	1,290	34.63	24.88	12.70	27.79	11.29	6.06	3.48	5.88	1.08
	1,379	35.09	24.14	13.60	27.17	10.72	6.44	3.47	5.44	1.10
	1,466	35.41	23.39	14.59	26.61	10.16	6.86	3.45	5.02	1.11
	1,556	35.69	22.68	15.46	26.17	9.68	7.35	3.39	4.63	1.12
	1,649	35.91	21.95	16.29	25.85	9.37	7.79	3.31	4.27	1.12
	1,748	36.24	21.24	17.03	25.49	8.94	8.25	3.21	3.97	1.12

Energy Outlook

Table 2. Total Primary Energy Supply, by Fuel: 1990-2040
in thousand tons of oil equivalent (kTOE)

FY	Total Primary Energy Supply (TPES)										
		Oil	Coal	Natural Gas	Renewable	Geothermal	Hydro	Solar and Wind	Biomass	Biofuels	
1990	25,772	9,736	1,255	-	14,780	4,700	1,509	-	8,571	-	
1991	26,866	10,904	1,539	-	14,423	4,951	1,281	-	8,191	-	
1992	28,383	13,042	1,354	-	13,988	4,901	1,105	-	7,981	-	
1993	27,014	11,614	1,503	-	13,897	4,873	1,252	-	7,772	-	
1994	30,458	14,466	1,529	5	14,458	5,434	1,459	-	7,565	-	
1995	32,340	16,506	1,644	4	14,185	5,275	1,551	-	7,358	-	
1996	33,483	16,731	2,215	7	14,529	5,618	1,750	-	7,161	-	
1997	35,059	17,618	2,739	5	14,698	6,223	1,511	-	6,965	-	
1998	36,186	17,511	2,969	8	15,699	7,664	1,266	-	6,769	-	
1999	37,641	16,612	3,387	6	17,637	9,109	1,952	-	6,576	-	
2000	38,857	15,903	4,624	9	18,321	9,997	1,941	-	6,383	-	
2001	36,865	15,301	4,510	115	16,939	8,979	1,768	-	6,192	-	
2002	37,328	15,093	4,227	1,449	16,559	8,807	1,751	-	6,002	-	
2003	37,409	14,680	4,303	2,208	16,218	8,446	1,959	-	5,813	0	
2004	37,247	14,071	4,532	2,039	16,605	8,841	2,139	-	5,625	0	
2005	38,059	13,640	5,317	2,701	16,401	8,515	2,088	2	5,796	2	
2006	37,817	12,802	5,039	2,529	17,447	8,999	2,474	5	5,968	2	
2007	38,480	12,944	5,391	3,033	17,112	8,783	2,132	5	6,141	51	
2008	40,457	12,826	6,356	3,192	18,083	9,220	2,450	5	6,315	92	
2009	39,904	12,650	6,067	3,215	17,973	8,877	2,437	6	6,496	158	
2010	41,046	13,609	7,031	3,028	17,379	8,538	1,943	5	6,679	214	
2011	41,851	12,787	7,726	3,269	18,068	8,549	2,414	8	6,874	224	
2012	43,524	13,605	8,085	3,134	18,700	8,813	2,552	7	7,035	293	
2013	44,989	13,754	10,003	2,887	18,345	8,258	2,494	6	7,237	350	
2014	46,990	14,420	10,642	3,036	18,891	8,863	2,275	14	7,356	382	
2015	51,274	17,211	11,615	2,854	19,594	9,496	2,157	76	7,431	434	
2016	54,590	18,547	13,086	3,270	19,687	9,519	2,019	178	7,494	477	

Base Year for Projections: 2020

Start of Projections: 2021 - **Clean Energy Scenario (CES)**

		Shares to TPES (%)									
		Oil	Coal	Natural Gas	Renewable						Other Technologies
	Other Technologies					Geothermal	Hydro	Solar and Wind	Biomass	Biofuels	
		37.78	4.87	-	57.35	18.24	5.86	-	33.26	-	
		40.59	5.73	-	53.69	18.43	4.77	-	30.49	-	
		45.95	4.77	-	49.28	17.27	3.89	-	28.12	-	
		42.99	5.56	-	51.44	18.04	4.64	-	28.77	-	
		47.50	5.02	0.01	47.47	17.84	4.79	-	24.84	-	
		51.04	5.08	0.01	43.86	16.31	4.80	-	22.75	-	
		49.97	6.62	0.02	43.39	16.78	5.23	-	21.39	-	
		50.25	7.81	0.01	41.92	17.75	4.31	-	19.87	-	
		48.39	8.20	0.02	43.38	21.18	3.50	-	18.71	-	
		44.13	9.00	0.02	46.85	24.20	5.19	-	17.47	-	
		40.93	11.90	0.02	47.15	25.73	5.00	-	16.43	-	
		41.51	12.23	0.31	45.95	24.35	4.80	-	16.80	-	
		40.43	11.32	3.88	44.36	23.59	4.69	-	16.08	-	
		39.24	11.50	5.90	43.35	22.58	5.24	-	15.54	0.00	
		37.78	12.17	5.47	44.58	23.74	5.74	-	15.10	0.00	
		35.84	13.97	7.10	43.09	22.37	5.49	0.00	15.23	0.00	
		33.85	13.32	6.69	46.14	23.79	6.54	0.01	15.78	0.01	
		33.64	14.01	7.88	44.47	22.82	5.54	0.01	15.96	0.13	
		31.70	15.71	7.89	44.70	22.79	6.06	0.01	15.61	0.23	
		31.70	15.20	8.06	45.04	22.25	6.11	0.01	16.28	0.40	
		33.15	17.13	7.38	42.34	20.80	4.73	0.01	16.27	0.52	
		30.55	18.46	7.81	43.17	20.43	5.77	0.02	16.42	0.53	
		31.26	18.57	7.20	42.96	20.25	5.86	0.02	16.16	0.67	
		30.57	22.23	6.42	40.78	18.36	5.54	0.01	16.09	0.78	
		30.69	22.65	6.46	40.20	18.86	4.84	0.03	15.66	0.81	
		33.57	22.65	5.57	38.21	18.52	4.21	0.15	14.49	0.85	
		33.97	23.97	5.99	36.06	17.44	3.70	0.33	13.73	0.87	

(Continuation)

Table 2. Total Primary Energy Supply, by Fuel: 1990-2040
in thousand tons of oil equivalent (kTOE)

FY	Total Primary Energy Supply (TPES)										
		Oil	Coal	Natural Gas	Renewable	Geothermal	Hydro	Solar and Wind	Biomass	Biofuels	
2017	57,958	19,669	15,475	3,226	19,588	8,831	2,393	197	7,651	517	
2018	59,717	19,994	16,349	3,601	19,772	8,973	2,336	207	7,725	532	
2019	59,852	19,054	17,482	3,626	19,690	9,192	1,998	197	7,736	567	
2020	56,577	16,453	17,546	3,288	19,290	9,249	1,790	206	7,563	481	
2021	59,243	17,653	18,913	2,820	19,857	9,184	2,287	236	7,611	539	
2022	62,035	17,571	18,840	3,832	21,793	10,995	2,252	529	7,399	618	
2023	64,175	18,163	19,562	4,073	22,377	10,995	2,354	825	7,398	805	
2024	66,643	19,161	20,302	4,314	22,865	11,024	2,455	1,120	7,406	860	
2025	69,992	20,132	21,071	4,556	24,233	11,934	2,557	1,415	7,419	907	
2026	73,948	21,353	21,871	4,796	25,928	13,157	2,659	1,711	7,436	965	
2027	77,141	22,705	22,708	5,037	26,691	13,442	2,761	2,006	7,455	1,026	
2028	80,265	24,219	23,571	5,277	27,197	13,442	2,863	2,322	7,474	1,097	
2029	83,682	25,876	23,960	5,864	27,982	13,442	3,203	2,674	7,490	1,173	
2030	87,626	27,725	24,383	6,568	28,949	13,442	3,774	2,960	7,515	1,258	
2031	92,088	29,696	24,837	7,523	30,032	13,442	4,344	3,392	7,507	1,347	
2032	96,814	31,749	25,319	8,723	31,022	13,442	4,912	3,767	7,462	1,439	
2033	101,640	33,896	25,830	9,986	31,929	13,442	5,356	4,226	7,371	1,535	
2034	106,815	36,135	26,367	11,217	33,096	13,442	6,219	4,616	7,185	1,634	
2035	112,265	38,380	26,932	12,492	34,462	13,442	7,335	4,954	7,000	1,731	
2036	117,962	40,884	27,523	13,349	36,206	13,440	8,495	5,534	6,895	1,842	
2037	124,043	43,398	28,140	14,313	38,191	13,439	9,882	6,153	6,767	1,951	
2038	130,532	45,992	28,783	15,165	40,592	13,495	11,642	6,746	6,647	2,061	
2039	137,596	48,659	29,451	16,035	43,451	13,799	13,559	7,389	6,530	2,174	
2040	144,877	51,495	30,146	16,846	46,390	13,915	15,717	8,064	6,402	2,292	

Base Year for Projections: 2020

Start of Projections: 2021 - **Clean Energy Scenario (CES)**

		Shares to TPES (%)									
	Other Technologies	Oil	Coal	Natural Gas	Renewable						Other Technologies
					Geothermal	Hydro	Solar and Wind	Biomass	Biofuels		
	-	33.94	26.70	5.57	33.80	15.24	4.13	0.34	13.20	0.89	-
	-	33.48	27.38	6.03	33.11	15.03	3.91	0.35	12.94	0.89	-
	-	31.84	29.21	6.06	32.90	15.36	3.34	0.33	12.92	0.95	-
	-	29.08	31.01	5.81	34.09	16.35	3.16	0.36	13.37	0.85	-
	-	29.80	31.92	4.76	33.52	15.50	3.86	0.40	12.85	0.91	-
	-	28.32	30.37	6.18	35.13	17.72	3.63	0.85	11.93	1.00	-
	-	28.30	30.48	6.35	34.87	17.13	3.67	1.28	11.53	1.25	-
	-	28.75	30.46	6.47	34.31	16.54	3.68	1.68	11.11	1.29	-
	-	28.76	30.10	6.51	34.62	17.05	3.65	2.02	10.60	1.30	-
	-	28.88	29.58	6.49	35.06	17.79	3.60	2.31	10.06	1.30	-
	-	29.43	29.44	6.53	34.60	17.43	3.58	2.60	9.66	1.33	-
	-	30.17	29.37	6.58	33.88	16.75	3.57	2.89	9.31	1.37	-
	-	30.92	28.63	7.01	33.44	16.06	3.83	3.20	8.95	1.40	-
	-	31.64	27.83	7.50	33.04	15.34	4.31	3.38	8.58	1.44	-
	-	32.25	26.97	8.17	32.61	14.60	4.72	3.68	8.15	1.46	-
	-	32.79	26.15	9.01	32.04	13.88	5.07	3.89	7.71	1.49	-
	-	33.35	25.41	9.82	31.41	13.23	5.27	4.16	7.25	1.51	-
	-	33.83	24.68	10.50	30.98	12.58	5.82	4.32	6.73	1.53	-
	-	34.19	23.99	11.13	30.70	11.97	6.53	4.41	6.23	1.54	-
	-	34.66	23.33	11.32	30.69	11.39	7.20	4.69	5.84	1.56	-
	-	34.99	22.69	11.54	30.79	10.83	7.97	4.96	5.46	1.57	-
	-	35.23	22.05	11.62	31.10	10.34	8.92	5.17	5.09	1.58	-
	-	35.36	21.40	11.65	31.58	10.03	9.85	5.37	4.75	1.58	-
	-	35.54	20.81	11.63	32.02	9.60	10.85	5.57	4.42	1.58	-

Energy Outlook

Table 3. Total Final Energy Consumption, by Fuel*: 1990-2040

in thousand tons of oil equivalent (kTOE)

FY	Total Final Energy Consumption (TFEC)								
		Oil	Coal	Natural Gas	Electricity	Biomass	Biodiesel	Bioethanol	
1990	19,018.63	8,095	696	-	1,824	8,403	-	-	
1991	17,821.82	6,975	816	-	1,839	8,191	-	-	
1992	18,496.00	8,064	676	-	1,775	7,981	-	-	
1993	19,622.19	9,278	748	-	1,824	7,772	-	-	
1994	19,855.53	9,311	866	-	2,115	7,565	-	-	
1995	22,133.32	11,594	894	-	2,287	7,358	-	-	
1996	22,831.14	12,245	911	-	2,514	7,161	-	-	
1997	23,955.93	13,205	1,010	-	2,776	6,965	-	-	
1998	23,831.38	13,293	833	-	2,935	6,769	-	-	
1999	23,647.24	13,327	809	-	2,936	6,576	-	-	
2000	23,196.39	12,830	840	-	3,143	6,383	-	-	
2001	22,817.29	12,442	818	-	3,365	6,192	-	-	
2002	22,756.13	12,651	782	0	3,321	6,002	-	-	
2003	22,979.31	12,519	974	0	3,673	5,813	0	-	
2004	23,050.03	12,580	1,055	0	3,790	5,625	0	-	
2005	22,670.99	11,795	1,184	12	3,883	5,796	0	1	
2006	22,362.44	11,089	1,324	52	3,927	5,968	1	1	
2007	23,152.39	11,243	1,514	77	4,128	6,141	31	20	
2008	23,301.65	10,698	1,898	70	4,231	6,315	51	39	
2009	23,925.81	11,213	1,624	70	4,374	6,492	108	45	
2010	25,092.22	11,452	1,941	70	4,752	6,670	110	98	
2011	25,182.19	11,285	1,941	78	4,824	6,833	114	108	
2012	25,774.06	11,584	1,784	59	5,091	6,967	117	172	
2013	27,299.46	12,241	2,196	63	5,294	7,160	124	222	
2014	28,505.53	12,905	2,415	77	5,447	7,286	130	246	
2015	30,987.88	15,039	2,350	50	5,830	7,291	147	281	
2016	33,530.33	16,556	2,854	65	6,376	7,212	158	309	

*includes non-energy use; does not include energy for power application

Base Year for Projections: 2020

Start of Projections: 2021- Business as Usual (BAU) Scenario

	Shares to TFEC (%)						
	Oil	Coal	Natural Gas	Electricity	Biomass	Biodiesel	Bioethanol
	42.57	3.66	-	9.59	44.18	-	-
	39.14	4.58	-	10.32	45.96	-	-
	43.60	3.65	-	9.60	43.15	-	-
	47.29	3.81	-	9.29	39.61	-	-
	46.89	4.36	-	10.65	38.10	-	-
	52.38	4.04	-	10.33	33.25	-	-
	53.63	3.99	-	11.01	31.36	-	-
	55.12	4.22	-	11.59	29.07	-	-
	55.78	3.50	-	12.32	28.41	-	-
	56.36	3.42	-	12.41	27.81	-	-
	55.31	3.62	-	13.55	27.52	-	-
	54.53	3.58	-	14.75	27.14	-	-
	55.59	3.44	0.00	14.59	26.37	-	-
	54.48	4.24	0.00	15.99	25.30	0.00	-
	54.58	4.58	0.00	16.44	24.40	0.00	-
	52.03	5.22	0.05	17.13	25.56	0.00	0.01
	49.59	5.92	0.23	17.56	26.69	0.00	0.01
	48.56	6.54	0.33	17.83	26.52	0.13	0.09
	45.91	8.14	0.30	18.16	27.10	0.22	0.17
	46.87	6.79	0.29	18.28	27.13	0.45	0.19
	45.64	7.74	0.28	18.94	26.58	0.44	0.39
	44.81	7.71	0.31	19.15	27.13	0.45	0.43
	44.95	6.92	0.23	19.75	27.03	0.45	0.67
	44.84	8.04	0.23	19.39	26.23	0.45	0.81
	45.27	8.47	0.27	19.11	25.56	0.46	0.86
	48.53	7.58	0.16	18.82	23.53	0.47	0.91
	49.38	8.51	0.19	19.02	21.51	0.47	0.92

(Continuation)

Table 3. Total Final Energy Consumption, by Fuel*: 1990-2040
in thousand tons of oil equivalent (kTOE)

Total Final Energy Consumption (TFEC)									
FY		Oil	Coal	Natural Gas	Electricity	Biomass	Biodiesel	Bioethanol	
2017	35,474.36	17,804	3,163	53	6,689	7,257	170	339	
2018	35,723.14	18,168	2,573	59	7,104	7,295	174	350	
2019	36,259.52	18,459	2,358	62	7,491	7,332	178	380	
2020	32,592.51	16,009	1,841	37	7,158	7,072	151	324	
2021	35,131.83	17,662	2,162	0	7,620	7,157	161	369	
2022	35,512.41	17,820	1,836	38	8,198	7,093	171	357	
2023	37,190.67	18,771	2,024	38	8,712	7,084	182	379	
2024	39,078.64	19,845	2,232	38	9,277	7,083	193	409	
2025	41,244.56	21,110	2,469	39	9,888	7,088	204	446	
2026	43,473.39	22,365	2,739	39	10,542	7,096	216	475	
2027	46,073.29	23,893	3,047	39	11,247	7,107	231	510	
2028	48,929.11	25,591	3,385	39	12,002	7,117	246	550	
2029	52,025.51	27,437	3,751	40	12,818	7,124	263	593	
2030	55,393.62	29,438	4,155	40	13,700	7,140	281	640	
2031	58,930.99	31,556	4,591	40	14,631	7,123	300	690	
2032	62,628.66	33,785	5,059	40	15,616	7,069	319	741	
2033	66,486.58	36,131	5,558	41	16,654	6,968	339	795	
2034	70,455.75	38,592	6,088	41	17,750	6,773	360	852	
2035	74,555.74	41,094	6,647	41	18,906	6,579	382	907	
2036	79,047.88	43,880	7,236	41	20,128	6,386	405	972	
2037	83,691.83	46,722	7,856	42	21,414	6,194	428	1,036	
2038	88,557.94	49,685	8,504	42	22,769	6,003	452	1,103	
2039	93,659.35	52,778	9,183	42	24,195	5,814	476	1,172	
2040	99,324.79	56,325	9,891	42	25,694	5,626	503	1,244	

*includes non-energy use; does not include energy for power application

Base Year for Projections: 2020

Start of Projections: 2021- Business as Usual (BAU) Scenario

	Shares to TFEC (%)						
	Oil	Coal	Natural Gas	Electricity	Biomass	Biodiesel	Bioethanol
	50.19	8.92	0.15	18.86	20.46	0.48	0.96
	50.86	7.20	0.17	19.89	20.42	0.49	0.98
	50.91	6.50	0.17	20.66	20.22	0.49	1.05
	49.12	5.65	0.11	21.96	21.70	0.46	0.99
	50.27	6.15	0.00	21.69	20.37	0.46	1.05
	50.18	5.17	0.11	23.08	19.97	0.48	1.00
	50.47	5.44	0.10	23.42	19.05	0.49	1.02
	50.78	5.71	0.10	23.74	18.13	0.49	1.05
	51.18	5.99	0.09	23.97	17.19	0.50	1.08
	51.45	6.30	0.09	24.25	16.32	0.50	1.09
	51.86	6.61	0.08	24.41	15.42	0.50	1.11
	52.30	6.92	0.08	24.53	14.54	0.50	1.12
	52.74	7.21	0.08	24.64	13.69	0.51	1.14
	53.14	7.50	0.07	24.73	12.89	0.51	1.16
	53.55	7.79	0.07	24.83	12.09	0.51	1.17
	53.94	8.08	0.06	24.93	11.29	0.51	1.18
	54.34	8.36	0.06	25.05	10.48	0.51	1.20
	54.77	8.64	0.06	25.19	9.61	0.51	1.21
	55.12	8.92	0.06	25.36	8.82	0.51	1.22
	55.51	9.15	0.05	25.46	8.08	0.51	1.23
	55.83	9.39	0.05	25.59	7.40	0.51	1.24
	56.10	9.60	0.05	25.71	6.78	0.51	1.25
	56.35	9.80	0.04	25.83	6.21	0.51	1.25
	56.71	9.96	0.04	25.87	5.66	0.51	1.25

Energy Outlook

Table 4. Total Final Energy Consumption, by Sector: 1990-2040

in thousand tons of oil equivalent (kTOE)

FY	Total Final Energy Consumption (TFEC)						
		Transport	Industry	Households	Services	Agriculture	
1990	18,618.70	4,685	4,136	8,848	816	134	
1991	17,459.72	4,420	3,406	8,669	838	128	
1992	18,146.84	5,128	3,529	8,521	856	113	
1993	19,253.18	5,791	4,090	8,414	855	103	
1994	19,470.96	6,083	3,970	8,346	970	102	
1995	21,676.96	7,175	4,974	8,356	1,041	131	
1996	22,534.26	8,116	4,855	8,309	1,116	139	
1997	23,616.53	8,078	5,491	8,297	1,258	494	
1998	23,581.15	8,303	5,176	8,244	1,436	422	
1999	23,382.02	8,221	5,073	8,125	1,556	407	
2000	22,792.93	8,302	4,537	7,906	1,684	364	
2001	22,595.86	8,227	4,509	7,654	1,852	354	
2002	22,528.42	8,529	4,300	7,451	1,867	381	
2003	22,727.39	8,341	4,825	7,257	1,904	400	
2004	22,803.60	8,633	4,749	7,151	1,869	401	
2005	22,484.02	8,226	4,952	7,072	1,853	381	
2006	22,138.47	7,725	5,036	7,095	1,927	355	
2007	22,873.50	8,031	5,262	7,251	1,989	340	
2008	23,060.55	7,496	5,778	7,377	2,044	366	
2009	23,659.20	7,914	5,369	7,633	2,413	330	
2010	24,872.30	8,035	5,948	7,878	2,663	347	
2011	24,962.51	7,983	5,948	7,991	2,739	302	
2012	25,489.19	8,364	5,806	8,171	2,830	318	
2013	26,871.75	8,784	6,312	8,386	3,038	352	
2014	27,900.99	9,133	6,529	8,488	3,397	354	
2015	29,808.98	10,557	6,750	8,731	3,370	401	
2016	32,224.23	11,425	7,449	9,035	3,865	450	

*includes non-energy use; does not include energy for power application

Base Year for Projections: 2020

Start of Projections: 2021- Business as Usual (BAU) Scenario

	Shares to TFEC (%)				
	Transport	Industry	Households	Services	Agriculture
	25.17	22.21	47.52	4.38	0.72
	25.31	19.51	49.65	4.80	0.73
	28.26	19.45	46.96	4.72	0.62
	30.08	21.24	43.70	4.44	0.53
	31.24	20.39	42.87	4.98	0.52
	33.10	22.95	38.55	4.80	0.60
	36.02	21.54	36.87	4.95	0.62
	34.20	23.25	35.13	5.33	2.09
	35.21	21.95	34.96	6.09	1.79
	35.16	21.70	34.75	6.66	1.74
	36.42	19.90	34.68	7.39	1.60
	36.41	19.95	33.88	8.20	1.57
	37.86	19.09	33.07	8.29	1.69
	36.70	21.23	31.93	8.38	1.76
	37.86	20.83	31.36	8.19	1.76
	36.59	22.03	31.45	8.24	1.69
	34.89	22.75	32.05	8.71	1.60
	35.11	23.00	31.70	8.70	1.49
	32.51	25.06	31.99	8.86	1.59
	33.45	22.69	32.26	10.20	1.39
	32.31	23.92	31.68	10.71	1.40
	31.98	23.83	32.01	10.97	1.21
	32.81	22.78	32.06	11.10	1.25
	32.69	23.49	31.21	11.30	1.31
	32.73	23.40	30.42	12.18	1.27
	35.42	22.64	29.29	11.30	1.34
	35.45	23.12	28.04	11.99	1.40

(Continuation)

Table 4. Total Final Energy Consumption, by Sector: 1990-2040
in thousand tons of oil equivalent (kTOE)

FY	Total Final Energy Consumption (TFEC)						
		Transport	Industry	Households	Services	Agriculture	
2017	33,860.97	11,823	7,925	9,192	4,404	516	
2018	34,299.75	12,238	7,523	9,431	4,668	440	
2019	35,122.88	12,697	7,306	9,711	4,936	473	
2020	31,220.38	9,809	6,336	10,028	4,611	437	
2021	33,489.47	10,983	6,819	10,179	4,848	661	
2022	34,264.16	11,193	7,002	10,283	5,310	476	
2023	35,960.84	11,946	7,471	10,437	5,603	504	
2024	37,870.39	12,804	7,929	10,534	6,074	529	
2025	40,054.99	13,737	8,438	10,853	6,462	565	
2026	42,298.21	14,597	9,005	11,216	6,876	603	
2027	44,907.17	15,669	9,639	11,631	7,324	645	
2028	47,770.62	16,873	10,293	12,142	7,776	686	
2029	50,873.34	18,184	10,998	12,699	8,261	730	
2030	54,246.06	19,605	11,769	13,318	8,780	774	
2031	57,787.33	21,103	12,593	13,948	9,327	816	
2032	61,488.66	22,678	13,469	14,581	9,899	862	
2033	65,350.32	24,336	14,395	15,211	10,497	911	
2034	69,323.54	26,077	15,372	15,792	11,118	963	
2035	73,428.02	27,821	16,403	16,422	11,763	1,019	
2036	77,925.12	29,828	17,481	17,104	12,430	1,081	
2037	82,574.61	31,855	18,611	17,840	13,119	1,149	
2038	87,446.96	33,973	19,791	18,632	13,828	1,224	
2039	92,555.30	36,193	21,018	19,481	14,555	1,307	
2040	98,228.38	38,842	22,320	20,398	15,305	1,364	

*includes non-energy use; does not include energy for power application

Base Year for Projections: 2020

Start of Projections: 2021- Business as Usual (BAU) Scenario

	Shares to TFEC (%)				
	Transport	Industry	Households	Services	Agriculture
	34.92	23.40	27.15	13.01	1.52
	35.68	21.93	27.49	13.61	1.28
	36.15	20.80	27.65	14.05	1.35
	31.42	20.29	32.12	14.77	1.40
	32.80	20.36	30.39	14.48	1.97
	32.67	20.43	30.01	15.50	1.39
	33.22	20.78	29.02	15.58	1.40
	33.81	20.94	27.82	16.04	1.40
	34.30	21.07	27.10	16.13	1.41
	34.51	21.29	26.52	16.26	1.43
	34.89	21.46	25.90	16.31	1.44
	35.32	21.55	25.42	16.28	1.44
	35.74	21.62	24.96	16.24	1.44
	36.14	21.70	24.55	16.19	1.43
	36.52	21.79	24.14	16.14	1.41
	36.88	21.90	23.71	16.10	1.40
	37.24	22.03	23.28	16.06	1.39
	37.62	22.17	22.78	16.04	1.39
	37.89	22.34	22.36	16.02	1.39
	38.28	22.43	21.95	15.95	1.39
	38.58	22.54	21.61	15.89	1.39
	38.85	22.63	21.31	15.81	1.40
	39.10	22.71	21.05	15.73	1.41
	39.54	22.72	20.77	15.58	1.39

Energy Outlook

Table 5. Total Final Energy Consumption, by Sector and by Fuel: 2014-2040
in thousand tons of oil equivalent (kTOE)

Sector/Fuel	2014	2015	2016	2017	2018	2019	
Agriculture	354	401	450	516	440	473	
Oil	172	194	229	290	208	229	
Gasoline	5	8	7	12	7	9	
Kero	0	0	1	0	0	0	
Diesel	165	182	212	270	200	218	
Fuel Oil	2	3	8	7	1	2	
Biodiesel	3	4	4	5	4	4	
Electricity	178	203	218	220	228	240	
Industry	6,529	6,750	7,449	7,925	7,523	7,306	
Coal	2,261	2,218	2,677	3,008	2,411	2,217	
Natural Gas	77	50	65	53	59	62	
Oil	1,206	1,382	1,458	1,470	1,469	1,381	
Diesel	535	587	656	750	693	754	
Fuel Oil	527	637	653	613	578	453	
LPG	128	141	130	85	196	173	
Kerosene	16	18	19	22	2	2	
Biomass	1,131	1,152	1,164	1,181	1,199	1,207	
Biodiesel	11	12	13	14	13	15	
Electricity	1,843	1,936	2,074	2,199	2,372	2,424	
Households	8,488	8,731	9,035	9,192	9,431	9,711	
Oil	862	973	1,122	1,159	1,255	1,312	
LPG	769	888	1,043	1,083	1,176	1,240	
Kerosene	93	85	79	75	79	72	
Electricity	1,803	1,956	2,204	2,303	2,430	2,627	
Biomass	5,823	5,802	5,709	5,731	5,746	5,772	
Services	3,397	3,370	3,865	4,404	4,668	4,936	
Natural Gas	-	-	-	-	-	-	
Oil	1,432	1,292	1,632	2,074	2,223	2,360	
Diesel	1,053	843	1,058	1,397	1,568	1,706	
Fuel Oil	113	138	201	146	148	158	
LPG	266	310	374	532	507	495	
Biomass	332	337	340	345	350	353	
Biodiesel	20	14	21	28	30	33	
Electricity	1,613	1,727	1,872	1,958	2,065	2,191	
Transport	9,133	10,557	11,425	11,823	12,238	12,697	
Natural Gas	0	-	-	-	-	-	
Oil	8,782	10,151	10,986	11,352	11,753	12,181	
Gasoline	3,181	3,652	4,020	4,370	4,504	4,870	
Diesel	4,839	5,841	6,156	6,195	6,452	6,479	
Fuel Oil	178	183	203	265	203	196	
Auto LPG	42	30	13	10	10	9	
Aviation Fuels	542	446	594	512	584	626	
Biodiesel	96	116	121	123	127	127	
Bioethanol	246	281	309	339	350	380	
Electricity	10	8	9	10	9	9	

Base Year for Projections: 2020

Start of Projections: 2021- Business as Usual (BAU) Scenario

	2020	2021	2022	2023	2024	2025	2026	2027
	437	661	476	504	529	565	603	645
	211	243	223	232	243	254	265	277
	10	15	11	11	12	12	13	13
	1	0	0	0	0	0	0	0
	198	226	210	218	228	238	249	260
	2	2	3	3	3	3	3	3
	4	4	4	4	4	5	5	5
	222	413	248	267	282	307	333	362
	6,336	6,819	7,002	7,471	7,929	8,438	9,005	9,639
	1,629	1,950	1,696	1,877	2,076	2,305	2,565	2,862
	37	0	38	38	38	39	39	39
	1,553	1,555	1,734	1,784	1,829	1,877	1,931	1,993
	830	888	906	939	970	1,004	1,043	1,087
	528	448	597	597	591	584	575	567
	178	200	213	231	249	270	293	319
	17	20	17	18	18	19	20	21
	905	923	947	954	960	966	972	978
	13	15	18	19	19	20	21	21
	2,198	2,375	2,569	2,800	3,006	3,232	3,478	3,745
	10,028	10,179	10,283	10,437	10,534	10,853	11,216	11,631
	1,238	1,266	1,347	1,399	1,451	1,615	1,812	2,053
	1,187	1,215	1,299	1,353	1,407	1,572	1,772	2,014
	51	51	47	46	44	42	41	39
	2,949	3,008	3,130	3,254	3,312	3,477	3,647	3,825
	5,842	5,904	5,806	5,784	5,771	5,762	5,757	5,753
	4,611	4,848	5,310	5,603	6,074	6,462	6,876	7,324
	-	-	-	-	-	-	-	-
	2,467	2,662	2,695	2,842	3,020	3,206	3,403	3,614
	1,877	2,027	2,064	2,178	2,321	2,470	2,627	2,793
	126	155	150	159	166	172	177	182
	464	480	480	505	534	565	599	639
	325	330	340	347	353	360	367	375
	37	40	41	43	46	49	52	55
	1,782	1,816	2,235	2,372	2,654	2,847	3,054	3,279
	9,809	10,983	11,193	11,946	12,804	13,737	14,597	15,669
	-	-	-	-	-	-	-	-
	9,381	10,505	10,713	11,432	12,249	13,134	13,953	14,975
	4,145	4,714	4,569	4,824	5,206	5,677	6,051	6,490
	4,914	5,401	5,748	6,191	6,609	6,992	7,403	7,943
	99	193	147	154	154	163	173	183
	4	3	4	4	4	4	4	4
	219	194	244	260	276	298	323	356
	97	101	108	116	124	131	139	149
	324	369	357	379	409	446	475	510
	7	8	16	18	22	26	30	36

(Continuation)

Table 5. Total Final Energy Consumption, by Sector and by Fuel: 2014-2040
in thousand tons of oil equivalent (kTOE)

Sector/Fuel	2028	2029	2030	2031	2032	2033
Agriculture	686	730	774	816	862	911
Oil	289	302	316	327	338	349
Gasoline	14	15	15	16	17	18
Kero	0	0	0	0	0	0
Diesel	272	284	297	306	317	327
Fuel Oil	4	4	4	4	4	4
Biodiesel	5	6	6	6	6	6
Electricity	391	422	452	483	518	555
Industry	10,293	10,998	11,769	12,593	13,469	14,395
Coal	3,188	3,543	3,934	4,359	4,814	5,301
Natural Gas	39	40	40	40	40	41
Oil	2,059	2,129	2,203	2,280	2,360	2,442
Diesel	1,133	1,181	1,232	1,284	1,337	1,390
Fuel Oil	557	547	537	527	518	510
LPG	347	377	409	443	477	513
Kerosene	22	23	24	26	28	30
Biomass	985	991	998	1,005	1,012	1,020
Biodiesel	22	23	24	25	26	27
Electricity	3,999	4,273	4,570	4,885	5,216	5,564
Households	12,142	12,699	13,318	13,948	14,581	15,211
Oil	2,319	2,614	2,940	3,294	3,673	4,079
LPG	2,282	2,578	2,905	3,260	3,641	4,048
Kerosene	38	36	35	34	32	31
Electricity	4,075	4,346	4,641	4,952	5,278	5,623
Biomass	5,748	5,739	5,737	5,703	5,629	5,510
Services	7,776	8,261	8,780	9,327	9,899	10,497
Natural Gas	-	-	-	-	-	-
Oil	3,839	4,077	4,330	4,595	4,872	5,158
Diesel	2,969	3,153	3,347	3,547	3,752	3,961
Fuel Oil	187	192	196	201	205	209
LPG	683	733	787	848	915	988
Biomass	384	394	405	416	427	439
Biodiesel	59	62	66	70	74	78
Electricity	3,495	3,728	3,980	4,246	4,526	4,822
Transport	16,873	18,184	19,605	21,103	22,678	24,336
Natural Gas	-	-	-	-	-	-
Oil	16,122	17,370	18,723	20,149	21,647	23,223
Gasoline	7,002	7,559	8,162	8,794	9,457	10,149
Diesel	8,531	9,168	9,856	10,577	11,334	12,126
Fuel Oil	193	204	216	228	240	253
Auto LPG	3	3	3	3	3	3
Aviation Fuels	392	437	487	547	613	693
Biodiesel	160	172	185	198	213	227
Bioethanol	550	593	640	690	741	795
Electricity	42	49	57	66	77	90

Base Year for Projections: 2020

Start of Projections: 2021- Business as Usual (BAU) Scenario

	2034	2035	2036	2037	2038	2039	2040
	963	1,019	1,081	1,149	1,224	1,307	1,364
	361	373	385	397	410	423	437
	18	19	20	21	22	24	25
	0	0	0	0	0	0	0
	338	349	360	371	383	395	407
	4	4	5	5	5	5	5
	7	7	7	7	8	8	8
	596	640	689	744	806	876	919
	15,372	16,403	17,481	18,611	19,791	21,018	22,320
	5,819	6,367	6,946	7,555	8,194	8,863	9,563
	41	41	41	42	42	42	42
	2,526	2,613	2,701	2,791	2,882	2,975	3,069
	1,444	1,498	1,552	1,606	1,660	1,713	1,766
	501	494	487	481	476	472	469
	550	587	626	665	705	746	788
	32	34	36	38	41	43	46
	1,028	1,037	1,046	1,055	1,065	1,075	1,086
	28	30	31	32	33	34	35
	5,929	6,316	6,716	7,137	7,575	8,029	8,525
	15,792	16,422	17,104	17,840	18,632	19,481	20,398
	4,512	4,975	5,470	5,998	6,560	7,158	7,794
	4,482	4,946	5,442	5,971	6,535	7,134	7,771
	30	29	28	27	26	25	24
	5,986	6,368	6,771	7,194	7,638	8,105	8,601
	5,294	5,079	4,864	4,648	4,433	4,218	4,002
	11,118	11,763	12,430	13,119	13,828	14,555	15,305
	-	-	-	-	-	-	-
	5,452	5,752	6,056	6,364	6,672	6,980	7,285
	4,173	4,386	4,599	4,810	5,017	5,218	5,411
	214	218	223	227	232	237	241
	1,065	1,147	1,234	1,327	1,424	1,525	1,632
	451	464	477	491	505	521	537
	82	87	91	95	99	103	107
	5,133	5,461	5,806	6,169	6,551	6,951	7,376
	26,077	27,821	29,828	31,855	33,973	36,193	38,842
	-	-	-	-	-	-	-
	24,877	26,533	28,435	30,355	32,359	34,457	36,972
	10,872	11,575	12,412	13,233	14,086	14,968	15,893
	12,956	13,791	14,727	15,676	16,662	17,688	18,821
	266	280	294	309	324	341	381
	3	2	2	2	2	2	2
	781	885	1,000	1,135	1,285	1,458	1,876
	243	259	276	294	312	332	353
	852	907	972	1,036	1,103	1,172	1,244
	106	122	145	170	199	233	273

Energy Outlook

Table 6. Greenhouse Gas (GHG) Emission: 1990 - 2040
in Metric Tons of Carbon Dioxide Equivalent (MTCO₂e)

FY	Total	by Sector*				By Fuel Type			
		Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)	
1990	37.73	11.63	14.18	9.23	2.69	33.43	4.30	0.00	
1991	38.05	14.87	13.39	7.09	2.69	32.75	5.29	0.00	
1992	41.91	15.89	15.56	7.47	2.99	37.09	4.82	0.00	
1993	46.37	16.38	17.58	9.10	3.30	40.99	5.38	0.00	
1994	47.46	17.09	18.45	8.38	3.55	42.05	5.40	0.01	
1995	55.62	18.30	21.79	11.49	4.05	49.73	5.88	0.01	
1996	59.94	20.14	24.65	10.80	4.35	51.77	8.16	0.02	
1997	66.64	23.69	24.45	12.65	5.85	56.43	10.20	0.01	
1998	66.97	24.16	25.16	11.47	6.17	55.64	11.31	0.02	
1999	64.31	21.67	24.86	11.05	6.72	51.37	12.93	0.01	
2000	64.82	24.12	25.11	9.03	6.56	47.03	17.77	0.02	
2001	64.76	24.77	24.88	8.50	6.61	47.11	17.38	0.27	
2002	64.07	23.62	25.79	7.97	6.68	44.32	16.36	3.39	
2003	65.74	25.09	25.18	9.20	6.27	44.02	16.55	5.17	
2004	67.22	26.05	26.07	9.03	6.07	45.12	17.33	4.77	
2005	68.08	28.52	24.81	9.48	5.26	41.19	20.57	6.32	
2006	62.56	24.61	23.30	9.66	4.99	37.27	19.37	5.92	
2007	65.55	26.55	24.11	10.18	4.71	37.82	20.64	7.09	
2008	68.10	29.12	22.33	11.90	4.74	36.04	24.59	7.47	
2009	68.84	29.55	23.40	10.25	5.63	37.89	23.43	7.52	
2010	74.23	32.73	23.63	11.87	5.99	39.68	27.46	7.08	
2011	74.65	33.70	23.42	11.57	5.97	36.80	30.21	7.65	
2012	77.07	36.10	24.38	10.71	5.87	38.15	31.58	7.33	
2013	85.78	41.63	25.48	12.36	6.31	39.85	39.18	6.75	
2014	91.22	44.74	26.45	12.88	7.15	42.56	41.56	7.10	
2015	99.30	48.45	30.60	13.20	7.06	47.15	45.48	6.68	
2016	109.25	52.26	33.11	15.29	8.59	50.47	51.13	7.65	

*includes emission from power generation and losses incurred in oil refining

**includes emission from the commercial, residential and AFF sectors

Base Year for Projections: 2020

Start of Projections: 2021 for Business as Usual (BAU) Scenario

	Shares to Total GHG (%)						
	by Sector*				By Fuel Type		
	Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)
	30.81	37.59	24.46	7.14	88.60	11.40	0.00
	39.08	35.20	18.65	7.08	86.09	13.91	0.00
	37.92	37.12	17.82	7.14	88.50	11.50	0.00
	35.34	37.92	19.63	7.11	88.40	11.60	0.00
	36.00	38.88	17.65	7.47	88.61	11.37	0.02
	32.90	39.17	20.65	7.29	89.41	10.57	0.02
	33.60	41.12	18.02	7.26	86.37	13.61	0.03
	35.55	36.69	18.98	8.78	84.68	15.31	0.02
	36.08	37.58	17.13	9.22	83.08	16.89	0.03
	33.69	38.66	17.19	10.45	79.88	20.10	0.02
	37.20	38.74	13.94	10.12	72.55	27.41	0.03
	38.26	38.42	13.13	10.20	72.75	26.83	0.42
	36.87	40.25	12.45	10.42	69.17	25.54	5.29
	38.16	38.30	14.00	9.54	66.97	25.18	7.86
	38.75	38.79	13.43	9.03	67.12	25.78	7.10
	41.90	36.45	13.93	7.72	60.51	30.21	9.28
	39.34	37.25	15.44	7.97	59.57	30.97	9.46
	40.50	36.78	15.53	7.19	57.69	31.49	10.82
	42.77	32.80	17.47	6.97	52.93	36.11	10.97
	42.93	33.99	14.89	8.18	55.04	34.03	10.92
	44.10	31.84	15.99	8.07	53.45	37.00	9.54
	45.14	31.37	15.49	8.00	49.29	40.47	10.24
	46.84	31.63	13.90	7.62	49.51	40.98	9.51
	48.53	29.70	14.41	7.36	46.45	45.68	7.87
	49.05	28.99	14.12	7.84	46.66	45.56	7.79
	48.79	30.82	13.29	7.11	47.48	45.80	6.72
	47.84	30.30	14.00	7.86	46.20	46.80	7.00

(Continuation)

Table 6. Greenhouse Gas (GHG) Emission: 1990 - 2040
in Metric Tons of Carbon Dioxide Equivalent (MTCO₂e)

FY	Total	by Sector*				By Fuel Type			
		Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)	
2017	120.69	59.72	34.19	16.63	10.16	52.47	60.67	7.55	
2018	125.58	65.35	35.38	14.22	10.63	53.06	64.10	8.42	
2019	132.45	71.37	36.63	13.18	11.27	55.31	68.66	8.48	
2020	122.58	71.75	28.16	11.32	11.35	46.26	68.63	7.69	
2021	130.45	74.29	31.54	12.50	12.13	49.81	74.05	6.60	
2022	141.62	82.61	32.57	12.23	14.20	53.78	79.35	8.49	
2023	148.67	85.92	34.77	13.10	14.88	56.83	83.35	8.49	
2024	156.34	89.39	37.24	14.03	15.67	60.36	87.47	8.52	
2025	164.52	92.60	39.91	15.08	16.92	64.40	91.32	8.80	
2026	172.87	95.85	42.40	16.27	18.34	68.50	95.30	9.07	
2027	182.38	99.26	45.51	17.64	19.98	73.44	99.51	9.43	
2028	191.97	102.11	48.99	19.13	21.75	79.27	101.59	11.11	
2029	202.65	105.44	52.78	20.74	23.68	85.69	103.85	13.11	
2030	213.68	108.49	56.88	22.52	25.78	91.79	106.21	15.67	
2031	225.77	112.11	61.21	24.44	28.02	98.67	108.09	19.01	
2032	238.58	115.95	65.76	26.48	30.39	105.49	110.33	22.76	
2033	252.66	120.55	70.54	28.66	32.89	113.02	112.92	26.72	
2034	266.99	124.92	75.57	30.97	35.53	120.82	115.18	31.00	
2035	281.78	129.47	80.60	33.41	38.30	128.68	117.58	35.52	
2036	298.17	134.62	86.37	35.97	41.21	137.76	120.35	40.06	
2037	314.82	139.70	92.20	38.66	44.26	146.78	122.71	45.33	
2038	332.41	145.20	98.29	41.47	47.45	156.28	125.46	50.67	
2039	350.70	150.86	104.66	44.41	50.77	166.23	128.13	56.34	
2040	370.95	156.93	112.31	47.47	54.24	177.60	131.08	62.26	

*includes emission from power generation and losses incurred in oil refining

**includes emission from the commercial, residential and AFF sectors

Base Year for Projections: 2020

Start of Projections: 2021 for Business as Usual (BAU) Scenario

	Shares to Total GHG (%)						
	by Sector*				By Fuel Type		
	Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)
	49.48	28.33	13.78	8.41	43.48	50.27	6.25
	52.04	28.18	11.32	8.46	42.25	51.04	6.71
	53.88	27.66	9.95	8.51	41.75	51.84	6.40
	58.53	22.97	9.24	9.26	37.74	55.99	6.28
	56.95	24.18	9.58	9.30	38.18	56.76	5.06
	58.33	23.00	8.64	10.03	37.97	56.03	6.00
	57.79	23.39	8.81	10.01	38.22	56.06	5.71
	57.18	23.82	8.97	10.03	38.60	55.95	5.45
	56.29	24.26	9.17	10.29	39.15	55.51	5.35
	55.45	24.53	9.41	10.61	39.63	55.13	5.25
	54.43	24.95	9.67	10.95	40.27	54.56	5.17
	53.19	25.52	9.96	11.33	41.29	52.92	5.79
	52.03	26.04	10.24	11.69	42.28	51.25	6.47
	50.77	26.62	10.54	12.07	42.96	49.71	7.33
	49.65	27.11	10.82	12.41	43.70	47.88	8.42
	48.60	27.56	11.10	12.74	44.22	46.24	9.54
	47.71	27.92	11.34	13.02	44.73	44.69	10.57
	46.79	28.30	11.60	13.31	45.25	43.14	11.61
	45.95	28.60	11.86	13.59	45.67	41.73	12.61
	45.15	28.97	12.06	13.82	46.20	40.36	13.44
	44.37	29.29	12.28	14.06	46.62	38.98	14.40
	43.68	29.57	12.48	14.27	47.02	37.74	15.24
	43.02	29.84	12.66	14.48	47.40	36.54	16.07
	42.30	30.28	12.80	14.62	47.88	35.34	16.78

Energy Outlook

Table 7. Greenhouse Gas (GHG) Emission: 1990 - 2040
in Metric Tons of Carbon Dioxide Equivalent (MTCO₂e)

FY	Total GHG Emission								
		by Sector*				By Fuel Type			
		Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)	
1990	37.73	11.63	14.18	9.23	2.69	33.43	4.30	0.00	
1991	38.05	14.87	13.39	7.09	2.69	32.75	5.29	0.00	
1992	41.91	15.89	15.56	7.47	2.99	37.09	4.82	0.00	
1993	46.37	16.38	17.58	9.10	3.30	40.99	5.38	0.00	
1994	47.46	17.09	18.45	8.38	3.55	42.05	5.40	0.01	
1995	55.62	18.30	21.79	11.49	4.05	49.73	5.88	0.01	
1996	59.94	20.14	24.65	10.80	4.35	51.77	8.16	0.02	
1997	66.64	23.69	24.45	12.65	5.85	56.43	10.20	0.01	
1998	66.97	24.16	25.16	11.47	6.17	55.64	11.31	0.02	
1999	64.31	21.67	24.86	11.05	6.72	51.37	12.93	0.01	
2000	64.82	24.12	25.11	9.03	6.56	47.03	17.77	0.02	
2001	64.76	24.77	24.88	8.50	6.61	47.11	17.38	0.27	
2002	64.07	23.62	25.79	7.97	6.68	44.32	16.36	3.39	
2003	65.74	25.09	25.18	9.20	6.27	44.02	16.55	5.17	
2004	67.22	26.05	26.07	9.03	6.07	45.12	17.33	4.77	
2005	68.08	28.52	24.81	9.48	5.26	41.19	20.57	6.32	
2006	62.56	24.61	23.30	9.66	4.99	37.27	19.37	5.92	
2007	65.55	26.55	24.11	10.18	4.71	37.82	20.64	7.09	
2008	68.10	29.12	22.33	11.90	4.74	36.04	24.59	7.47	
2009	68.84	29.55	23.40	10.25	5.63	37.89	23.43	7.52	
2010	74.23	32.73	23.63	11.87	5.99	39.68	27.46	7.08	
2011	74.65	33.70	23.42	11.57	5.97	36.80	30.21	7.65	
2012	77.07	36.10	24.38	10.71	5.87	38.15	31.58	7.33	
2013	85.78	41.63	25.48	12.36	6.31	39.85	39.18	6.75	
2014	91.22	44.74	26.45	12.88	7.15	42.56	41.56	7.10	
2015	99.30	48.45	30.60	13.20	7.06	47.15	45.48	6.68	
2016	109.25	52.26	33.11	15.29	8.59	50.47	51.13	7.65	

*includes emission from power generation and losses incurred in oil refining

**includes emission from the commercial, residential and AFF sectors

Base Year for Projections: 2016

Start of Projections: 2017 for Clean Energy Scenario (CES)

	Shares to Total GHG (%)						
	by Sector*				By Fuel Type		
	Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)
	30.81	37.59	24.46	7.14	88.60	11.40	0.00
	39.08	35.20	18.65	7.08	86.09	13.91	0.00
	37.92	37.12	17.82	7.14	88.50	11.50	0.00
	35.34	37.92	19.63	7.11	88.40	11.60	0.00
	36.00	38.88	17.65	7.47	88.61	11.37	0.02
	32.90	39.17	20.65	7.29	89.41	10.57	0.02
	33.60	41.12	18.02	7.26	86.37	13.61	0.03
	35.55	36.69	18.98	8.78	84.68	15.31	0.02
	36.08	37.58	17.13	9.22	83.08	16.89	0.03
	33.69	38.66	17.19	10.45	79.88	20.10	0.02
	37.20	38.74	13.94	10.12	72.55	27.41	0.03
	38.26	38.42	13.13	10.20	72.75	26.83	0.42
	36.87	40.25	12.45	10.42	69.17	25.54	5.29
	38.16	38.30	14.00	9.54	66.97	25.18	7.86
	38.75	38.79	13.43	9.03	67.12	25.78	7.10
	41.90	36.45	13.93	7.72	60.51	30.21	9.28
	39.34	37.25	15.44	7.97	59.57	30.97	9.46
	40.50	36.78	15.53	7.19	57.69	31.49	10.82
	42.77	32.80	17.47	6.97	52.93	36.11	10.97
	42.93	33.99	14.89	8.18	55.04	34.03	10.92
	44.10	31.84	15.99	8.07	53.45	37.00	9.54
	45.14	31.37	15.49	8.00	49.29	40.47	10.24
	46.84	31.63	13.90	7.62	49.51	40.98	9.51
	48.53	29.70	14.41	7.36	46.45	45.68	7.87
	49.05	28.99	14.12	7.84	46.66	45.56	7.79
	48.79	30.82	13.29	7.11	47.48	45.80	6.72
	47.84	30.30	14.00	7.86	46.20	46.80	7.00

(Continuation)

Table 7. Greenhouse Gas (GHG) Emission: 1990 - 2040
in Metric Tons of Carbon Dioxide Equivalent (MTCO₂e)

FY	Total GHG Emission								
		by Sector*				By Fuel Type			
		Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)	
2017	120.69	59.72	34.19	16.63	10.16	52.47	60.67	7.55	
2018	125.58	65.35	35.38	14.22	10.63	53.06	64.10	8.42	
2019	132.45	71.37	36.63	13.18	11.27	55.31	68.66	8.48	
2020	122.58	71.75	28.16	11.32	11.35	46.26	68.63	7.69	
2021	130.45	74.29	31.54	12.50	12.13	49.81	74.05	6.60	
2022	139.64	81.58	32.16	12.04	13.86	52.89	78.32	8.43	
2023	145.35	84.69	33.30	12.87	14.49	54.81	82.12	8.41	
2024	152.60	88.05	35.58	13.75	15.23	58.07	86.11	8.42	
2025	158.30	89.75	37.39	14.75	16.41	61.25	87.76	9.29	
2026	165.32	91.86	39.82	15.88	17.75	65.23	89.93	10.15	
2027	173.08	94.15	42.45	17.18	19.29	69.66	92.32	11.09	
2028	182.71	97.70	45.44	18.60	20.97	74.62	95.69	12.40	
2029	193.25	101.59	48.74	20.13	22.79	79.99	99.48	13.78	
2030	204.88	105.83	52.47	21.81	24.76	85.94	103.50	15.43	
2031	214.50	107.55	56.46	23.61	26.86	92.15	104.66	17.68	
2032	225.47	110.21	60.63	25.54	29.08	98.67	106.30	20.50	
2033	237.19	113.19	64.99	27.59	31.42	105.52	108.20	23.46	
2034	249.07	115.93	69.52	29.75	33.87	112.67	110.04	26.36	
2035	261.02	118.57	73.97	32.03	36.45	119.89	111.78	29.35	
2036	272.80	120.15	79.10	34.41	39.14	127.94	113.50	31.37	
2037	284.32	121.28	84.16	36.91	41.96	136.02	114.67	33.63	
2038	296.42	122.63	89.37	39.52	44.90	144.37	116.41	35.63	
2039	308.52	123.62	94.71	42.23	47.96	153.06	117.78	37.68	
2040	321.25	124.58	100.48	45.05	51.13	162.26	119.41	39.58	

*includes emission from power generation and losses incurred in oil refining

**includes emission from the commercial, residential and AFF sectors

Base Year for Projections: 2016

Start of Projections: 2017 for Clean Energy Scenario (CES)

	Shares to Total GHG (%)						
	by Sector*				By Fuel Type		
	Transformation	Transport	Industry	Other**	Liquid Fossils (Oil)	Solid Fossils (Coal)	Gaseous Fossil (Natural Gas)
	49.48	28.33	13.78	8.41	43.48	50.27	6.25
	52.04	28.18	11.32	8.46	42.25	51.04	6.71
	53.88	27.66	9.95	8.51	41.75	51.84	6.40
	58.53	22.97	9.24	9.26	37.74	55.99	6.28
	56.95	24.18	9.58	9.30	38.18	56.76	5.06
	58.42	23.03	8.62	9.93	37.88	56.09	6.03
	58.27	22.91	8.85	9.97	37.71	56.50	5.79
	57.70	23.31	9.01	9.98	38.05	56.43	5.52
	56.70	23.62	9.32	10.36	38.69	55.44	5.87
	55.57	24.09	9.61	10.74	39.46	54.40	6.14
	54.40	24.53	9.93	11.15	40.25	53.34	6.41
	53.47	24.87	10.18	11.48	40.84	52.37	6.79
	52.57	25.22	10.42	11.79	41.39	51.48	7.13
	51.66	25.61	10.64	12.09	41.95	50.52	7.53
	50.14	26.32	11.01	12.52	42.96	48.80	8.24
	48.88	26.89	11.33	12.90	43.76	47.15	9.09
	47.72	27.40	11.63	13.25	44.49	45.62	9.89
	46.54	27.91	11.95	13.60	45.24	44.18	10.58
	45.43	28.34	12.27	13.96	45.93	42.82	11.25
	44.04	28.99	12.62	14.35	46.90	41.61	11.50
	42.66	29.60	12.98	14.76	47.84	40.33	11.83
	41.37	30.15	13.33	15.15	48.71	39.27	12.02
	40.07	30.70	13.69	15.54	49.61	38.18	12.21
	38.78	31.28	14.02	15.92	50.51	37.17	12.32

Energy Outlook

Table 8. Energy Outlook Indicators

FY	Total Primary Energy Supply (TPES) (in MTOE)		Greenhouse Gas (GHG) Emission (in MTCO ₂ e)		GDP (in billion pesos: at constant 2018 prices)*	Population (in millions)			
	Business as Usual	Clean Energy	Business as Usual	Clean Energy			TPES to GDP (TOE/Php1M)		
							Business as Usual	Clean Energy	
1990	25.77	25.77	36.93	36.93	5,239.63	60.94	4.92	4.92	
1991	26.87	26.87	37.24	37.24	5,216.76	62.36	5.15	5.15	
1992	28.38	28.38	41.00	41.00	5,238.55	63.82	5.42	5.42	
1993	27.01	27.01	45.35	45.35	5,352.85	65.32	5.05	5.05	
1994	30.46	30.46	46.45	46.45	5,586.97	66.84	5.45	5.45	
1995	32.34	32.34	54.49	54.49	5,845.38	68.41	5.53	5.53	
1996	33.48	33.48	58.71	58.71	6,187.93	70.01	5.41	5.41	
1997	35.06	35.06	65.28	65.28	6,508.87	71.65	5.39	5.39	
1998	36.19	36.19	65.60	65.60	6,475.41	75.36	5.59	5.59	
1999	37.64	37.64	62.97	62.97	6,692.10	76.99	5.62	5.62	
2000	38.86	38.86	63.44	63.44	6,985.38	77.02	5.56	5.56	
2001	36.87	36.87	63.40	63.40	7,198.38	78.59	5.12	5.12	
2002	37.33	37.33	62.78	62.78	7,465.89	80.28	5.00	5.00	
2003	37.41	37.41	64.45	64.45	7,845.68	81.88	4.77	4.77	
2004	37.25	37.25	65.90	65.90	8,361.08	83.56	4.45	4.45	
2005	38.06	38.06	66.78	66.78	8,774.32	85.26	4.34	4.34	
2006	37.82	37.82	61.38	61.38	9,240.80	86.97	4.09	4.09	
2007	38.48	38.48	64.33	64.33	9,843.24	88.71	3.91	3.91	
2008	40.46	40.46	66.86	66.86	10,270.88	89.44	3.94	3.94	
2009	39.90	39.90	67.57	67.57	10,419.63	91.02	3.83	3.83	
2010	41.05	41.05	72.85	72.85	11,183.86	92.60	3.67	3.67	
2011	41.85	41.85	73.29	73.29	11,615.36	94.18	3.60	3.60	
2012	43.52	43.52	75.64	75.64	12,416.47	96.50	3.51	3.51	
2013	44.99	44.99	84.20	84.20	13,254.64	98.19	3.39	3.39	
2014	46.99	46.99	90.27	90.27	14,096.05	99.88	3.33	3.33	
2015	51.27	51.27	99.51	99.51	14,990.91	101.56	3.42	3.42	
2016	54.59	54.59	109.75	109.75	16,062.68	103.24	3.40	3.40	

* 2021 onwards: DOE estimate based on GDP growth targets from the NEDA and DBCC

Intensity					Per Capita			
	GHG to GDP (tCO ₂ e/PhP 100K)		GHG to TPES (tCO ₂ e/TOE)		TPES (TOE/person)		GHG (tCO ₂ e/person)	
	Business as Usual	Clean Energy	Business as Usual	Clean Energy	Business as Usual	Clean Energy	Business as Usual	Clean Energy
	0.70	0.70	1.43	1.43	0.42	0.42	0.61	0.61
	0.71	0.71	1.39	1.39	0.43	0.43	0.60	0.60
	0.78	0.78	1.46	1.46	0.44	0.44	0.64	0.64
	0.85	0.85	1.70	1.70	0.41	0.41	0.69	0.69
	0.83	0.83	1.53	1.53	0.46	0.46	0.69	0.69
	0.93	0.93	1.69	1.69	0.47	0.47	0.80	0.80
	0.95	0.95	1.75	1.75	0.48	0.48	0.84	0.84
	1.00	1.00	1.86	1.86	0.49	0.49	0.91	0.91
	1.01	1.01	1.81	1.81	0.48	0.48	0.87	0.87
	0.94	0.94	1.67	1.67	0.49	0.49	0.82	0.82
	0.91	0.91	1.63	1.63	0.50	0.50	0.82	0.82
	0.88	0.88	1.72	1.72	0.47	0.47	0.81	0.81
	0.84	0.84	1.68	1.68	0.46	0.46	0.78	0.78
	0.82	0.82	1.72	1.72	0.46	0.46	0.79	0.79
	0.79	0.79	1.77	1.77	0.45	0.45	0.79	0.79
	0.76	0.76	1.75	1.75	0.45	0.45	0.78	0.78
	0.66	0.66	1.62	1.62	0.43	0.43	0.71	0.71
	0.65	0.65	1.67	1.67	0.43	0.43	0.73	0.73
	0.65	0.65	1.65	1.65	0.45	0.45	0.75	0.75
	0.65	0.65	1.69	1.69	0.44	0.44	0.74	0.74
	0.65	0.65	1.77	1.77	0.44	0.44	0.79	0.79
	0.63	0.63	1.75	1.75	0.44	0.44	0.78	0.78
	0.61	0.61	1.74	1.74	0.45	0.45	0.78	0.78
	0.64	0.64	1.87	1.87	0.46	0.46	0.86	0.86
	0.64	0.64	1.91	1.91	0.47	0.47	0.90	0.90
	0.65	0.65	1.90	1.90	0.50	0.50	0.96	0.96
	0.67	0.67	1.96	1.96	0.53	0.53	1.04	1.04

(Continuation)

Table 8. Energy Outlook Indicators

FY	Total Primary Energy Supply (TPES) (in MTOE)		Greenhouse Gas (GHG) Emission (in MTCO ₂ e)		GDP (in billion pesos: at constant 2018 prices)*	Population (in millions)			
	Business as Usual	Clean Energy	Business as Usual	Clean Energy			TPES to GDP (TOE/Php1M)		
							Business as Usual	Clean Energy	
2017	57.96	57.96	120.69	120.69	17,175.98	104.92	3.37	3.37	
2018	59.72	59.72	125.58	125.58	18,265.19	106.60	3.27	3.27	
2019	59.85	59.85	132.45	132.45	19,382.75	108.27	3.09	3.09	
2020	56.58	56.58	122.58	122.58	17,537.84	109.03	3.23	3.23	
2021	59.24	59.24	130.45	130.45	18,538.05	110.20	3.20	3.20	
2022	62.75	62.04	141.62	139.64	19,782.47	111.57	3.17	3.14	
2023	65.10	64.17	148.67	145.35	21,068.33	112.89	3.09	3.05	
2024	67.79	66.64	156.34	152.60	22,437.77	114.16	3.02	2.97	
2025	71.45	69.99	164.52	158.30	24,008.41	115.38	2.98	2.92	
2026	75.46	73.95	172.87	165.32	25,822.44	116.59	2.92	2.86	
2027	79.21	77.14	182.38	173.08	27,939.16	117.79	2.84	2.76	
2028	83.13	80.26	191.97	182.71	30,250.64	118.99	2.75	2.65	
2029	87.36	83.68	202.65	193.25	32,778.43	120.19	2.67	2.55	
2030	91.97	87.63	213.68	204.88	35,543.26	121.38	2.59	2.47	
2031	96.72	92.09	225.77	214.50	38,495.39	122.56	2.51	2.39	
2032	101.93	96.81	238.58	225.47	41,647.26	123.74	2.45	2.32	
2033	107.34	101.64	252.66	237.19	45,008.81	124.90	2.38	2.26	
2034	113.05	106.81	266.99	249.07	48,593.30	126.06	2.33	2.20	
2035	119.06	112.27	281.78	261.02	52,414.00	127.22	2.27	2.14	
2036	125.38	117.96	298.17	272.80	56,484.16	128.36	2.22	2.09	
2037	132.22	124.04	314.82	284.32	60,816.22	129.50	2.17	2.04	
2038	139.45	130.53	332.41	296.42	65,420.12	130.62	2.13	2.00	
2039	147.20	137.60	350.70	308.52	70,309.95	131.74	2.09	1.96	
2040	155.62	144.88	370.95	321.25	75,500.63	132.85	2.06	1.92	

* 2021 onwards: DOE estimate based on GDP growth targets from the NEDA and DBCC

Intensity					Per Capita			
	GHG to GDP (tCO ₂ e/PhP 100K)		GHG to TPES (tCO ₂ e/TOE)		TPES (TOE/person)		GHG (tCO ₂ e/person)	
	Business as Usual	Clean Energy	Business as Usual	Clean Energy	Business as Usual	Clean Energy	Business as Usual	Clean Energy
	0.69	0.69	2.04	2.04	0.55	0.55	1.13	1.13
	0.68	0.68	2.07	2.07	0.56	0.56	1.16	1.16
	0.67	0.67	2.17	2.17	0.55	0.55	1.20	1.20
	0.68	0.68	2.13	2.13	0.52	0.52	1.09	1.09
	0.70	0.70	2.20	2.20	0.54	0.54	1.18	1.18
	0.72	0.71	2.26	2.25	0.56	0.56	1.27	1.25
	0.71	0.69	2.28	2.26	0.58	0.57	1.32	1.29
	0.70	0.68	2.31	2.29	0.59	0.58	1.37	1.34
	0.69	0.66	2.30	2.26	0.62	0.61	1.43	1.37
	0.67	0.64	2.29	2.24	0.65	0.63	1.48	1.42
	0.65	0.62	2.30	2.24	0.67	0.65	1.55	1.47
	0.63	0.60	2.31	2.28	0.70	0.67	1.61	1.54
	0.62	0.59	2.32	2.31	0.73	0.70	1.69	1.61
	0.60	0.58	2.32	2.34	0.76	0.72	1.76	1.69
	0.59	0.56	2.33	2.33	0.79	0.75	1.84	1.75
	0.57	0.54	2.34	2.33	0.82	0.78	1.93	1.82
	0.56	0.53	2.35	2.33	0.86	0.81	2.02	1.90
	0.55	0.51	2.36	2.33	0.90	0.85	2.12	1.98
	0.54	0.50	2.37	2.33	0.94	0.88	2.21	2.05
	0.53	0.48	2.38	2.31	0.98	0.92	2.32	2.13
	0.52	0.47	2.38	2.29	1.02	0.96	2.43	2.20
	0.51	0.45	2.38	2.27	1.07	1.00	2.54	2.27
	0.50	0.44	2.38	2.24	1.12	1.04	2.66	2.34
	0.49	0.43	2.38	2.22	1.17	1.09	2.79	2.42

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