



Capacity development and strengthening for energy policy formulation
and implementation of sustainable energy projects in Indonesia

ENERGY PROFILE OF YOGYAKARTA PROVINCE 2007

Regional CASINDO Team of Yogyakarta



**Center of Regional Energy Management
of Universitas Muhammadiyah Yogyakarta
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Chapter I

SUMMARY OF ENERGY PROFILE 2007

1.1 Socio - Economic

Land Area	3,186	km ²
Population	3,434,534	Persons
Number of Households	1,002,383	Households

Gross Regional Domestic Product (GRDP)

Value	18,308	Billion Rupiah
Per Capita	5.3	Million Rupiah

GRDP by Sector (% of total GRDP)

Agriculture	18.22%
Mining	0.76%
Manufacture Industry	13.82%
Utility	0.91%
Construction	9.47%
Commercial Service	23.27%
Transportation	10.25%
Financial Service	9.27%
Other Services	14.03%
	100.00%

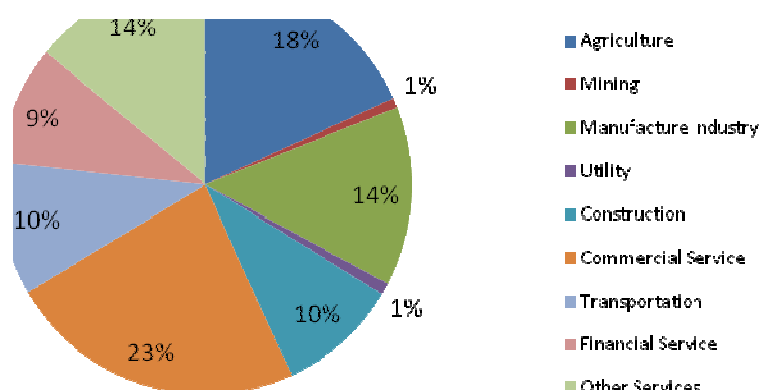


Figure 1. 1. GDP by sector in 2007.

1.2 Final Energy Consumption

Consumption by Type

Oil Fuel	3.5795	Million BOE
Electricity	0.9082	Million BOE
LPG	0.2205	Million BOE
Biomass	0.0033	Million BOE
Coal	0.0133	Million BOE
Coal Briquet	0.0028	Million BOE
Total	4.7275	Million BOE

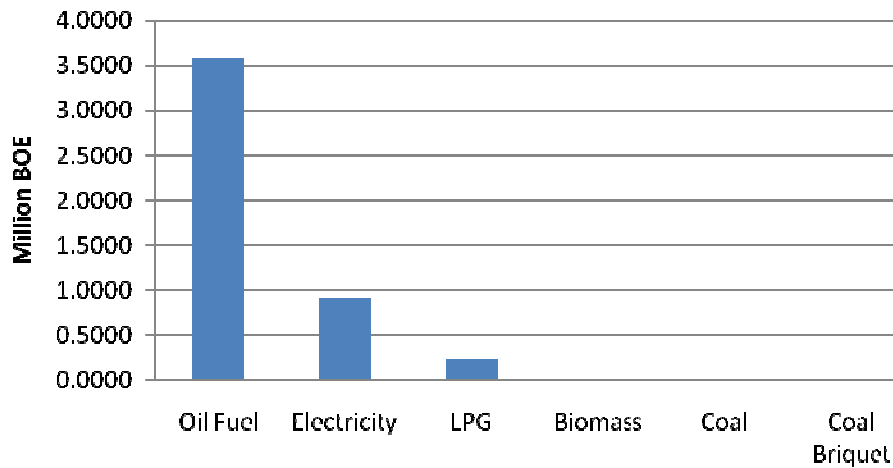


Figure 1. 2. Energy consumption by type of energy in 2007.

Consumption by Sector

Household	1.41	Million BOE
Commercial	0.34	Million BOE
Transportation	2.72	Million BOE
Industrial	0.21	Million BOE
Agriculture, Mining, and Construction	0.05	Million BOE
Total	4.73	Million BOE

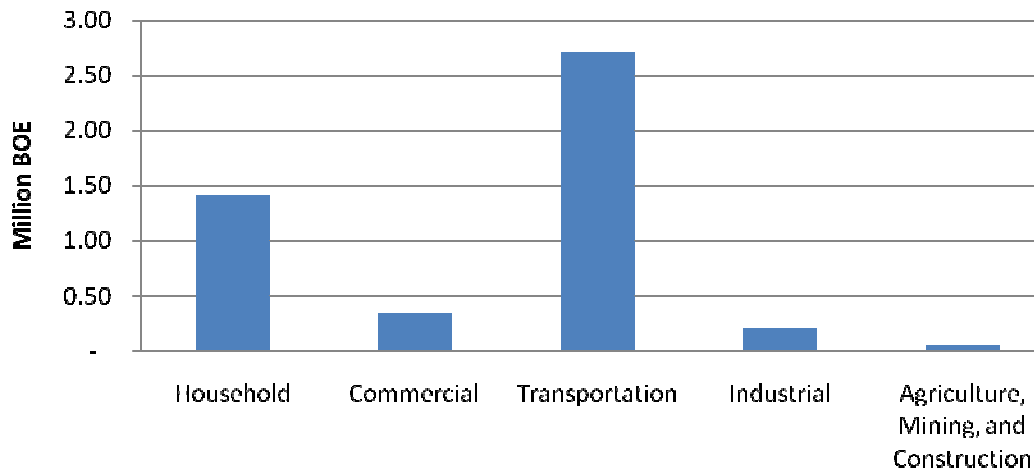


Figure 1. 3. Energy consumption by sector in 2007.

1.3 Energy Economy Indicator

Elasticity of Final Energy Use	0.19	
Intensity of Final Energy Use	0.26	BOE/Million Rupiah
Final Energy Consumption per Capita	1.38	BOE/Capita/Year
Electricity Use per Capita	431.38	kWh/Capita/Year
Electrified Village Ratio	100.00	%
Electrification Ratio	79.64	%

1.4 Energy Commodity Balance 2007

	Unit	Coal	Coal Briquet	Wood	Oil Fuel	Avtur	Mogas
		Ton	Ton	Ton	Kilo Liter	Kilo Liter	Kilo Liter
1	Primary Energy Supply	3,048.2	776.9	1,423.4	600,262.8	37,078.8	348,512.0
	a. Indigeneous Production	-	-	1,423.4	-	-	-
	b. Import	3,048.2	776.9	-	600,262.8	37,078.8	348,512.0
2	Energy Transformation	-	-	-	-	-	-
3	Own Use and Losses	-	-	-	-	-	-
	a. Transmission and Distribution	-	-	-	-	-	-
4	Final Energy Supply	3,048.2	776.9	1,423.4	600,262.8	37,078.8	348,512.0
5	Statistical Difference	-	-	-	-	-	-
6	Final Energy Consumption	3,048.2	776.9	1,423.4	600,262.8	37,078.8	348,512.0
	a. Household	-	776.9	1,423.4	116,342.8	-	-
	b. Commercial	-	-	-	6,204.6	-	-
	c. Transportation	-	-	-	457,525.7	37,078.8	348,512.0
	d. Industry	3,048.2	-	-	12,387.0	-	-
	e. Other Sector	-	-	-	7,802.8	-	-

	Unit	Kerosene	ADO	IDO	FO	LPG	Electricity
		Kilo Liter	Kilo Liter	Kilo Liter	Kilo Liter	Ton	GWh
1	Primary Energy Supply	116,920.0	91,496.0	48.0	6,208.0	25,866.0	1,615.8
	a. Indigeneous Production	-	-	-	-	-	-
	b. Import	116,920.0	91,496.0	48.0	6,208.0	25,866.0	1,615.8
2	Energy Transformation	-	-	-	-	-	-
3	Own Use and Losses	-	-	-	-	-	134.3
	a. Transmission and Distribution	-	-	-	-	-	134.3
4	Final Energy Supply	116,920.0	91,496.0	48.0	6,208.0	25,866.0	1,481.6
5	Statistical Difference	-	-	-	-	-	-
6	Final Energy Consumption	116,920.0	91,496.0	48.0	6,208.0	25,866.0	1,481.6
	a. Household	116,342.8	-	-	-	24,344.8	829.0
	b. Commercial	370.4	5,834.2	-	-	1,306.3	477.7
	c. Transportation	-	71,934.9	-	-	-	-
	d. Industry	190.0	5,941.0	48.0	6,208.0	214.9	174.9
	e. Other Sector	16.8	7,785.9	-	-	-	-

1.5 Energy Balance 2007

	Unit	Coal	Coal Briquet	Wood	Oil Fuel	Avtur	Mogas	Kerosene
		BOE	BOE	BOE	BOE	BOE	BOE	BOE
1	Primary Energy Supply	13,035.9	2,768.9	3,270.7	3,579,481.3	218,420.0	2,030,953.7	693,031.6
	a. Indigeneous Production	-	-	3,270.7	-	-	-	-
	b. Import	13,035.9	2,768.9	-	3,579,481.3	218,420.0	2,030,953.7	693,031.6
2	Energy Transformation	-	-	-	-	-	-	-
3	Own Use and Losses	-	-	-	-	-	-	-
	a. Transmission and Distribution	-	-	-	-	-	-	-
4	Final Energy Supply	13,035.9	2,768.9	3,270.7	3,579,481.3	218,420.0	2,030,953.7	693,031.6
5	Statistical Difference	-	-	-	-	-	-	-
6	Final Energy Consumption	13,035.9	2,768.9	3,270.7	3,579,481.3	218,420.0	2,030,953.7	693,031.6
	a. Household	-	2,768.9	3,270.7	689,610.4	-	-	689,610.4
	b. Commercial	-	-	-	40,042.3	-	-	2,195.3
	c. Transportation	-	-	-	2,716,022.4	218,420.0	2,030,953.7	-
	d. Industry	13,035.9	-	-	83,198.4	-	-	1,126.2
	e. Other Sector	-	-	-	50,608.0	-	-	99.8

	Unit	ADO	IDO	FO	LPG	Electricity	Total
		BOE	BOE	BOE	BOE	BOE	BOE
1	Primary Energy Supply	593,543.7	317.2	43,215.1	220,497.3	990,499.2	4,809,554.3
	a. Indigeneous Production	-	-	-	-	-	3,270.7
	b. Import	593,543.7	317.2	43,215.1	220,497.3	990,499.2	4,806,282.5
2	Energy Transformation	-	-	-	-	-	-
3	Own Use and Losses	-	-	-	-	82,294.9	82,297.9
	a. Transmission and Distribution	-	-	-	-	82,294.9	82,297.9
4	Final Energy Supply	593,543.7	317.2	43,215.1	220,497.3	908,204.3	4,727,256.4
5	Statistical Difference	-	-	-	-	-	-
6	Final Energy Consumption	593,543.7	317.2	43,215.1	220,497.3	908,204.3	4,727,258.4
	a. Household	-	-	-	207,530.0	508,153.8	1,411,333.8
	b. Commercial	37,847.0	-	-	11,135.4	292,835.9	344,013.6
	c. Transportation	466,648.6	-	-	-	-	2,716,022.4
	d. Industry	38,539.9	317.2	43,215.1	1,831.8	107,214.6	205,280.6
	e. Other Sector	50,508.2	-	-	-	-	50,608.0

Chapter II ENERGY USE ACTIVITY

2.1 Demography

a. Population and Density in 2007

No.	Regency/City	Population (persons)	Number of Households	Area (km ²)	Density (person/km ²)
1	Kulonprogo	374,445	103,111	586.72	638.20
2	Bantul	896,994	219,930	506.85	1,769.74
3	Gunungkidul	685,210	193,844	1,485.36	461.31
4	Sleman	1,026,767	329,881	574.82	1,786.24
5	Yogyakarta	451,118	155,617	32.50	13,880.55
Total Province		3,434,534	1,002,383	3,186.25	1,077.92

Source: BPS

b. Population Growth

No.	Regency/City	Population Growth (%/year)			
		1990 - 1995	1995 - 2000	2000 - 2005	2005 - 2007
1	Kulonprogo	(0.04)	0.71	0.15	0.09
2	Bantul	1.19	0.91	1.99	1.47
3	Gunungkidul	0.31	0.43	0.33	0.27
4	Sleman	1.51	1.48	1.87	1.35
5	Yogyakarta	(0.38)	1.43	1.82	1.33
Total Province		0.72	1.00	1.37	1.02

Source: BPS

c. Household Size

No.	Regency/City	Number of Person in Household (Person/Household)				
		1995	2000	2005	2006	2007
1	Kulonprogo	5.07	4.93	3.62	3.29	3.63
2	Bantul	4.68	4.16	3.42	4.16	4.08
3	Gunungkidul	5.10	4.90	3.46	3.53	3.53
4	Sleman	4.45	4.12	3.00	3.66	3.11
5	Yogyakarta	5.05	5.03	2.78	3.46	2.90
Total Province		4.81	4.51	3.22	3.68	3.43

Source: BPS

d. Population by Income Category

d.1 Regency of Kulonprogo

Rural

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	67,070	73,157	30,328	47,050	64,516
2	Under 1.5X Poverty Line	131,868	99,068	92,980	83,242	76,705
3	Middle Income	91,322	121,712	129,693	110,687	96,625
4	20% Highest Income	72,755	76,206	64,249	60,622	59,463
Total		363,015	370,143	317,250	301,600	297,309

Source: Susenas

Urban

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	15,556	12,447	18,357	19,433	21,058
2	Under 1.5X Poverty Line	26,527	24,053	23,943	19,071	14,193
3	Middle Income	17,175	24,557	12,770	18,855	26,072
4	20% Highest Income	15,676	15,643	14,366	14,881	15,813
Total		74,934	76,700	69,436	72,240	77,136

Source: Susenas

d.2 Regency of Bantul**Rural**

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	10,800	21,843	12,461	25,995	32,525
2	Under 1.5X Poverty Line	73,103	53,344	54,572	49,889	34,723
3	Middle Income	98,301	110,888	130,199	134,175	108,783
4	20% Highest Income	45,135	47,043	49,415	52,515	43,733
Total		227,339	233,118	246,647	262,574	219,764

Source: Susenas

Urban

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	39,119	44,204	76,057	64,016	50,115
2	Under 1.5X Poverty Line	191,088	128,835	150,825	135,489	117,838
3	Middle Income	201,119	269,760	235,475	298,947	375,863
4	20% Highest Income	108,333	110,700	114,730	123,059	133,414
Total		539,659	553,499	577,087	621,511	677,230

Source: Susenas

d.3 Regency of Gunungkidul**Rural**

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	115,093	134,247	97,498	84,804	71,191
2	Under 1.5X Poverty Line	241,239	260,783	202,797	214,924	225,116
3	Middle Income	205,797	175,093	218,786	220,750	219,344
4	20% Highest Income	141,009	142,816	130,258	126,883	125,706
Total		703,138	712,939	649,339	647,360	641,357

Source: Susenas

Urban

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	1,176	7,508	7,800	7,361	10,481
2	Under 1.5X Poverty Line	3,527	10,510	8,190	6,892	9,034
3	Middle Income	24,395	12,312	20,669	14,361	15,436
4	20% Highest Income	7,054	6,606	9,750	7,469	8,902
Total		36,152	36,936	46,409	36,084	43,853

Source: Susenas

d.4 Regency of Sleman**Rural**

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	6,932	17,841	6,661	5,888	5,627
2	Under 1.5X Poverty Line	28,987	27,321	44,404	27,214	16,880
3	Middle Income	102,714	98,690	108,789	94,213	89,886
4	20% Highest Income	34,501	35,127	39,963	31,988	28,274
Total		173,134	178,979	199,817	159,303	140,667

Source: Susenas

Urban

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	37,110	45,394	51,952	76,421	98,357
2	Under 1.5X Poverty Line	139,510	110,539	81,703	105,291	123,168
3	Middle Income	353,930	397,107	470,679	497,584	487,355
4	20% Highest Income	129,889	137,567	150,973	169,824	177,220
Total		660,439	690,607	755,307	849,120	886,100

Source: Susenas

d.5 City of Yogyakarta

Urban

No.	Income Category	1999	2002	2005	2006	2007
1	Under Poverty Line	31,443	17,420	20,777	21,226	21,203
2	Under 1.5X Poverty Line	57,724	59,003	52,394	45,990	37,443
3	Middle Income	300,820	329,856	262,874	286,551	302,249
4	20% Highest Income	97,145	101,148	84,463	88,442	90,223
Total		487,132	507,427	420,508	442,209	451,118

Source: Susenas

2.2 Economy

a. GRDP by Regency/City in 2007

No.	Regency/City	GRDP (Million Rp)	GRDP/Capita (mill Rp/cap/yr)
1	Kulonprogo	1,587,630	4.24
2	Bantul	3,448,949	3.85
3	Gunungkidul	2,941,288	4.29
4	Sleman	5,553,593	5.41
5	Yogyakarta	4,776,401	10.59
Total Province		18,307,861	5.33

Source: BPS

b. GRDP by Sector

No.	Sector	GRDP (Constant Price of 2000, million rupiah)				
		2003	2004	2005	2006	2007
1	Agriculture	2,948,400	3,052,935	3,185,771	3,306,928	3,333,382
2	Mining	119,433	120,441	122,332	126,137	138,358
3	Manufacture Industry	2,325,236	2,400,776	2,463,230	2,481,167	2,528,020
4	Utility	135,379	144,845	153,115	152,467	165,772
5	Construction	1,178,024	1,284,471	1,395,079	1,580,312	1,732,945
6	Commercial Service	3,533,719	3,732,673	3,917,638	4,065,741	4,257,088
7	Transportation	1,437,072	1,582,194	1,673,352	1,761,672	1,875,307
8	Financial Service	1,408,894	1,500,542	1,623,210	1,591,885	1,695,164
9	Other Services	2,274,252	2,327,547	2,377,149	2,469,045	2,565,477
Total		15,360,409	16,146,424	16,910,877	17,535,354	18,291,513

Source: BPS

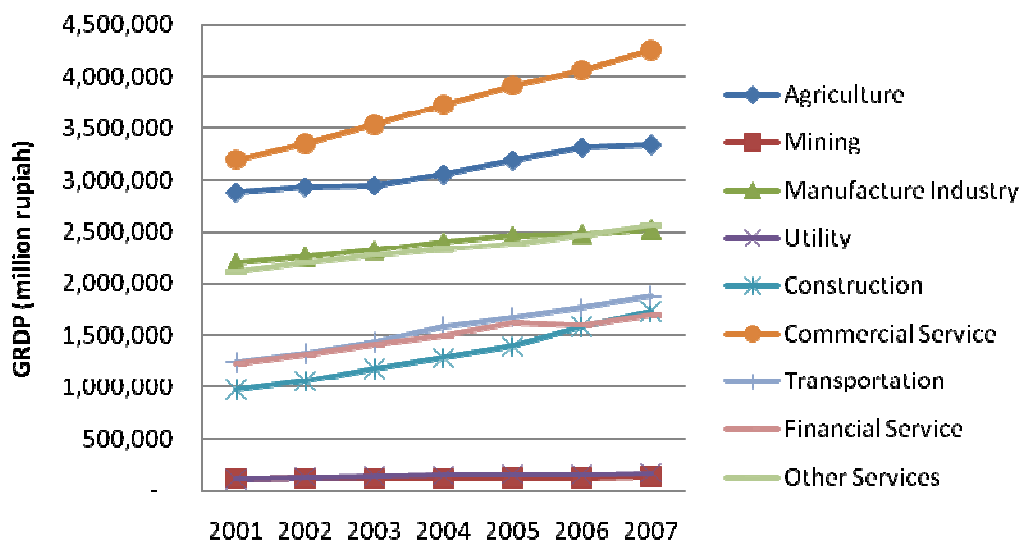


Figure 2. 1. GRDP by sector in 2007.

c. GRDP Growth dan Inflation

No.		2003	2004	2005	2006	2007
1	GRDP Growth (%)	4.58	5.12	4.74	3.69	4.31
2	Inflation (%)	5.73	6.95	14.98	10.4	7.99

Source: BPS

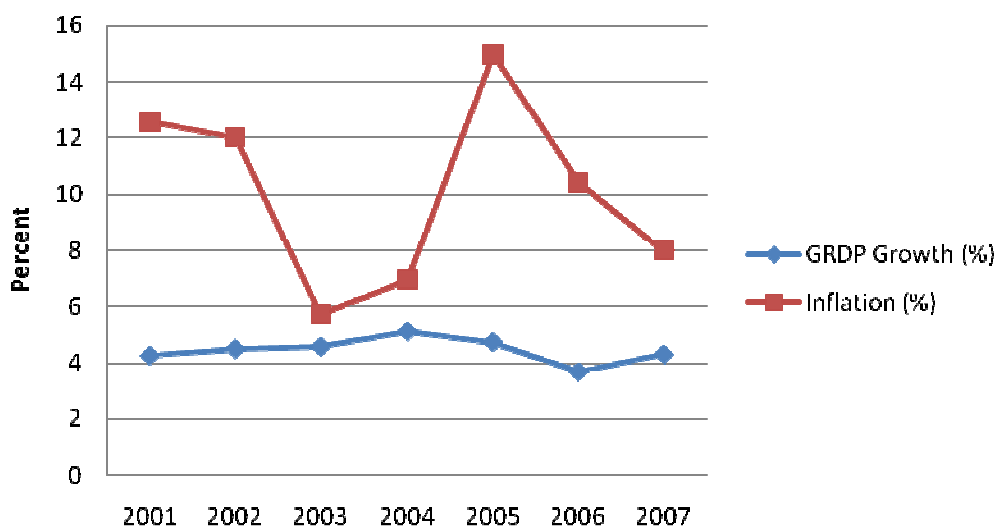


Figure 2. 2. GRDP growth and inflation rate in 2007

d. Value Added of Manufacture Industry Sector

No.	Subsector	Value added (Constant Price 2000) (million rupiah)						
		2001	2002	2003	2004	2005	2006	2007
1	Food	696,555	695,205	742,507	800,848	845,594	860,186	907,914
2	Textile	465,973	489,219	502,380	508,391	510,219	511,559	508,540
3	Wood	311,451	316,500	316,920	323,944	323,919	336,147	327,564
4	Paper	115,899	112,777	122,742	124,966	129,735	129,201	133,385
5	Chemistry	103,019	109,942	110,043	112,353	114,892	117,393	113,887

No.	Subsector	Value added (Constant Price 2000) (million rupiah)						
		2001	2002	2003	2004	2005	2006	2007
6	Non Metal	117,875	139,423	121,658	126,292	129,566	126,765	119,285
7	Machinery	224,906	239,015	235,737	225,655	226,719	220,145	227,699
8	Others	164,222	159,805	173,250	178,328	182,586	179,771	189,745
Total		2,199,898	2,261,886	2,325,236	2,400,776	2,463,230	2,481,167	2,528,020

Source: BPS

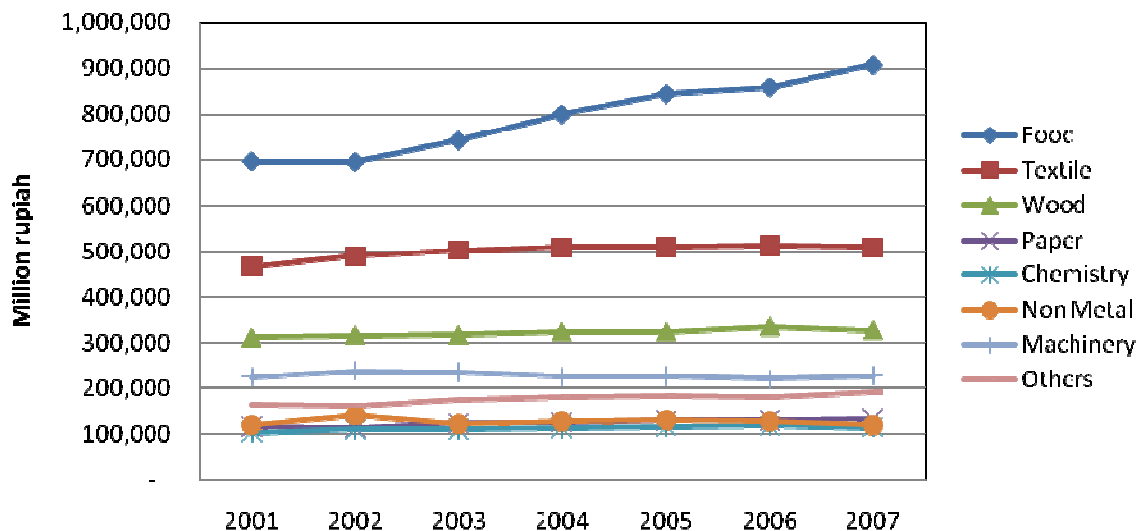


Figure 2. 3. Value added of manufacture industrial sector.

e. Value Added of Commercial Sector

No.	Subsector	Value added (Constant Price 2000) (million rupiah)					
		2002	2003	2004	2005	2006	2007
1	Hotel and Lodging	304,147	322,629	340,362	319,188	259,896	287,901
2	Wholesale and Retail	1,247,964	1,307,280	1,374,914	1,462,659	1,534,974	1,613,884
3	Restaurant	1,362,114	1,467,971	1,564,148	1,662,981	1,774,752	1,848,580
4	Financial Services	1,314,860	1,408,894	1,500,542	1,623,210	1,591,885	1,695,164
5	Amusement Services	56,772	57,919	65,442	67,681	70,717	76,936
6	Social Services	374,515	377,920	387,807	405,129	425,402	429,787
Total		4,660,371	4,942,613	5,233,216	5,540,848	5,657,626	5,952,252

Source: BPS

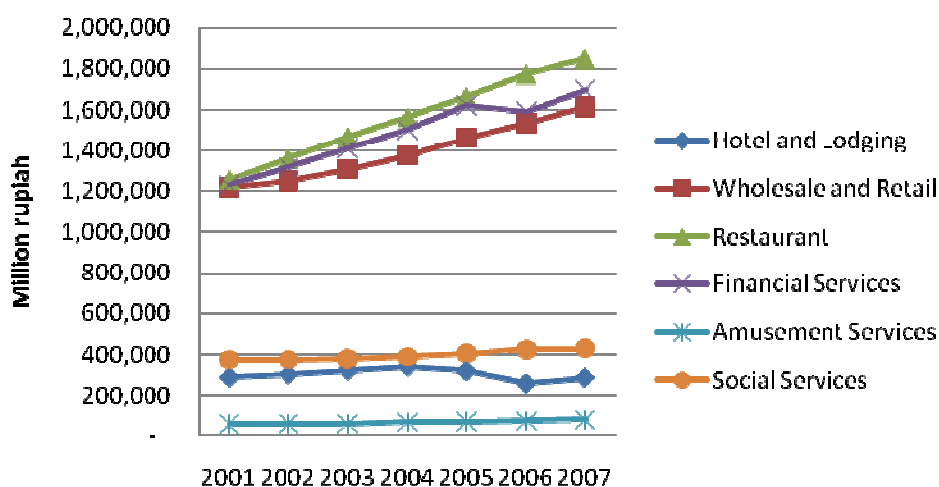


Figure 2. 4. Value added of commercial sector in 2007

f. Value Added of Other Sector

No.	Subsector	Value added (Constant Price 2000) (million rupiah)					
		2002	2003	2004	2005	2006	2007
1	Construction	1,053,019	1,178,024	1,284,471	1,395,079	1,580,312	1,732,945
2	Agriculture	2,935,480	2,948,400	3,052,935	3,185,771	3,306,928	3,333,382
3	Mining	118,319	119,433	120,441	122,332	126,137	138,358
Total		4,106,818	4,245,857	4,457,847	4,703,182	5,013,377	5,204,685

Source: BPS

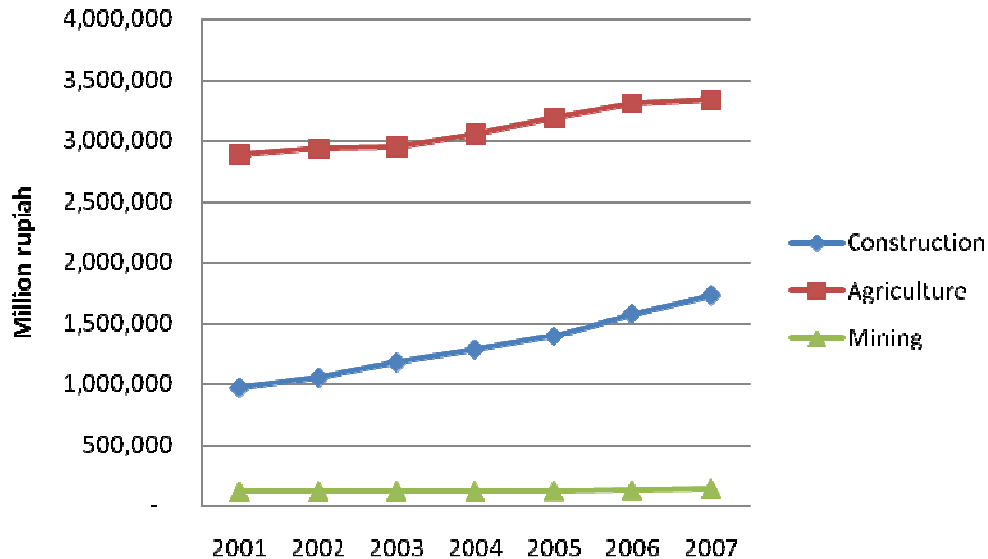


Figure 2. 5. Value added of other sector.

2.3 Transportation

No.	Type of Mode	2001	2002	2003	2004	2005	2006	2007
1	Passenger Car (unit)	67,309	70,203	74,728	78,817	82,705	84,786	89,598
2	Motorcycle (unit)	539,448	597,143	666,941	755,101	843,077	916,204	1,012,319
3	Bus (unit)	6,591	7,400	8,039	9,968	14,685	17,673	21,232
4	Truck (unit)	27,745	30,816	32,520	34,031	35,670	36,812	38,537
5	Train (1000 Km)	498	561	765	997	798	856	1,357
6	Aeroplane (1000 Km)	3,472	4,141	6,652	8,454	6,650	6,106	5,975

Source: BPS, Airport, and PT. KAI

Chapter III ENERGY CONSUMPTION

3.1 Energy Consumption from Supply Side

a. Oil Fuel Selling of Pertamina

No.	Type	Oil Fuel Sold (KL)						
		2001	2002	2003	2004	2005	2006	2007
1	Avtur	16,800	20,037	31,431	52,468	41,270	37,894	37,079
2	Avgas	-	-	-	-	-	-	-
3	Premium	273,173	292,188	303,440	324,966	344,035	346,274	348,512
4	Kerosene	141,780	148,195	141,713	141,713	131,605	114,245	116,920
	a. Household	141,737	148,113	141,653	141,640	131,194	113,996	116,730
	b. Industry	43	82	60	73	411	249	190
5	Automotive Diesel Oil	152,046	144,309	125,739	103,473	108,081	93,707	91,496
	a. Transportation	124,958	116,023	99,101	79,835	88,850	88,734	85,555
	b. Industry	27,088	28,286	26,638	23,638	19,231	4,973	5,941
	c. Electricity	-	-	-	-	-	-	-
6	Industrial Diesel Oil	472	624	552	447	392	253	48
	a. Transportation	-	-	-	-	-	-	-
	b. Industry	472	624	552	447	392	253	48
	c. Electricity	-	-	-	-	-	-	-
7	Fuel Oil	4,160	8,420	5,446	7,536	6,280	5,136	6,208
	a. Transportation	288	-	-	-	-	-	-
	b. Industry	3,872	8,420	5,446	7,536	6,280	5,136	6,208
	c. Electricity	-	-	-	-	-	-	-
Total		886,889	915,321	881,771	883,772	878,021	810,850	814,935

Source: Pertamina 2008

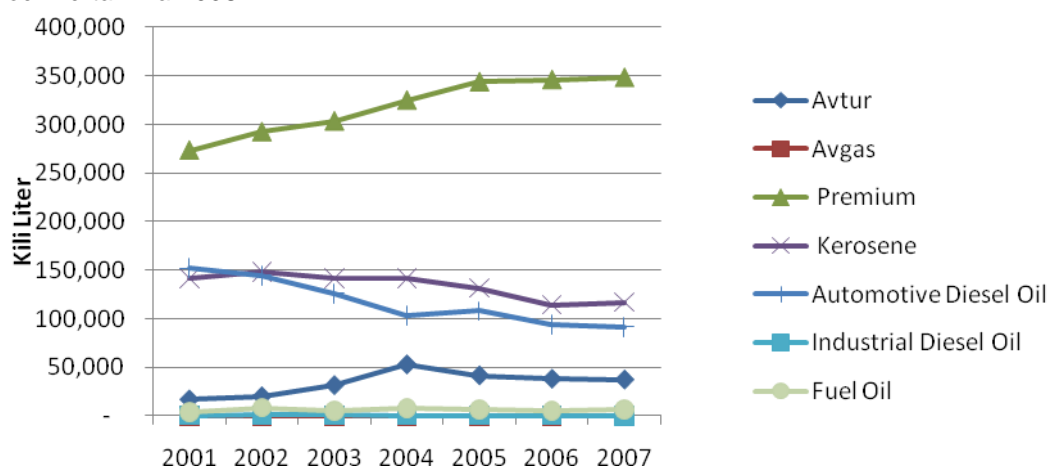


Figure 3. 1. Oil fuel selling of pertamina by type of energy in 2007

b. Electricity Selling of PLN

No.	Category	Electricity Sold (GWh)						
		2001	2002	2003	2004	2005	2006	2007
1	Household	631.44	731.52	760.23	789.48	851.44	840.20	828.96
2	Social	57.55	77.52	85.12	89.86	94.69	96.35	98.00
3	Public	43.03	49.98	54.19	76.95	78.59	79.96	81.33
4	Industry	158.82	182.18	183.99	181.63	178.85	176.88	174.90
5	Business	172.77	206.51	224.24	234.09	265.76	282.07	298.38
Total		1,063.62	1,247.71	1,307.77	1,372.01	1,469.34	1,475.46	1,481.57

Source: PLN 2008

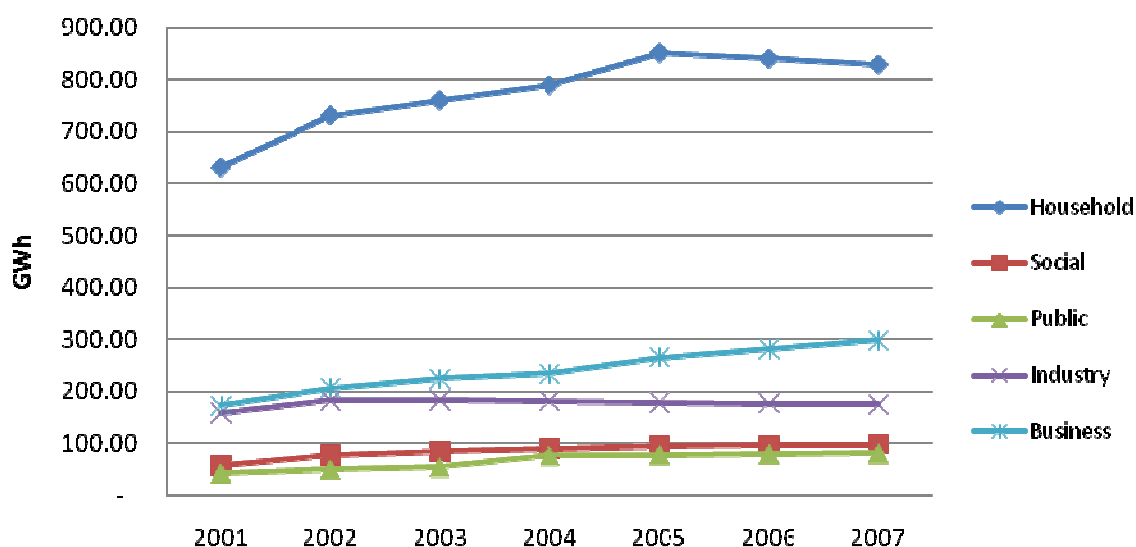


Figure 3. 2. Electricity selling of PLN by sector in 2007

c. Number of PLN electricity customer

No.	Category	Number of Customer						
		2001	2002	2003	2004	2005	2006	2007
1	Household	556,683	574,546	594,655	623,957	644,167	669,802	695,437
2	Social	13,917	14,338	14,776	15,393	16,246	17,858	17,858
3	Public	2,223	2,441	2,753	3,186	4,098	4,505	4,505
4	Industry	455	450	454	451	448	452	456
5	Business	20,555	21,863	22,772	24,022	25,626	26,464	27,301
Total		593,833	613,638	635,410	667,009	690,585	719,081	745,557

Source: PLN 2008

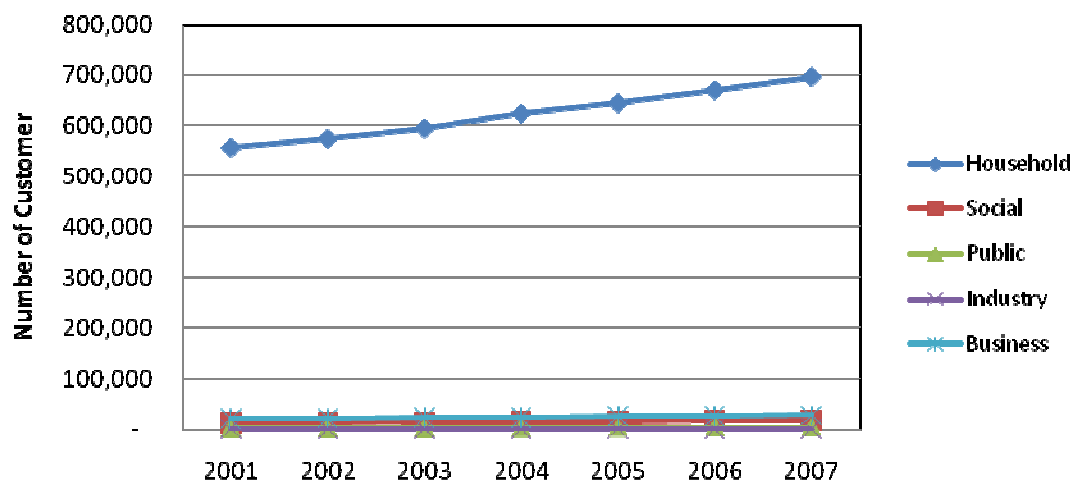


Figure 3. 3. Number of PLN customer by sector in 2007

d.LPG Selling of Pertamina

No.	Category	LPG Sold (Ton)				
		2003	2004	2005	2006	2007
1	Household	21,914.92	24,884.29	24,884.29	22,278.93	24,344.84
2	Industry	1,665.09	1,890.71	1,890.71	1,392.07	1,521.16
Total		23,580.01	26,775.00	26,775.00	23,671.00	25,866.00

Source: Pertamina 2008

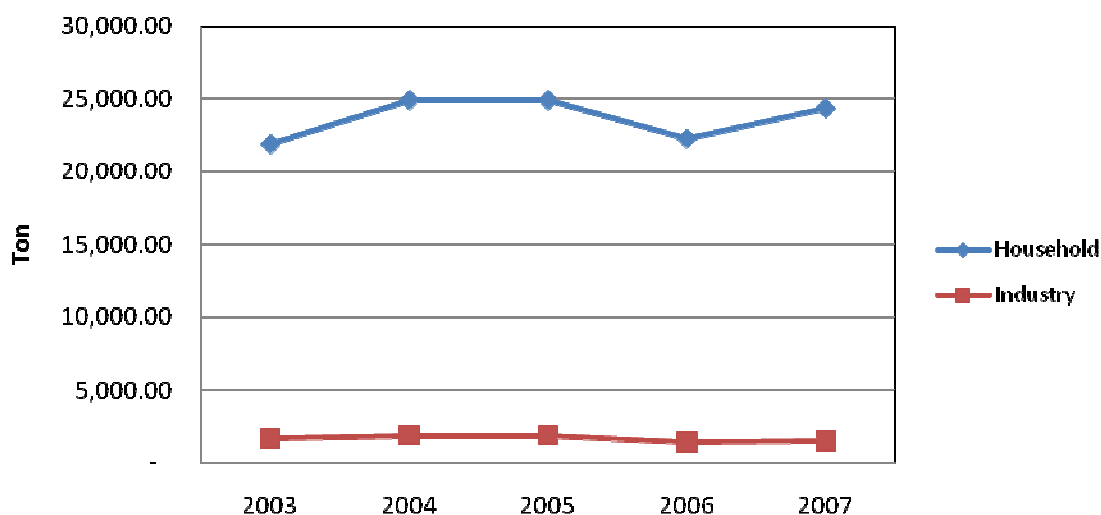


Figure 3. 4. LPG selling of Pertamina by sector in 2008

f. Coal Selling

No.	Kelompok Pelanggan	Penjualan Briket Batubara (Ton)				
		2003	2004	2005	2006	2007
1	Industry	1,005.83	1,793.99	895.44	3,031.05	3,106.49
Total		1,005.83	1,793.99	895.44	3,031.05	3,106.49

Source: BPS 2008

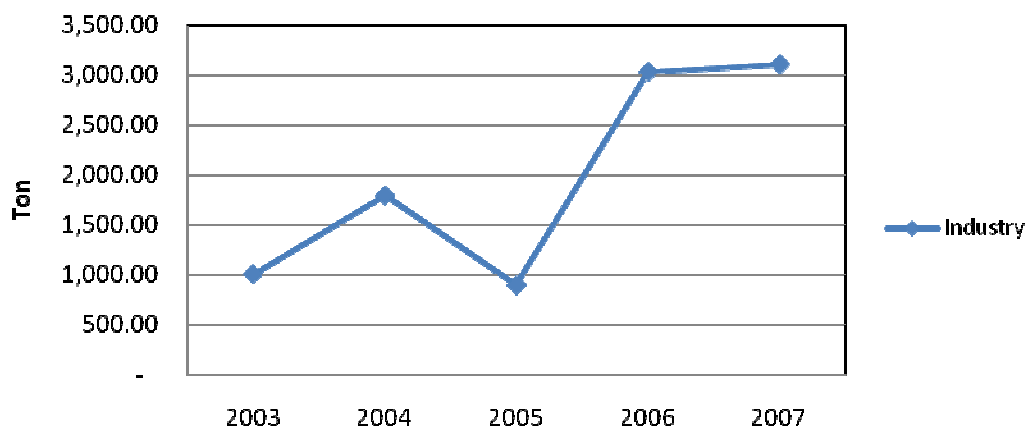


Figure 3. 5. Coal selling of industrial sector in 2007

3.2 Intensity of Energy Use

3.2.1 Household Sector

a.1 Regency of Kulonprogo

Rural

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	0.0786	0.0506	-	0.0017	0.0014
2	Under 1.5X Poverty Line	0.1329	0.0761	-	0.0019	0.0015
3	Middle Income	0.1844	0.0916	0.01522	0.0002	0.0017
4	20% Highest Income	0.2908	0.1446	0.04189	-	0.0013

Urban

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomassa
1	Under Poverty Line	0.0697	0.0839	0.00450	0.0008	0.0011
2	Under 1.5X Poverty Line	0.0914	0.0745	0.00590	0.0016	0.0014
3	Middle Income	0.3233	0.1187	0.07735	0.0002	0.0007
4	20% Highest Income	0.1178	0.1799	0.23009	-	0.0012

a.2 Regency of Bantul

Rural

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	0.0933	0.0920	-	0.0031	0.0011
2	Under 1.5X Poverty Line	0.1378	0.1109	-	0.0014	0.0014
3	Middle Income	0.1361	0.1162	0.04023	0.0006	0.0014
4	20% Highest Income	0.2398	0.1413	0.10414	-	0.0009

Urban

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	0.1330	0.0796	0.00858	0.0008	0.0012
2	Under 1.5X Poverty Line	0.2168	0.1135	0.01905	0.0024	0.0008
3	Middle Income	0.2718	0.1257	0.04457	0.0002	0.0008
4	20% Highest Income	0.2389	0.2458	0.14414	0.0003	0.0003

a.3 Regency of Gunungkidul

Rural

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	0.0583	0.1060	-	0.0007	0.0011
2	Under 1.5X Poverty Line	0.1037	0.0955	-	0.0017	0.0015
3	Middle Income	0.2008	0.1257	0.03266	0.0004	0.0022
4	20% Highest Income	0.1918	0.1630	0.08377	-	0.0025

Urban

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomassa
1	Under Poverty Line	0.0688	0.0659	0.00444	0.0005	0.0011
2	Under 1.5X Poverty Line	0.1730	0.1058	0.01116	0.0025	0.0013
3	Middle Income	0.2497	0.1800	0.06539	0.0006	0.0009
4	20% Highest Income	0.2122	0.2153	0.16604	-	-

a.4 Regency of Sleman

Rural

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomassa
1	Under Poverty Line	0.0643	0.0539	-	0.0023	0.0011
2	Under 1.5X Poverty Line	0.1047	0.0805	-	0.0025	0.0013
3	Middle Income	0.1605	0.1461	0.02752	0.0003	0.0014
4	20% Highest Income	0.2303	0.1932	0.07680	-	0.0007

Urban

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	0.1415	0.0467	0.00913	0.0011	0.0009
2	Under 1.5X Poverty Line	0.1850	0.0777	0.01194	0.0049	0.0011
3	Middle Income	0.2547	0.1636	0.08163	0.0003	0.0006
4	20% Highest Income	0.1529	0.3246	0.16503	-	0.0001

a.5 City of Yogyakarta Urban

No.	Income category	Energy Use Intensity in 2007 (BOE/capita/year)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	0.2287	0.1327	0.01476	0.00168	0.00017
2	Under 1.5X Poverty Line	0.3074	0.1505	0.02875	0.00379	0.00007
3	Middle Income	0.2668	0.1824	0.10666	0.00038	0.00003
4	20% Highest Income	0.1677	0.3442	0.22336	-	0.00001

3.2.2 Commercial sector

No.	Subsector	Energy Use Intensity in 2007 (BOE/million rupiah/year)			
		ADO	Kerosene	Electricity	LPG
1	Hotel and Lodging	0.10715	0.00020	0.14825	0.00534
2	Wholesale and Retail	-	-	0.03338	0.00080
3	Restaurant	-	0.00116	0.07632	0.00448
4	Financial Services	0.00246	-	0.00812	0.00001
5	Amusement Services	0.01506	-	0.37441	0.00024
6	Social Services	0.00389	-	0.02938	0.00002

3.2.3 Industrial sector

No.	Subsector	Energy Use Intensity in 2007 (BOE/million rupiah/year)						
		ADO	IDO	Kerosene	Fuel Oil	Electricity	LPG	Coal
1	Food	0.01531	0.00001	0.00045	0.02420	0.01584	0.00098	-
2	Textile	0.02515	0.00058	0.00073	0.02967	0.11798	0.00083	0.01911
3	Wood	0.00094	0.00000	0.00003	0.00175	0.01024	0.00022	-
4	Paper	0.00067	-	0.00002	0.00020	0.01251	0.00002	-
5	Chemical	0.02370	0.00002	0.00069	0.00437	0.04662	0.00007	-
6	Non Metal	0.05002	0.00001	0.00146	0.03516	0.04190	0.00321	0.00315
7	Machinery	0.00249	-	0.00007	0.00044	0.05725	0.00015	-
8	Other	0.01170	0.00006	0.00034	0.00403	0.02357	0.00013	0.01550

3.2.4 Transportation sector

No.	Subsector	Energy Use Intensity in 2007 (BOE/unit/year or BOE/1000 Km/year)		
		Premium	ADO	Avtur
1	Passenger Car (unit)	9.6392	0.4779	-
2	Motorcycle (unit)	0.8971	-	-
3	Bus (unit)	-	6.2763	-
4	Truck (unit)	6.7247	6.9682	-
5	Railway (1000 Km)	-	16.2370	-

No.	Subsector	Energy Use Intensity in 2007 (BOE/unit/year or BOE/1000 Km/year)		
		Premium	ADO	Avtur
6	Aeroplane (1000 Km)	-	-	36.5578

e. Other sector

No.	Subsector	Energy Use Intensity in 2007 (BOE/million rupiah/year)	
		Kerosene	ADO
1	Construction	-	0.017411
2	Agriculture	0.000030	0.005912
3	Mining	-	0.004537

3.3 Energy Consumption from Demand Side

3.3.1 Energy Consumption by Sector

No.	Type	Energy Consumption in 2007 (BOE)					
		Household	Commercial	Transportation	Industry	Other	Total
1	Avtur	-	-	218,420.04	-	-	218,420.04
2	Premium*	-	-	2,030,953.68	-	-	2,030,953.68
3	Kerosene	689,610.36	2,195.28	-	1,126.21	99.77	693,031.61
4	Automotive Diesel Oil	-	37,847.01	466,648.63	38,539.86	50,508.20	593,543.70
5	Industrial Diesel Oil	-	-	-	317.17	-	317.17
6	Fuel Oil	-	-	-	43,215.13	-	43,215.13
7	LPG	207,530.04	11,135.42	-	1,831.84	-	220,497.30
8	Coal	-	-	-	13,035.87	-	13,285.24
9	Coal Briquet	2,768.86	-	-	-	-	2,768.86
10	Electricity	508,153.80	292,835.91	-	107,214.57	-	908,204.28
11	Biomass**	3,270.74	-	-	-	-	3,270.74
Total		1,411,333.79	344,013.62	2,716,022.36	205,280.65	50,607.97	4,727,507.75

* included Pertamina and Pertamina Plus

**Firewood

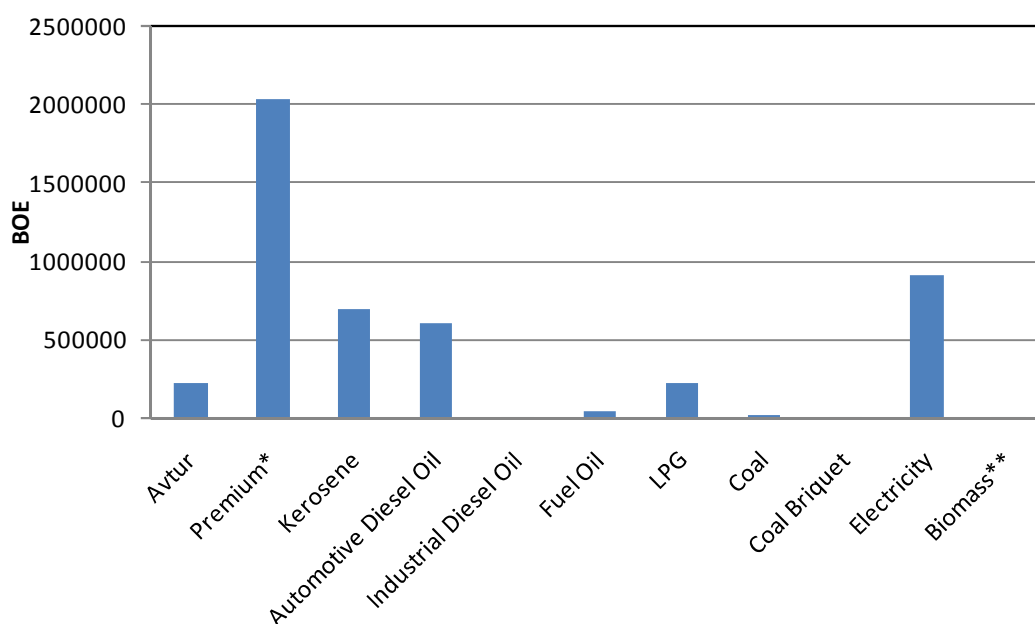


Figure 3. 6. Energy consumption by type of energy in 2007.

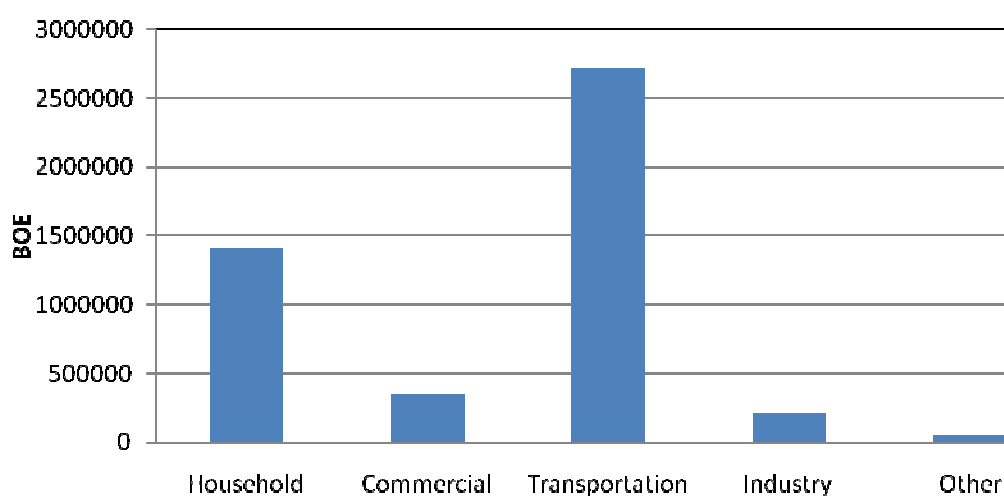


Figure 3. 7. Energy consumption by sector in 2007.

3.3.2 Household Sector

b.1 Regency of Kulonprogo Rural

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	5,074.08	3,266.55	-	111.11	89.22
2	Under 1.5X Poverty Line	10,191.89	5,838.62	-	147.62	116.55
3	Middle Income	17,819.35	8,848.85	1,470.89	14.67	161.66
4	20% Highest Income	17,293.76	8,599.62	2,490.61	-	78.51
Total		50,379.09	26,553.64	3,961.50	273.40	445.95

Urban

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	1,468.14	1,765.86	94.73	16.40	23.26
2	Under 1.5X Poverty Line	1,297.07	1,056.90	83.70	22.10	20.04
3	Middle Income	8,427.81	3,094.49	2,016.79	6.16	19.29
4	20% Highest Income	1,863.17	2,845.12	3,638.41	-	19.13
Total		13,056.19	8,762.37	5,833.62	44.67	81.71

b.2 Regency of Bantul Rural

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	3,033.10	2,992.24	-	101.47	36.88
2	Under 1.5X Poverty Line	4,786.54	3,851.86	-	48.71	48.62
3	Middle Income	14,809.23	12,643.82	4,376.23	66.98	148.07
4	20% Highest Income	10,489.25	6,178.20	4,554.41	-	39.90
Total		33,118.12	25,666.12	8,930.64	217.16	273.48

Urban

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	6,664.78	3,987.55	430.05	38.80	61.79
2	Under 1.5X Poverty Line	25,546.32	13,374.91	2,245.24	279.61	95.34
3	Middle Income	102,142.77	47,262.90	16,751.94	66.65	282.70
4	20% Highest Income	31,877.46	32,787.34	19,230.70	44.36	42.43
Total		166,231.32	97,412.69	38,657.93	429.41	482.26

b.3 Regency of Gunungkidul**Rural**

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	4,153.19	7,548.31	-	51.07	79.00
2	Under 1.5X Poverty Line	23,354.61	21,499.49	-	387.40	337.03
3	Middle Income	44,050.12	27,582.16	7,162.93	96.01	486.01
4	20% Highest Income	24,112.29	20,493.50	10,530.15	-	311.06
Total		95,670.20	77,123.46	17,693.08	534.48	1,213.09

Urban

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	721.18	691.00	46.54	5.34	11.75
2	Under 1.5X Poverty Line	1,563.15	955.92	100.86	22.50	12.15
3	Middle Income	3,854.04	2,778.80	1,009.34	8.95	13.51
4	20% Highest Income	1,889.39	1,916.52	1,478.08	-	-
Total		8,027.76	6,342.25	2,634.82	36.78	37.41

b.4 Regency of Sleman**Rural**

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	361.66	303.29	-	12.92	6.15
2	Under 1.5X Poverty Line	1,766.99	1,358.25	-	41.62	21.96
3	Middle Income	14,424.34	13,134.21	2,473.73	27.87	128.57
4	20% Highest Income	6,510.90	5,461.95	2,171.53	-	19.07
Total		23,063.89	20,257.70	4,645.26	82.41	175.74

Urban

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	13,912.79	4,592.51	897.74	109.77	93.20
2	Under 1.5X Poverty Line	22,789.11	9,568.00	1,470.50	600.57	132.52
3	Middle Income	124,139.04	79,726.38	39,780.50	147.93	301.80
4	20% Highest Income	27,090.46	57,521.50	29,246.88	-	17.58
Total		187,931.39	151,408.38	71,395.63	858.27	545.09

**b.5 City of Yogyakarta
Urban**

No.	Income category	Energy Consumption in 2007 (BOE)				
		Kerosene	Electricity	LPG	Coal Briquet	Biomass
1	Under Poverty Line	4,849.16	2,813.89	312.90	35.70	3.65
2	Under 1.5X Poverty Line	11,511.41	5,636.89	1,076.40	141.77	2.64
3	Middle Income	80,645.40	55,120.78	32,236.42	114.80	8.47
4	20% Highest Income	15,126.42	31,055.62	20,151.83	-	1.26
Total		112,132.39	94,627.18	53,777.55	292.27	16.00

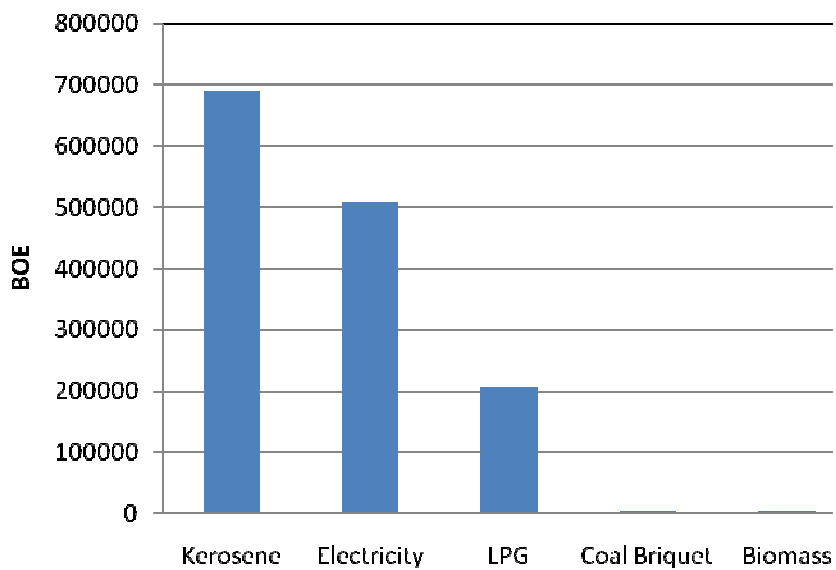


Figure 3. 8. Energy consumption by type of energy for household sector in 2007

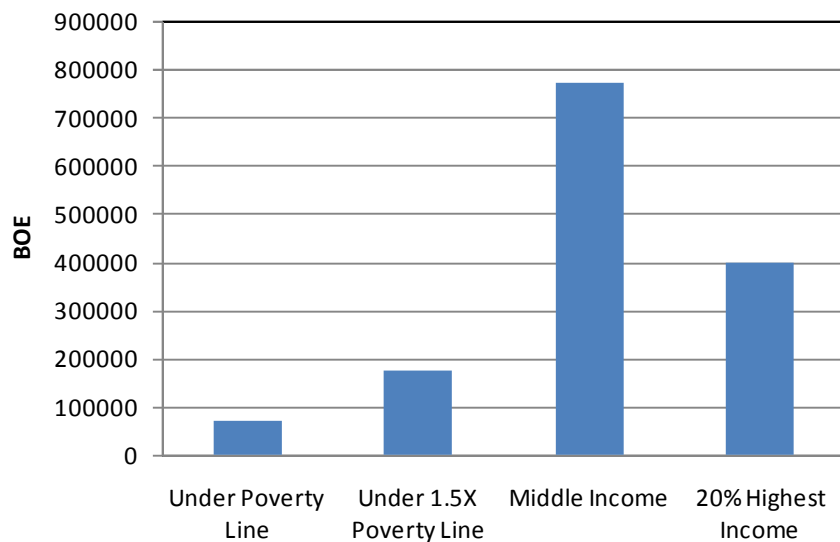


Figure 3. 9. Energy consumption by income category for household sector in 2007

3.3.3 Commercial Sector

No.	Subsector	Energy Consumption in 2007 (BOE)				
		ADO	Kerosene	Electricity	LPG	Total
1	Hotel and Lodging	30,847.85	58.38	42,680.42	1,537.98	75,124.62
2	Wholesale and Retail	-	-	53,864.26	1,288.47	55,152.74
3	Restaurant	-	2,136.90	141,087.23	8,273.55	151,497.68
4	Financial Services	4,170.71	-	13,772.74	8.79	17,952.24
5	Amusement Services	1,158.60	-	28,805.63	18.17	29,982.40
6	Social Services	1,669.85	-	12,625.64	8.46	14,303.94
Total		37,847.01	2,195.28	292,835.91	11,135.42	344,013.62

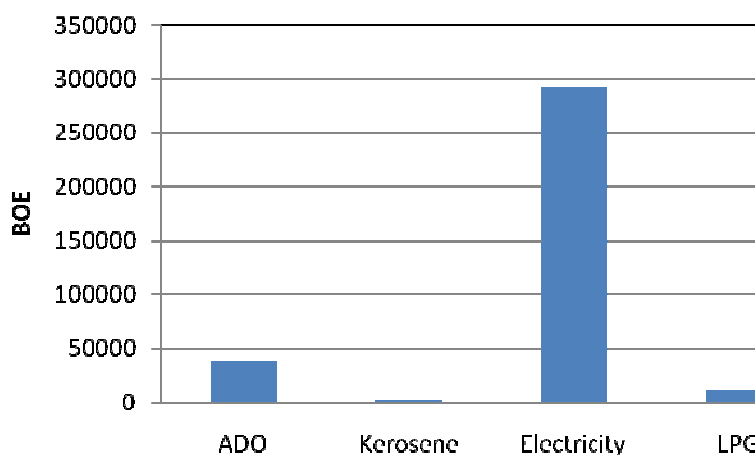


Figure 3. 10. Energy consumption by type for commercial sector in 2007

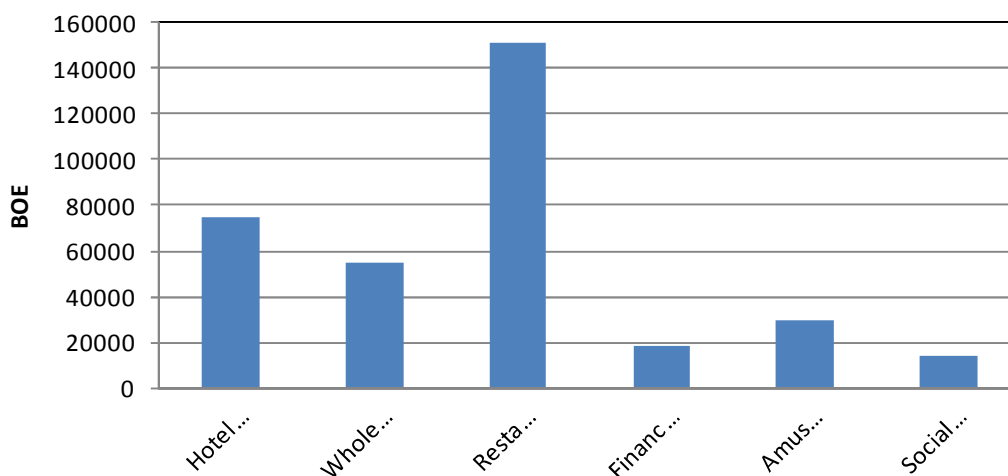


Figure 3. 11. Energy consumption by sub-sector for commercial sector

3.3.4 Industrial Sector

No.	Subsector	Energy Consumption in 2007 (BOE)						
		ADO	IDO	Kerosene	Fuel Oil	Electricity	LPG	Coal
1	Food	13,903.34	4.99	406.28	21,967.86	14,377.00	888.53	-
2	Textile	12,788.73	296.06	373.71	15,088.47	59,999.29	421.31	9,718.97
3	Wood	306.52	0.26	8.96	573.94	3,353.56	70.63	-
4	Paper	89.96	-	2.63	27.03	1,668.79	2.49	-
5	Chemical	2,699.53	2.76	78.89	497.51	5,309.60	7.82	-
6	Non Metal	5,966.10	1.26	174.34	4,194.57	4,997.76	382.93	376.27

No.	Subsector	Energy Consumption in 2007 (BOE)						
		ADO	IDO	Kerosene	Fuel Oil	Electricity	LPG	Coal
7	Machinery	566.37	-	16.55	101.27	13,036.28	33.15	-
8	Other	2,219.32	11.84	64.85	764.48	4,472.29	24.98	2,940.63
Total		38,539.86	317.17	1,126.21	43,215.13	107,214.57	1,831.84	13,035.87

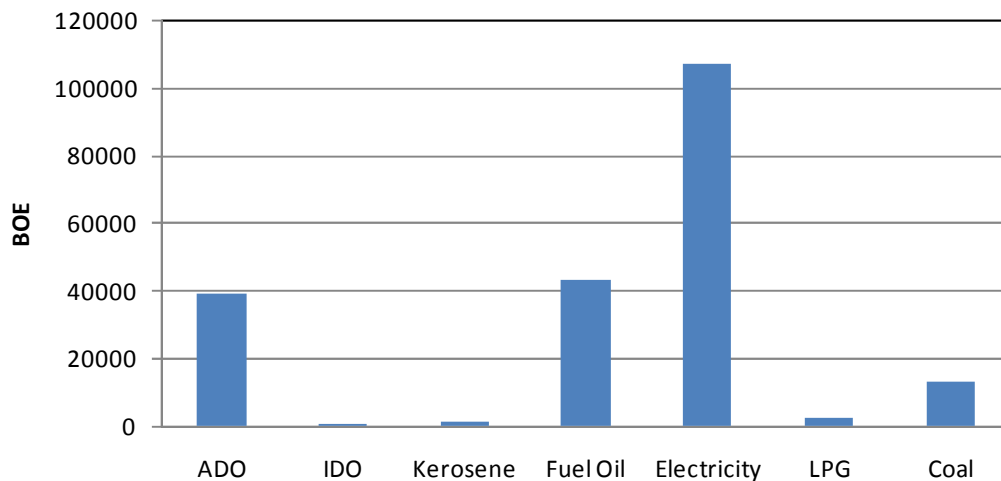


Figure 3. 12. Energy consumption by type for industrial sector in 2007

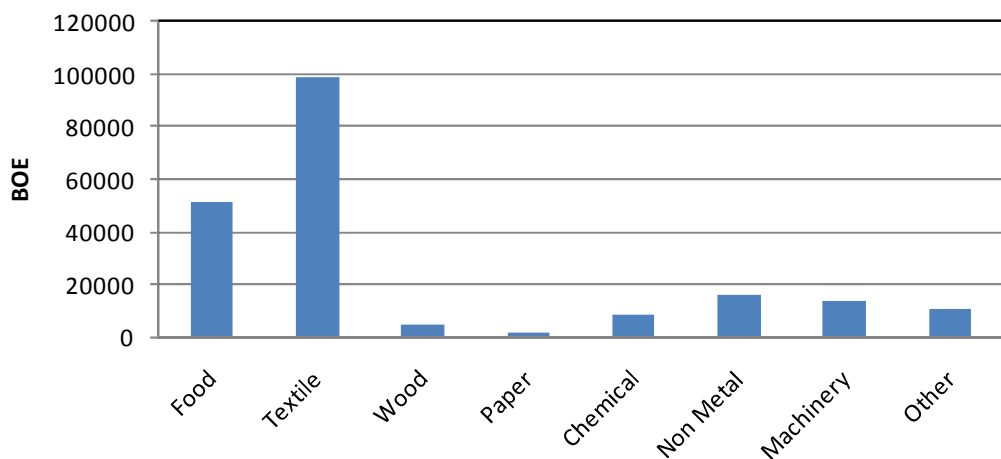


Figure 3. 13. Energy consumption by sub-sector for industrial sector in 2007

3.3.5 Transportation Sector

No.	Subsector	Energy Consumption in 2007 (BOE)			
		Premium	ADO	Avtur	Total
1	Passenger Car (unit)	863,653.02	42,816.28	-	906,469.30
2	Motorcycle (unit)	908,149.79	-	-	908,149.79
3	Bus (unit)	-	133,258.96	-	133,258.96
4	Truck (unit)	259,150.87	268,531.87	-	527,682.74
5	Railway (1000 Km)	-	22,041.52	-	22,041.52
6	Aeroplane (1000 Km)	-	-	218,420.04	218,420.04
Total		2,030,953.68	466,648.63	218,420.04	2,716,022.36

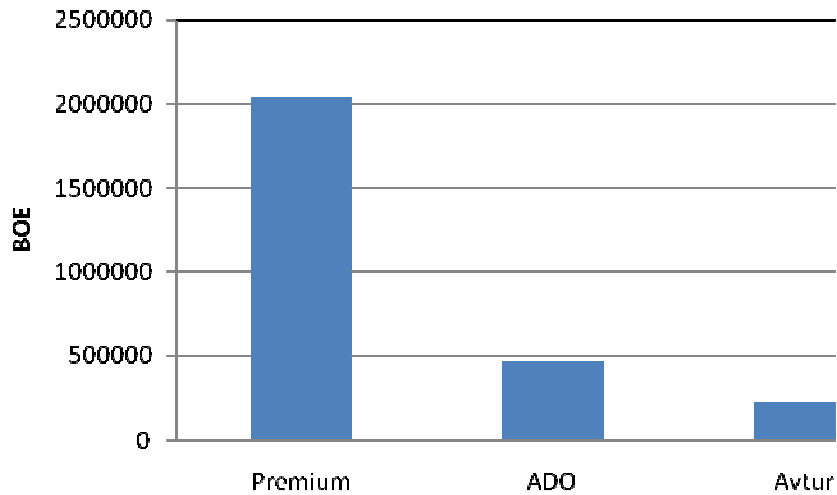


Figure 3.14 Energy consumption by type of energy for transportation sector in 2007

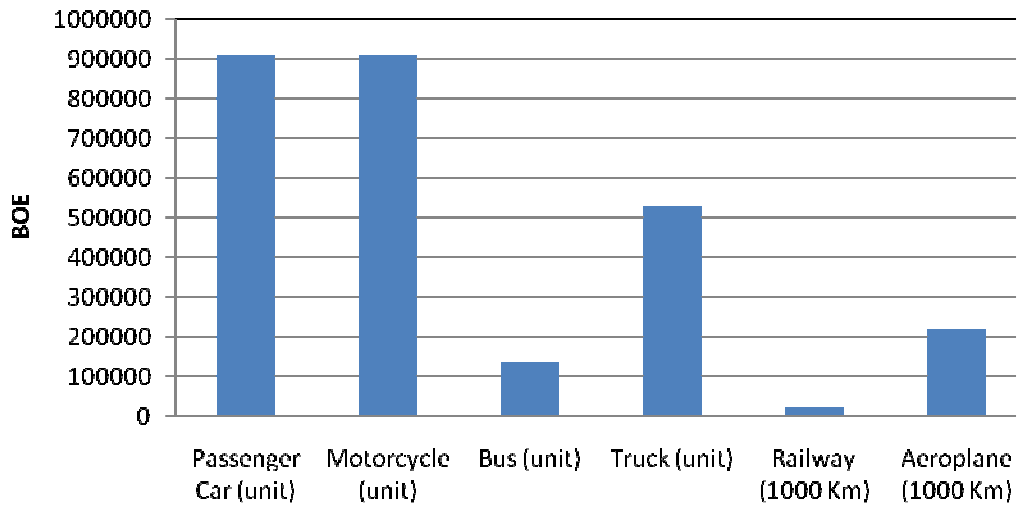


Figure 3.15. Energy consumption by mode of transportation in 2007

3.3.6 Other Sector

No.	Subsector	Energy Consumption in 2007 (BOE)		
		Kerosene	ADO	Total
1	Construction	-	30,173.02	30,173.02
2	Agriculture	99.77	19,707.46	19,807.23
3	Mining	-	627.72	627.72
Total		99.77	50,508.20	50,607.97

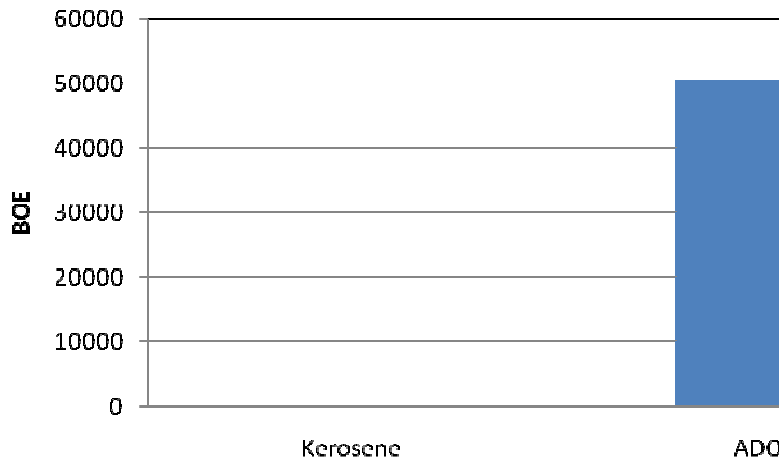


Figure 3. 16. Energy consumption by type of energy for other sector in 2007

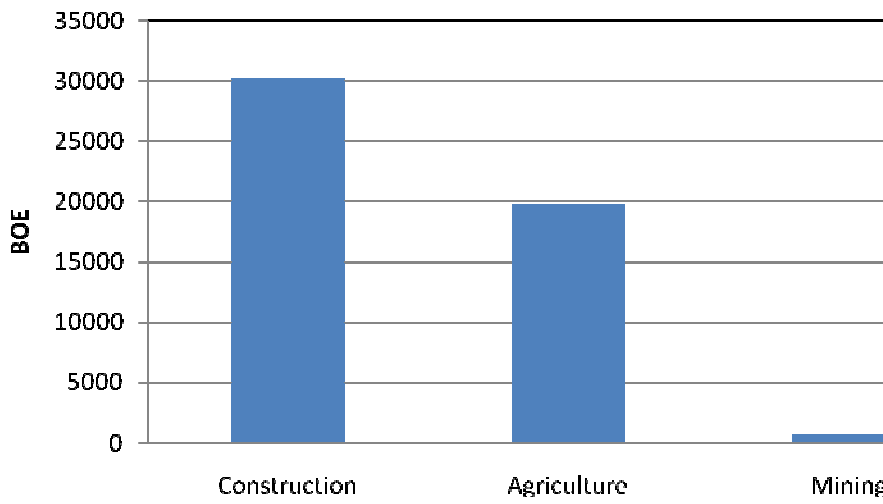


Figure 3. 17. Energy consumption by sub-sector for other sector in 2007

Chapter IV ENERGY SUPPLY

4.1 Oil Fuell

4.1.1 Oil Fuel Storage

No.	Storage Name	Location	Capacity (KL)
1	Rewulu	Regency of Kulonprogo	55,500
Total			55,500

Source: Pertamina

4.1.2 Gas Pump

No.	No. SPBU	Address	Owner	Average Selling (KL/day)	
				Premium	ADO
1	SPBU 44 551 01	City of Yogyakarta	Ike Saraswati	17.81	2.84
2	SPBU 44 551 04	City of Yogyakarta	Aris Yudanto, SH	22.19	5.42
3	SPBU 44 551 05	City of Yogyakarta	Endro Haryanto, Drs	9.55	5.94
4	SPBU 44 551 08	City of Yogyakarta	Harkat Manunggal Jaya	24.52	8.26
5	SPBU 44 552 02	City of Yogyakarta	KPH Angling Kusumo	35.61	5.61
6	SPBU 44 552 03	City of Yogyakarta	Toni Mulyanto	6.19	3.35
7	SPBU 44 552 06	City of Yogyakarta	Benoe Harjo	11.10	3.87
8	SPBU 44 552 11	City of Yogyakarta	Sutiati Mursidi	13.16	1.03
9	SPBU 44 552 03	City of Yogyakarta	Betty Sri Mulyandari	22.19	6.14
10	SPBU 44 552 01	Regency of Sleman	Achmad Purnomo	23.48	2.84
11	SPBU 44 552 04	Regency of Sleman	Sindoetomo	29.42	6.45
12	SPBU 44 552 07	Regency of Sleman	Sutini Seger Sudrajat	27.35	22.19
13	SPBU 44 552 08	Regency of Sleman	Rejobumi Mitrasari	22.45	3.87
14	SPBU 44 552 09	Regency of Sleman	Diah Kusuma Handayani	20.90	1.81
15	SPBU 44 552 10	Regency of Sleman	Jati Nindiarito	24.77	2.32
16	SPBU 44 552 12	Regency of Sleman	Bray Sri Handayani, Dra	32.26	6.45
17	SPBU 44 555 01	Regency of Sleman	P. Koesnanto	18.06	13.68
18	SPBU 44 555 02	Regency of Sleman	R. Sri Bondan	9.03	1.03
19	SPBU 44 555 04	Regency of Sleman	Wien Gatot Sampurna	9.29	4.13
20	SPBU 44 555 05	Regency of Sleman	A. Zein Kadir	23.48	3.61
21	SPBU 44 555 06	Regency of Sleman	Siswanto, MM, Drs	16.00	4.39
22	SPBU 44 555 07	Regency of Sleman	Abdul Kadir, Drs	15.74	3.10
23	SPBU 44 555 08	Regency of Sleman	Diah Kusuma Handayani	14.19	2.58
24	SPBU 44 555 09	Regency of Sleman	Th. Soegiarti S	18.84	2.58
25	SPBU 44 555 10	Regency of Sleman	Suryo Prasetyo*, Drs	22.97	5.42
26	SPBU 44 555 11	Regency of Sleman	Dwi Tjahyono HS SH MM	20.90	5.94
27	SPBU 4x 555 01	Regency of Sleman	Yuni Atuti	5.16	5.32
28	SPBU 4x 555 02	Regency of Sleman	Tris Ari Sutiah	4.13	4.23
29	SPBU 44 555 12	Regency of Sleman	Retno Kartiko	3.87	1.03
30	SPBU 44 555 13	Regency of Sleman	Dwi Tjahyono Sutanto	18.58	6.71
31	SPBU 44 551 02	Regency of Bantul	Kopata	17.81	13.42
32	SPBU 44 551 03	Regency of Bantul	Anggreni	13.68	2.06
33	SPBU 44 551 06	Regency of Bantul	Asukadi Condro K	13.42	2.58
34	SPBU 44 551 10	Regency of Bantul	A. Zein Kadir	11.87	3.61
35	SPBU 44 557 01	Regency of Bantul	Bambang Muljoharjdo	3.10	1.29
36	SPBU 44 557 02	Regency of Bantul	Chuban Bustami, MM, Ir	11.10	3.87
37	SPBU 44 557 03	Regency of Bantul	Sudaryati	31.48	9.55
38	SPBU 44 557 04	Regency of Bantul	Imam Iskak	10.32	7.74
39	SPBU 44 557 05	Regency of Bantul	Hadi Siswo Harjono	19.35	8.26

No.	No. SPBU	Address	Owner	Average Selling (KL/day)	
				Premium	ADO
40	SPBU 44 557 06	Regency of Bantul	Premisol Arimas	21.42	3.10
41	SPBU 44 557 07	Regency of Bantul	Akum Cahyono	11.35	2.58
42	SPBU 44 557 08	Regency of Bantul	Susilo Budi utami	7.74	4.65
43	SPBU 44 558 03	Regency of Bantul	Arif Sampurno	19.61	5.94
44	SPBU 44 55 01	Regency of Kulonprogo	Pc. Her Benu Murwanto	14.71	9.81
45	SPBU 44 55 02	Regency of Kulonprogo	KPH Probo Kusumo	16.26	6.19
46	SPBU 44 55 03	Regency of Kulonprogo	Supriyana	13.42	9.29
47	SPBU 44 55 04	Regency of Kulonprogo	Kadari WK	14.97	14.45
48	SPBU 44 58 01	Regency of Gunungkidul	Sugiarto, SH	36.90	18.06
49	SPBU 44 58 02	Regency of Gunungkidul	Ujoko Suseno, S.U, Drs	7.74	4.13
50	SPBU 44 58 04	Regency of Gunungkidul	Bakti Pertiwi Mataram	11.10	5.16
51	SPBU 44 58 05	Regency of Gunungkidul	Sigit Anggoropriyo	7.23	3.87
52	SPBU 44 58 06	Regency of Gunungkidul	Suradi	9.29	5.16
Total				867.10	296.92

Source: Pertamina and Dinas Disperindagkop

4.1.3 Kerosene Retailer

No.	No. Pangkalan	Address	Owner	Average Selling (KL/day)
1	140301	City of Yogyakarta	Sukatirah	4.19
2	140244	City of Yogyakarta	Anton Handoko	16.77
3	140250	City of Yogyakarta	RM Russaban	12.58
4	140209	City of Yogyakarta	G. Supartini	12.58
5	140282	City of Yogyakarta	Saryono	6.13
6	140250	City of Yogyakarta	Veronika Ayuningtiyas. SE	8.39
7	140245	City of Yogyakarta	Helwi Ristiani	4.19
8	140256	City of Yogyakarta	Soedibjo	4.19
9	140200	City of Yogyakarta	Firdaus Muhammad	4.35
10	140252	City of Yogyakarta	M. Andiyanto FM	4.19
11	140261	City of Yogyakarta	Harry Mulyandrio	6.13
12	140245	City of Yogyakarta	Budiharjo Sh	4.19
13	140297	Regency of Bantul	Sumantoro	12.58
14	140296	Regency of Bantul	Sakijo, S.A	12.58
15	150553	Regency of Bantul	Toni Mulyanto	20.97
16	140283	Regency of Bantul	Ida Siti S	16.77
17	140296	Regency of Bantul	V. Isti Tri. D	12.58
18	140249	Regency of Bantul	Sri Winarni	4.35
19	140291	Regency of Kulonprogo	Fauzan Noor	12.58
20	140290	Regency of Kulonprogo	A. Zein Kadir	12.58
21	140247	Regency of Kulonprogo	Setyawan	12.58
22	140286	Regency of Gunungkidul	Betty Sri. M	6.13
23	140294	Regency of Gunungkidul	Ign Sri, H., MM	14.52
24	140300	Regency of Gunungkidul	Widyarto, W. SH	12.58
25	140234	Regency of Gunungkidul	Emma Ratnaningtyas, SE	12.58
26	140248	Regency of Gunungkidul	Wahyu Wijanarko	4.19
27	140265	Regency of Sleman	A. Haryoto	13.55
28	140254	Regency of Sleman	Expra Baru	9.19
29	140288	Regency of Sleman	Suhadi Jaya Abadi	8.39
30	140303	Regency of Sleman	Sutiartiti M	17.58
31	140295	Regency of Sleman	Kopana	6.13
32	140258	Regency of Sleman	Ssi Rosalina	8.87

No.	No. Pangkalan	Address	Owner	Average Selling (KL/day)
33	140253	Regency of Sleman	Muh. Rodhi Apriyanto	13.23
34	140299	Regency of Sleman	Wahyu Hardianto	16.77
35	140287	Regency of Sleman	Yos Widi H	17.90
36	140257	Regency of Sleman	Sri Wuryani Sh	5.32
37	140251	Regency of Sleman	"KSU-Lansia-	4.19
38	140255	Regency of Sleman	Shinta Rachmawati	5.00
Total				381.61

Source: Pertamina and Dinas Disperindagkop

4.2 Potential and Utilization of Hydropower

No.	Name	Location	Potential (kw)
1	Saluran Kalibawang	Kedungrong 1	90.0
2	Saluran Kalibawang	Kedungrong 2	100.0
3	Saluran Kalibawang	Semawang	600.0
4	Saluran Kalibawang	Tempel, Pendoworejo, Girimulyo	35.0
5	Saluran Kalibawang	Kemukus, Tanjungharjo, Nanggulan	5.3
6	Selokan Kamal	Kamal, Giripurwo, Girimulyo	34.0
7	Sel. Van Der Wicjk-3	Klagaran, Sedangrejo, Mingir	22.0
8	Sel. Van Der Wicjk-4	Kajoran, Banyuredjo, Sayegan,	25.0
9	Sel. Van Der Wicjk-5	Kedungprahu, Sendangrejo, Minggir	14.7
10	Sel. Mataram-1	Gasiran, Banyuredjo, Sayegan	9.5
11	Sel. Mataram-2	Bluran, Tirtonadi, Mlati	31.0
12	Sel. Mataram-3	Trini, Trihanggo, Gamping	23.0
13	Sel. Mataram 4	Gemawang	3.5
14	Sel. Mataram 8	Candisari, Kalasan	4.7
15	Kali Buntung	Kricak, Tegalrejo	12.4
16	Bendung Tegal	Tegal, Kebonagung, Imogiri	106.0
17	Sel. Van Der Wicjk-4	Desa Kajoran, Banyuredjo, Sayegan,	25.0
18	Sumber Cincin Guling 1	Gedad, Banyusoco, Playen	3.5
19	Sumber Cincin Guling 2	Gedad, Banyusoco, Playen	3.0
20	Sumber air tejun Slumpret	Mengguran, Bleberan, Playeng	41.0
Total			1,188.6

Source: Dinas Disperindagkop

4.3 Electricity

4.3.1 Substation Transformer

No.	Name	Location	Voltage (kV)	Capacity (MVA)
1	Kentungan	Regency of Sleman	150	120
2	Bantul	Regency of Bantul	150	120
3	Gejayan	City of Yogyakarta	150	120
4	Wirobrajan	City of Yogyakarta	150	60
5	Godean	Regency of Sleman	150	60
6	Medari	Regency of Sleman	150	30
7	Wates	Regency of Kulonprogo	150	46
8	Semanu	Regency of Gunungkidul	150	60

Source: PLN 2008

4.3.2 Distribution Transformer

No.	Regency/City	20 kV	
		Unit	MVA
1	Kalasan	896	38.57
2	Wates	1,478	54.64
3	Bantul	1,473	61.24
4	Sedayu	1,067	47.24
5	Wonosari	2,425	76.56
6	Sleman	1,234	73.48
7	Yogyakarta Utara	1,032	89.17
8	Yogyakarta Selatan	952	73.46
Total		10,557	514.36

Source: PLN 2008

4.3.3 Transmission dan Distribution Line

No.	Line Type	Length (kmc)
1	Intermediate voltage 20 kV	4,597.04
2	Low voltage 380/330 V	7,658.00

Source: PLN 2008

4.3.4 Charged Capacity

No.	Customer category	Electricity sold (MVA)						
		2001	2002	2003	2004	2005	2006	2007
1	Household	400.93	413.80	428.28	449.38	463.94	457.81	516.35
2	Social	28.31	29.17	30.06	31.31	33.05	33.62	41.33
3	Public	14.88	16.34	18.43	21.32	27.43	27.91	34.30
4	Industry	87.66	86.70	87.47	86.89	86.31	85.36	86.21
5	Business	107.40	114.24	118.99	125.52	133.90	142.11	159.24
Total		639.18	660.23	683.21	714.42	744.62	746.82	837.43

Source: PLN 2008

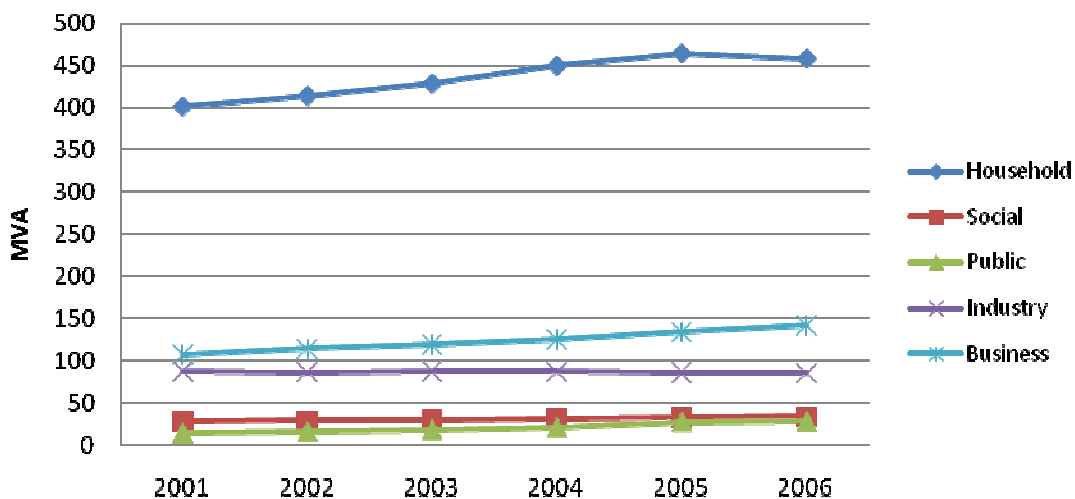


Figure 4. 1. PLN charged capacity

4.3.5 Captive Power

No.	Regency/City	Number of Captive Power (CP)	Installed Capacity (kVA)
1	UP Yogyakarta Utara	58	21,852
2	UPJ Kalasan	17	2,621
3	UPJ Sleman	27	12,872
4	UP Yogyakarta Selatan	34	13,915
5	UPJ Wonosari	23	6,067
6	UPJ Sedayu	18	7,838
7	UPJ Wates	6	1,814
8	UPJ Bantul	9	2,580
Total		192	69,559

Source: PLN 2008

4.3.6 Electrification Ratio and Rural Electrification

No.	Regency/City	Electrification Ratio	Rural Electrification
1	Kulonprogo	73.81%	100.00%
2	Bantul	72.90%	100.00%
3	Gunungkidul	65.28%	100.00%
4	Sleman	95.30%	100.00%
5	Yogyakarta	83.87%	100.00%
Propinsi		82.54%	100.00%

Source: PLN 2008

4.4 Biomass Potential

No.	Regency/City	Biomass Potential (ton)			
		Paddy	Maize	Coconut	Sugar Cane
1	Kulonprogo	97,225.04	13,961.57	25,750.00	3,511.92
2	Bantul	149,157.36	10,074.98	10,797.52	6,941.15
3	Gunungkidul	214,597.75	207,301.91	6,607.87	411.90
4	Sleman	247,519.30	16,546.50	8,341.71	4,920.34
5	Yogyakarta	803.57	22.06	41.63	-
Total		709,303.02	247,907.02	51,538.73	15,785.31

Source: BPS

4.5 Biofuel Potential

No.	Regency/City	Biofuel Potential (ton)	
		Cassava	Sugar Cane
1	Kulonprogo	44,494.92	3,511.92
2	Bantul	43,697.52	6,941.15
3	Gunungkidul	871,143.55	411.90
4	Sleman	17,271.68	4,920.34
5	Yogyakarta	-	-
Total		976,607.68	15,785.31

Source: BPS

4.6 Biogas Potential

No.	Regency/City	Biogas Potential (animal)					
		Cow	Goat	Poultry	Pig	Buffalo	Sheep
1	Kulonprogo	46,544	74,954	2,440,501	710	244	23,619
2	Bantul	49,655	40,486	1,719,995	2,537	890	20,379
3	Gunungkidul	114,139	145,232	1,523,856	73	136	11,624
4	Sleman	47,352	32,354	5,990,261	4,538	3,474	58,997
5	Yogyakarta	146	318	65,635	49	17	509
Total		257,836	293,344	11,740,248	7,907	4,761	115,128

Source: BPS

4.7 Wind Energy

No.	Location	Wind Speed (m/s)	Potential Capacity (MW)
1	Along Yogyakarta Beach	2,5 to 4	up to 10
2	Sundak, Srandakan, Baron, Samas Beach	4 to 5	10 to 100

Source: Dinas Disperindagkop

4.8 Solar Energy

No.	Year	Location	Number of Unit
1	2003	Gunungkidul, Kulonprogo. Sleman	24
2	2004	Kulonprogo, Sleman	27
3	2005	Kulonprogo	24
4	2007	Sleman. Bantul	100
Total			175

Source: Dinas Disperindagkop

Chapter V ENERGY PRICE

5.1 Oil Fuel

No	Type	Oil Fuel Price (Rp/liter)					
		Jan 05	Oct 05	Jan 06	Jul 06	Jan 07	Jul 07
1	Avtur	3,608	6,776	5,390	6,083	-	-
2	Avgas	11,240	13,840	10,750	14,666	-	-
3	Premium						
	a. Transportation	1,810	4,500	4,500	4,500	4,500	4,500
	b. Industry	2,100	5,160	4,780	6,502	4,838	6,179
4	Pertamax	4,000	5,700	5,000	6,100	5,400	6,600
5	Pertamax Plus	4,200	5,900	5,200	6,300	5,550	6,700
6	Kerosene						
	a. Household	1,800	2,000	2,000	2,000	2,000	2,000
	b. Industry	2,200	6,400	5,320	6,372	5,541	5,926
7	Automotive Diesel Oil						
	a. Transportation	1,650	4,300	4,300	4,300	4,300	6,125
	b. Industry	2,100	5,350	4,950	6,321	4,983	5,859
8	Industrial Diesel Oil						
	a. Transportation	1,650	-	5,020	6,065	4,886	5,677
	b. Industry	2,050	5,130	4,810	6,065	4,886	5,677
9	Fuel Oil						
	a. Transportation	1,560	3,150	3,640	3,759,48	2,927	3,950
	b. Industry	1,600	3,150	3,480	3,759,49	2,927	3,950

Source: Pertamina

5.2 LPG

No.	Customer Category	Unit	2007	2008	2009
			Price	Price	Price
1	Household	12 kg	63,000	69,000	70,200
2	Household	3 kg	-	-	12,000
3	Industrial	50 kg	343,900	362,750	367,750

Source: Pertamina

5.3 PLN Electricity

No	Customer category	Tariff (Rp/kWh)			
		2003	2004	2005	2006
1	Household	493	528	530	539
2	Social	493	528	530	539
3	Public	613	622	634	641
4	Industry	565	601	600	617
5	Business	695	712	714	742

Source: PLN

Chapter VI OTHER INFORMATION

6.1 List of Regional Regulation Related to Energy

No.	No. of Regulation	Content
1	No. 3 Tahun 2002	Development Program of Yogyakarta Province

6.2 List of Energy Stakeholders

6.2.1 Government Offices

No.	Office Name	Address	Person In Charge	Telp. No.
1	Dinas Pekerjaan Umum	Jl. Bumi ijo, Yogyakarta	Edy Indrajaya	(0274) 581335
2	Dinas Perhubungan	Jl. Magelang no. 41 Yogyakarta	Mulyadi Hadikusumo	(0247) 561787
3	Dinas Pertanian	Jl. Gondosuli No. 6 yogyakarta 55165	Nanang Suwandi	(0274) 563937

6.2.2 Company

No	Company Name	Address	Person In Charge	Telp. No.
1	Pertamina DIY	Jl. Mangkubumi No.20 yogyakarta	Imam Hidayah Chalik	(0274) 565720
2	P.T. PLN APJ DIY	Jl. P. Mangkubumi No.16 Yogyakarta	Ari Agus Salim	(0274) 512401

6.2.3 Non-Government Office

No	Name	Address	Person In Charge	Telp. No.
1	Yayasan Dian Desa Lembaga Konsumen Yogyakarta	Jl. kaliurang km 7 PO BOX 19 Yogyakarta Jl. Sukonandi II nomor 4 A Yogyakarta 55162	Anton Soejarwo Nanang Ismuhartoyo	(0274) 885247 (0274) 554457
3	Inspect Yogyakarta	Jl. Kenari 13 Sidoarum III Godean Yogyakarta	M. Fikron W. Arifudin	(0274) 798342