

Energy

15.1 Introduction

The world energy scenario during 2008-09 has been very eventful. International oil prices fluctuated widely; leaving all vulnerable oil import countries like Pakistan under great stress. The volatile energy picture not only made major dents in the macroeconomic variables such as budget deficit, current account balance, inflation, exchange rates and foreign exchange reserves, but also eroded the purchasing power of poor on the back of rising prices of petroleum products. The world also has been facing the challenge of international financial crises making way for wide spread recession thereby impacting negatively such economies which significantly depend upon international market for their growth efforts.

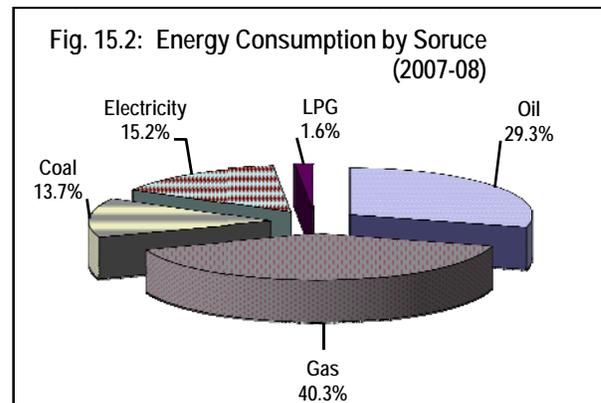
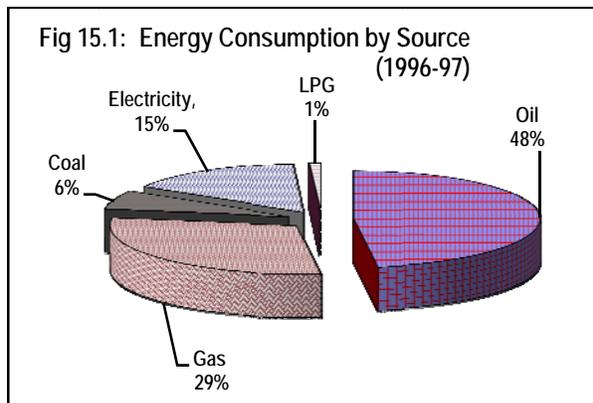
Pakistan has experienced a slow down in all economic activities as a result of international financial crises and demand contraction policies of the government. The major impact has been experienced in the industrial sector. Energy consumption being an integral part of all the economic activities has also declined as a result of the economic slow down. Energy in its all form has declined or at least remained somewhat stagnant

during the fiscal year 2008-09. The most prominent has been the large scale manufacturing sector which due to its negative growth of 7.7 percent experienced decline in the energy consumption. Interestingly poor and un-interrupted power supply on the back of circular debt problem has been singled out as one of the prime reason for dismal performance of the large scale manufacturing sector.

Pakistan's Energy Directory

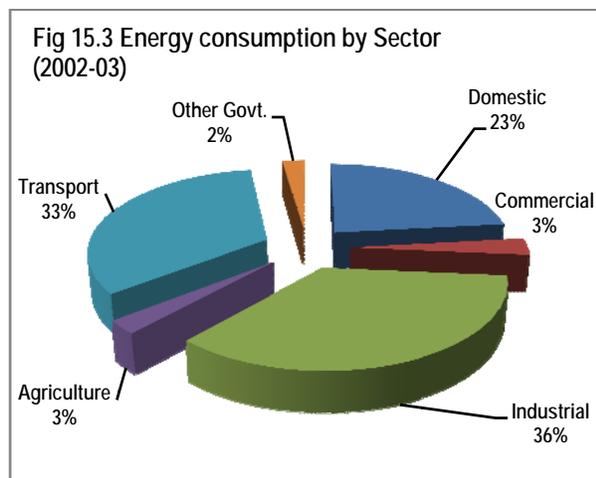
15.2 Energy Consumption

The energy consumption mix of Pakistan has changed over the past decade or so. The shares of gas and coal increased to 40.3 percent and 13.7 percent respectively since 1996-97; coal consumption has witnessed a 7.7 percentage point increase in its share during the period under review. On the other hand, the share of oil consumption has decreased to 29.3 percent while the share of electricity consumption has remained almost equal to its 1996-97 position (See. Figs. 15.1 & 15.2). This overall change in the energy consumption mix is due to the availability of indigenous energies such as gas and coal as well as the partly due to volatile prices of oil.

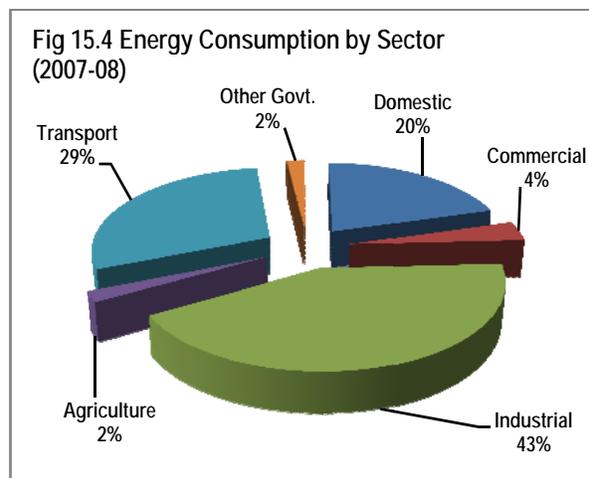


Source: Hydrocarban Development Institute of Pakistan

Sector wise energy consumption during the year 2007-08 witnessed variation from its position of 2002-03. As Industrial and commercial sector witnessed an increase in its Share in overall energy



consumption during the period under review. Whereas, Transport, Domestic and agriculture sectors exhibited decline in their in the consumption of energy (See. Fig 15.3 & 15.4).



Source: Hydrocarbon Development Institute of Pakistan

A review of the past pattern of energy consumption from 1998-99 to 2007-08 reveals that there is a persistent shift in energy consumption from petroleum products to other energy sources such as Coal, Electricity and Gas (See table 15.1). The consumption of petroleum products increased at an average rate of 1.4 percent annually, whereas the consumption of Coal, Gas and Electricity grew at an annual average rate of 13.5 percent, 8.2 percent and 6.1 percent respectively.

Notwithstanding the positive annual growth during last decade, energy consumption witnessed a negative growth in all sources (except electricity which showed almost flat growth of 0.7 percent) during July-March 2008-09 over the comparable period last year. A major reason for negative growth in energy consumption is the relatively lower level of economic activity during this period, and partly due to circular debt problem in the energy sector

Table 15.1: Annual Energy Consumption

Fiscal Year	Petroleum Products		Gas		Electricity		Coal	
	Tones (000)	Change (%)	(mmcft)	Change (%)	(Gwh)	Change (%)	M.T* (000)	Change (%)
1998-99	16,647		635,891		43,296		3,461.40	
1999-00	17,768	6.7	712,101	12.0	45,586	5.3	3,167.90	-8.5
2000-01	17,648	-0.7	768,068	7.9	48,584	6.6	4,044.70	27.7
2001-02	16,960	-3.9	824,604	7.4	50,622	4.2	4,408.60	9.0
2002-03	16,452	-3.0	872,264	5.8	52,656	4.0	4,889.90	10.9
2003-04	13,421	-18.4	1,051,418	20.5	57,491	9.2	6,064.50	24.0
2004-05	14,671	9.3	1,161,043	10.4	61,327	6.7	7,893.80	30.2
2005-06	14,627	-0.3	1,223,385	5.4	67,603	10.2	7,714.00	-2.3
2006-07	16,847	15.2	1,221,994	-0.1	72,712	7.6	7,894.10	2.3
2007-08	18,080	7.3	1,275,212	4.4	73,400	0.9	10,110.60	28.1
Avg. 10 years		1.4		8.2		6.1		13.5
July-March								
2007-08	13,342		955,625		55,208		6,559	
2008-09 (e)	12,892	-3.4	931,700	-2.5	55,614	0.7	4,822	-26.5

e: estimated for coal
*Million Ton

Source: Hydrocarbon Development Institute of Pakistan

a) Petroleum Products

During three quarters of current fiscal year i.e. July-March 2008-09, the consumption of petroleum products by most of the sectors (other than the power sector and government sector) exhibited a negative growth over the same period

last year (See table 15.2). The consumption of petroleum products in the power sector increased marginally. The fact that the consumption of petroleum products remained negative reflects the state of the economy along with higher consumer prices of POL Products.

Year	House holds	Change (%)	Industry	Change (%)	Agriculture	Change (%)	Transport	Change (%)	Power	Change (%)	Other Govt.	Change (%)	Total
1998-99	493		2,140		249		7,864		5,526		376		16,648
1999-00	477	-3.2	2,116	-1.1	293	17.7	8,308	5.6	6,228	12.7	346	-8.0	17,768
2000-01	451	-5.5	1,924	-9.1	255	-13.0	8,158	-1.8	6,488	4.2	372	7.5	17,648
2001-02	335	-25.7	1,612	-16.2	226	-11.4	8,019	-1.7	6,305	-2.8	464	24.7	16,960
2002-03	283	-15.5	1,604	-0.5	197	-12.8	8,082	0.8	6,020	-4.5	266	-42.7	16,452
2003-04	231	-18.4	1,493	-6.9	184	-6.6	8,464	4.7	2,740	-54.5	309	16.2	13,421
2004-05	193	-16.5	1,542	3.3	142	-22.8	9,025	6.6	3,452	26.0	317	2.6	14,671
2005-06	129	-33.2	1,682	9.1	82	-42.3	8,157	-9.6	4,219	22.2	359	13.2	14,627
2006-07	106	-17.8	1,596	-5.1	97	18.3	7,982	-2.1	6,741	59.8	325	-9.5	16,847
2007-08	121	14.1	1,071	-32.9	109	12.7	9,384	17.6	7,084	5.1	311	-4.5	18,080
July-March													
2007-08	82		861		87		6816		5255		243		13342
2008-09	75	-8	718	-17	50	-42	6307	-7	5497	5	245	1	12892

Source: Hydrocarbon Development Institute of Pakistan

b). Natural Gas

Consumption pattern of gas by different users since 1998-99 is presented in table 15.3. The sectoral consumption of gas indicates that the household, commercial, fertilizer, industrial and transport sectors have experienced growth in consumption of gas during 2007-08. Likewise, consumption of gas in the transport sector increased by 27.1 percent mainly due to a shift from imported fuel oil to relatively cheaper source of gas during July-March 2008-09 followed by the commercial, industrial and fertilizer sectors with

the growth rate of 3.2 percent, 2.8 percent and 0.7 percent respectively. The gas consumption in industry increases owing to its cost effectiveness. Fertilizer sectors gas consumption showed a negligible improvement of 0.7 percent during first nine months of the current fiscal year. However, the major gas consuming sectors witnessing negative growth are cement and power having declined by 35.3 percent and 13.1 percent respectively over the same period last year due to reduced construction activities coupled with problems like inter corporate circular debt which laid power plants to remain under utilized.

Year	House hold	Change (%)	Comm-ercial	Change (%)	Cement	Change (%)	Ferti-lizer	Change (%)	Power	Change (%)	Indus-trial	Change (%)	Transp-ort (CNG) ^P mmeft	Change (%)
1998-99	131		21		8		167		184		121		2,182	
1999-00	139	6.1	22	4.8	9	12.5	177	6.0	227	23.4	135	11.6	2,426	11.2
2000-01	141	1.4	21	-4.5	7	-22.2	175	-1.1	281	23.8	139	3.0	4,423	82.3
2001-02	144	2.1	22	4.8	7	0.0	178	1.7	315	12.1	151	8.6	7,369	66.6
2002-03	154	6.9	23	4.5	3	-57.1	181	1.7	336	6.7	165	9.3	11,320	53.6
2003-04	155	0.6	24	4.3	8	166.7	185	2.2	470	39.9	193	17.0	15,858	40.1
2004-05	172	11.0	27	12.5	13	62.5	190	2.7	507	7.9	226	17.1	24,443	54.1
2005-06	171	-0.6	29	7.4	15	15.4	198	4.2	492	-3.0	279	23.5	38,885	59.1
2006-07	186	8.8	31	6.9	15	0.0	194	-2.0	434	-11.8	307	10.0	56,446	45.2
2007-08	204	9.7	34	9.4	13	-15.1	200	3.1	430	-1.0	323	5.1	72,018	27.6
July-March														
2007-08	173		25.6		9		149		320		227		51,700	
2008-09	172	-0.5	26.4	3.2	6	-35.3	150	0.7	278	-13.1	234	2.8	65,725	27.1

P: Provisional

Source: Hydrocarbon Development Institute of Pakistan

c). Electricity

After recording at an average rate of 6.1 percent per annum since 1999-00 to 2007-08, the electricity consumption by different sectors increased merely by 0.7 percent during July-March 2008-09 against the comparable period last year. This trend of the decelerating growth of electricity consumption started in 2006-07. With the

exception of Other Government Sector, all remaining sectors witnessed a negative growth during July-March 2008-09 over the same period last year. Reduction in consumption of electricity by different sectors is due to a shortage of electricity, its higher cost due to gradual phasing out of a subsidy on electricity, and the circular debt problem (See table 15.4).

Table 15.4: Consumption of Electricity by Sectors (Percentage Change)

Year	Trac-tion	House hold		Commercial		Industrial		Agriculture		Street Light		Other Govt.		Total
		GWH House hold	Change (%)	GWH (000)	Change (%)	GWH (000)	Change (%)	GWH (000)	Change (%)	Gwh	Change (%)	GWH (000)	Change (%)	
1998-99	15	19.4		2.4		12		5.6		224		3.6		43,296
1999-00	15	21.4	10.3	2.5	4.2	13.2	10.0	4.5	-19.6	239	6.7	3.6	0.0	45,586
2000-01	13	22.8	6.5	2.8	12.0	14.3	8.3	4.9	8.9	213	-10.9	3.5	-2.8	48,584
2001-02	11	23.2	1.8	3	7.1	15.1	5.6	5.6	14.3	212	-0.5	3.5	0.0	50,622
2002-03	10	23.7	2.2	3.2	6.7	16.2	7.3	6	7.1	244	15.1	3.4	-2.9	52,656
2003-04	9	25.8	8.9	3.7	15.6	17.4	7.4	6.7	11.7	262	7.4	3.7	8.8	57,491
2004-05	12	27.6	7.0	4.1	10.8	18.6	6.9	7	4.5	305	16.4	3.8	2.7	61,327
2005-06	13	30.7	11.2	4.7	14.6	19.8	6.5	7.9	12.9	353	15.7	4	5.3	67,603
2006-07	12	33.3	8.5	5.4	14.9	21.1	6.6	8.2	3.8	387	9.6	4.4	10.0	72,712
2007-08	8	33.7	1.2	5.6	3.7	20.7	-1.9	8.5	3.7	415	7.2	4.5	2.3	73,400
July-March														
2007-08	7	25.2		4.1		15.7		6.5		321		3.4		55,208
2008-09	4	23.6	-6.3	3.8	-7.3	14.6	-7.0	6.5	0.0	307	-4.4	6.8	100.0	55,614

Source: Hydrocarbon Development Institute of Pakistan

15.3 Supply of Energy

The primary energy supply has increased by 12.9 percent since 1998-99. After remaining positive until 2007-08, primary energy supply and per capita availability of energy witnessed a negative growth during 2008-09, due to lower than normal economic growth experienced during this period (See table 15.5).

Analysis of the composition of final energy supplies to the country suggests that supply of coal during the last ten years (from 1998-99) grew by

an average rate of 13.0 percent per annum followed by gas, crude oil, electricity and petroleum products with per annum growth rates of 9.5 percent, 7.2 percent, 4.7 percent and 1.5 percent respectively during the period under review. All components of final energy supply have experienced a negative growth during July-March 2008-09 over the corresponding period last year (See table 15.6) with the exception of gas which showed a marginal increase of 0.2 percent.

Table 15.5: Primary Energy Supply and Per Capita Availability

Year	Energy Supply		Per Capita	
	Million TOE	Change (%)	Availability (TOE)	Change (%)
1998-99	41.72		0.31	
1999-00	43.19	3.51	0.32	1.28
2000-01	44.4	2.82	0.32	0.63
2001-02	45.07	1.5	0.32	-1.25
2002-03	47.06	4.41	0.32	2.86
2003-04	50.85	8.06	0.34	5.25
2004-05	55.58	9.26	0.36	6.45
2005-06	58.06	4.18	0.37	2.48
2006-07	60.62	4.33	0.38	2.61
2007-08	62.92	3.78	0.39	2.86
<u>Jul-Mar</u>				
2007-08	49.9		0.31	
2008-09 E	47.1	-5.61	0.29	-6.45

E : estimated*Source: Hydrocarbon Development Institute of Pakistan.***TOE- Tons of Oil Equivalent****Table 15.6: Composition of Final Energy Supplies**

Year	Crude Oil		Gas		Petroleum Products		Coal		Electricity	
	Million Barrels	Change (%)	(bcf)*	Change (%)	(Mln.T.)	Change (%)	(Mln.T)	Change (%)	(000Gwh)(a)	Change (%)
1998-99	52.6		744.9		17.2		4.4		65.4	
1999-00	53.3	1.3	818.3	9.9	18.5	7.6	4.1	-6.8	65.7	0.5
2000-01	73.6	38.1	857.4	4.8	18.9	2.2	4	-2.4	68.1	3.7
2001-02	75.1	2.0	923.8	7.7	18.7	-1.1	4.4	10.0	72.4	6.3
2002-03	76	1.2	992.6	7.4	18	-3.7	4.9	11.4	75.7	4.6
2003-04	80.3	5.7	1,202.70	21.2	15.4	-14.4	6	22.4	80.9	6.9
2004-05	85.3	6.2	1,344.90	11.8	16.8	9.1	7.9	31.7	85.7	5.9
2005-06	87.5	2.6	1,400.00	4.1	17	1.2	7.7	-2.5	93.8	9.5
2006-07	85.3	-2.5	1413.6	1.0	18.6	9.7	7.9	2.5	98.4	4.9
2007-08	90.5	6.1	1454.2	2.9	19.8	6.1	10.1	28.1	95.9	-2.6
Avg. 10 Year	7.2		9.5		1.5		13.0		4.7	
<u>Jul-March</u>										
2007-08	66.0		1090.6		14.6		6.6 e		74.0	
2008-09	62.4	-5.5	1092.3	0.2	14.2	-2.8	4.8 e	-26.5	60.8 p	-17.9

e: Estimated and p:provisional*Source: Hydrocarbon Development Institute of Pakistan***a: Giga Watt hour*****: Billion cubic feet****a). Crude Oil**

The total recoverable reserves of crude oil in the country as of 1st January 2009 have been estimated at 313 million barrels. The average crude oil production during July-March 2008-09 was 66532 barrels per day as compared to 70166 barrels per day during the corresponding period last year showing a negative growth of 5.2 percent. The Northern region witnessed a decrease of 4490 barrel average production per day, whereas the

Southern region's average per day barrel production increased by 856 in absolute terms during the first nine months of the current fiscal year over the comparable period last year. Consequently, during the period under review, 40.4 percent of overall oil production took place in the Northern region and 59.6 percent in the Southern region. The production of crude oil during July-march 2008-09 and the corresponding period last year is given in table 15.7.

Table 15.7: Production of Crude Oil

Region	2007-08	July-March 2007-08	July-March 2008-09	Change (%)
Northern Region	30,619.73	31,378.28	26,888.21	-14.3
Dewan	106.1	89.94	197.64	119.7
OGDCL	16,320.37	16,556.46	15,351.43	-7.3
OPII	447.26	458.84	401.01	-12.6
POL	6,333.35	6,713.72	3,839.05	-42.8
PPL	4,929.52	5,071.40	4,672.11	-7.9
MOL	2,483.13	2,487.92	2,426.96	-2.5
Southern Region	39,334.04	38,787.22	39,643.29	2.2
OGDCL	25,076.31	24,571.45	25,393.15	3.3
BP (Pakistan)	9,541.40	9,558.32	9,654.17	1.0
PPL	130.84	137.78	146.74	6.5
BHP	2,621.90	2,537.25	2,720.06	7.2
OMV	94.12	90.8	64.25	-29.2
ENI	340.44	334.23	386.00	15.5
OPII	1460.17	1490.48	1240.36	-16.8
Petronas	68.85	66.91	38.56	-42.4
Total:	69,953.78	70,165.50	66,531.51	-5.2

Source: Ministry of Petroleum & Natural Resources

b) Natural Gas

Government is making efforts towards enhancing gas production in order to meet the increasing demand of energy in the country. To this end, aggressive exploration activities are afoot. As of January 1st 2009, the recoverable reserves of natural gas have been estimated at 29.671 trillion cubic feet. The average production of natural gas

during July-March 2008-09 was 3986.5 million cubic feet per day (mmcf) as compared to 3965.9 (mmcf) during the corresponding period last year, showing an increase of 0.52 percent. Presently 26 private and public sector companies are engaged in oil and gas exploration & production activities. Total natural gas production by company wise is given in table 15.8.

Table- 15.8: Production of Natural Gas (mmcf)

Company	2007-08	July-March (2007-08)	July-March (2008-09)	Change (%)
BHP	379.43	359.88	435.36	20.97
ENI	386.53	378.65	416.6	10.02
Dewan	22.04	19.21	40.45	110.57
MGCL	468.36	468.19	469.07	0.19
OGDCL	901.77	909.35	920.11	1.18
OMV	517.27	520.76	467.61	-10.21
OPII	76.82	81.6	54.14	-33.65
POL	34.88	36.01	25.81	-28.33
PPL	827.31	832.82	812.17	-2.48
Tullow	17.62	17.83	12.69	-28.83
PEL	30.42	30.85	30.66	-0.62
BP	224.26	224.04	222.99	-0.47
Petronas	24.04	23.51	15.4	-34.50
MOL	62.47	63.19	63.45	0.41
Total:	3,973.21	3,965.89	3,986.53	0.52

Source: Ministry of Petroleum & Natural Resources

(i). Liquefied Petroleum Gas (LPG):

Liquefied Petroleum Gas (LPG) contributes about 0.7 percent of the country's total primary energy supply mix. The main objective to enhance the use of LPG is to stop deforestation in the areas where the supply of natural gas is technically not viable. As a result of the government's policies, LPG supplies have been increasing at an annual cumulative growth rate of 18.2 percent during last few years with a supply of 601,592 Metric Ton in 2007-08. The cornerstone of the LPG Policy is to ensure enhanced availability of the product at a competitive price. LPG marketing companies have imported provisionally around 32,621 MT of LPG during July-March, 2009.

(ii). Compressed Natural Gas (CNG):

In an effort to reduce dependency on other fuels as well as to improve the environment, the use of CNG in vehicles is being encouraged. Due to price difference of about 60.0 percent between petrol and CNG, vehicles are still being converted to CNG and approximately 2.0 Million vehicles are using CNG. The numbers of CNG stations are increasing with an increase in the conversion rate and there are about 2,700 established CNG stations in the country presently. With an investment of Rs.70 billion, Pakistan at present is the largest CNG user country. In addition, the government's policy of de-dieselization is being actively pursued with the provincial governments, who are implementing this policy to achieve import substitution. For instance, the diesel operated intra-city urban public transport is being phased out in

Karachi, Hyderabad, Lahore Faisalabad, Peshawar, Quetta and Islamabad/ Rawalpindi.

(iii). Liquefied Natural Gas (LNG):

The government is encouraging LNG import by the private sector and in this connection the first LNG policy was announced during 2006. SSGC has been mandated to launch the "Pakistan Mashal LNG Project" and to act as a project vehicle company for implementation of the project through the private sector in two phases between the years 2011 to 2014. At present, SSGC is in the process of finalizing the LNG project. Additionally, Pakistan GasPort Limited, a private company, is also pursuing the LNG import project at their own cost and risk.

c) Drilling Activities

During July-March 2008-09, altogether a total of 60 wells were drilled, including 20 wells in the public sector and 40 in the private sector as compared to 45 wells in the same period last year showing an increase of 33.3 percent. Exploratory wells witnessed a negative growth, whereas the development wells posted a positive growth in both the public and the private sector during period under consideration. A total investment of US \$1001 million has been made so far in the current financial year in the upstream petroleum sector. Table 15.9 reveals the details of the drilling activities of the public and private sector companies engaged in the exploration and development of wells, with achievements made during July-March 2008-09 as well as in the corresponding period last year.

Sector	2007-08	July-March	July-March	Change (%)
		2007-08	2008-09	
<u>Public Sector (OGDCL)</u>	31	18	20	11.11
i) Exploratory	8	9	7	-22.22
ii) Appraisal/Dev	23	9	13	44.44
<u>Private Sector</u>	49	27	40	48.15
iii) Exploratory	18	13	10	-23.08
iv) Appraisal/Dev.	31	14	30	114.29
Total:	80	45	60	33.33

Source: Ministry of Petroleum & Natural Resources

Box Item**Petroleum Exploration & Production Policy 2009:**

The Government has recently finalized the Petroleum Exploration & Production Policy 2009 with the objective to promote Exploration & Production (E&P) activities in the country and to attract investment in the upstream E&P sector for enhancing energy supply in line with mid term and long-term energy plans. In order to provide further incentives to the petroleum industry, the price of gas has been linked to the price of a basket of crude oils being imported by Pakistan and better gas prices have been offered to the investors as compared to Policy 2007 for all zones. The factor of the biddable Gas Price Gradient (GPG) having a weightage of 20 percent has been eliminated. Now the bids will be evaluated on the basis of best work programme with related financial commitment on work units. The stringent criteria for pre-qualification of the E&P Companies have also been simplified in order to encourage new local entrants. This simplification makes sense given that new entrants would be required to join other E&P companies, gain requisite experience to independently handle operator-ship, enter into a Technical Services agreement with an internationally renowned E&P/services company, and/or engage a high caliber technical and management team capable of exploiting a hydrocarbon resource to its full potential. The procedure of "Call for Nomination" has been discontinued in an effort to reduce time in award of blocks. In order to cater to the demand for natural gas, the discount during the EWT phase has been reduced to 10 percent to encourage companies towards early production. The existing leaseholder, already producing in the field and with better knowledge and experience of the lease area, will have the advantage of first right to match the highest bid to the existing lease holder to fully exploit the hydrocarbon potential of the lease area for another term of 10 years after expiry of the lease term. Recognizing the importance of local community for providing lasting benefits, the Government has also decided to increase the social welfare rates for the development of local remote areas. The Government's intention is to involve the community as an important stakeholder and have their support. The amount of social welfare obligation in the exploration phase may be raised to US\$ 5000 in each zone. The first right of refusal has been given to the Government of Pakistan under item 10.4 of the Policy titled "sale of natural gas within Pakistan". The Federal Government in consultation with the Provincial Government will explore the possibilities of sharing its revenue of royalty rental etc. with locals of the area. The relevant clause of the model Petroleum Concession Agreement be amended to ensure the employment of unskilled workers of the area, at local/district level to the extent of at least 50 percent, both by the Operator and its Contractors. The scope of training fund utilization be extended to cover internship/scholarships and training of local inhabitants in different institutions.

15.4 Performance of Major Oil and Gas Companies**a). Oil and Gas Development Company Limited (OGDCL):**

The company has drilled 20 wells showing an increase of 33 percent in the drilling activities as compared to the corresponding period last year. The production activities of OGDCL consist of oil, gas, LPG and sulphur. Average oil production during the period July-March 2009 was 40,745 barrels per day as compared to 41,128 barrels per day during the corresponding period last year while the average gas production during July-

march 2008-09 stood at 920 MMscfd as compared to 909 MMscfd during the corresponding period last year. During the period July-March 2008-09, the production of LPG has decreased by 47 percent as compared to last year's production owing to depletion of gas production from Dhodak field. In addition, the production of LPG remained depressed due to the shut down of couple of plants owing to annual turnaround and other problems like refrigeration package and high line back pressure etc. Average sulphur production during the period was 66 Metric Tons per day. During the corresponding period in the previous financial

year, the average production of sulphur was 71 Metric Tons per day (see Table 15.10).

During July 2008, the Company encountered Gas/Condensate in its Kunnar South Exploratory well No.1 located in district Tando Allah Yar of

Sindh Province. The short duration initial testing results of zone no. 1 of the well produced 200 BPD of Condensate and 11 MMscfd of gas. Similarly zone no. 2 of the well produced 250 BPD of condensate and 14.7 MMscfd of gas.

TABLE 15.10: Physical Performance of OGDCL

S. #	Name of Activity	July-March	July-March	Change (%)
		2007-08	2008-09	
1	Total wells Drilled	15	20	33
	I Exploratory Wells	8	8	
	ii Development/Appraisal Wells	7	12	
2	Production			
	I Oil (BBL)	11,310,177 (41,128)	11,164,017 (40,745)	-1
	ii Gas (MMcft)	250,070 (909)	252,108 (920)	1
	iii LPG (Tonnes)	78,476 (285)	41,795 (153)	-47
	iv Sulphur (Tonnes)	19,543 (71)	18,000 (66)	-8

(Figures in bracket show daily average production)

Source: OGDCL

b). Sui Northern Gas Pipelines Limited (SNGPL):

SNGPL has supplied gas to 1300 towns and villages of Punjab, NWFP and AJK/Federal areas so far. During the first nine months of the current fiscal year 2008-09, the Company connected 450 industrial, 2,850 commercial and 180,000 domestic consumers. SNGPL carried out development work for extension of the gas network to the tune of Rs. 7,848 million on transmission projects, Rs. 5,831 million on distribution projects and Rs. 285 million on other projects (See Table 15.11). The General Industry sector is the largest consumer of gas provided by SNGPL and transmission projects account for 56.2 percent of the total investment made by the company. During the next fiscal year 2009-10, the company is projected to invest Rs. 18,457 million in transmission, distribution and other projects.

c). Sui Southern Gas Company Limited: (SSGC)

By the end of March 2009, Sui Southern Gas Company Limited was supplying gas to 1,875 towns and villages of Sindh and Balochistan. During the period under review, SSGC provided

new connections to 218 Industrial, 1,349 Commercial and 80,545 Domestic consumers bringing the total consumers to 2,148,622. During July-March 2008-09, the Company carried out development work for extension of the gas net work to the tune of Rs.1,034 million on transmission projects, Rs.3,907 million on distribution projects and Rs.579 million on other projects under the 'Khushal Pakistan' programme and with the collaboration of District Governments (See Table 15.11). Power and General industry has remained a major consumer of the gas provided to all sectors accounting for around 32.0 percent share each followed by the domestic sector with the share of 19.0 percent with 98.0 percent of new connections being provided to the domestic sector. Furthermore, most of the investments made by the SSGC are in distribution projects. During the next fiscal year the company plans to invest Rs.13,381/-million on transmission and distribution projects.

15.5 Power sector

The installed capacity in the private sector witnessed a positive growth of 3.4 percent during 2008-09 over the same period last year. While the private sector showed a negative growth of 1.7 percent in 2007-08.

The total installed capacity of WAPDA accounting for 58.0 percent of total capacity declined by 1.7 percent during July-March 2008-09. The total installed capacity of IPPs remained 5,954 MW followed by KESC's 1884.0 MW and nuclear energy's 462 MW in July-March 2008-09 (table 15.12).

Table 15.11: Physical Performance of SNGPL & SSGC

S. No	Name of Activity	July-March 2008-09 SNGPL	July-March 2008-09 SSGCL
1	<u>Sector-Wise Gas Consumption (mmcf)</u>		
	Power	91,347	91,360
	Fertilizer	35,001	19,303
	Cement	2,448	3,401
	CNG/Transport	51,196	16,377
	General Industry	142,475	93,011
	Commercial	19,213	7,218
	Domestic	109,510	54,206
	Total	451,190	284,875
2	<u>New Connections (Nos.)</u>		
	Domestic	180,000	80,545
	Industrial	450	218
	Commercial	2,850	1,349
	Total	183,300	82,112
3	<u>Addition in Distribution Network (KMs)</u>		
	Mains	4,000	1,429
	Services	820	328
	Total	4,820	1,757
4	<u>Investment in Gas Sector (Rs. Million)</u>		
	Transmission Projects	7,848	1,034
	Distribution Projects	5,831	3,907
	Others	285	579
	Total	13,964	5,520

*Source: SNGPL, SSGC***Table 15.12: Total Installed Generation Capacity (MW)**

S.No	Power Company	Installed Capacity 2007-08	Share (%)	Installed Capacity 2008-09	Share (%)	Change
1	<u>WAPDA</u>	11,654	59.6	11,454	58.0	-1.7
	Hydel	6,474	55.6*	6,555	57.2*	1.3
	Thermal	5,180	44.4*	4,899	42.8*	-5.4
2	IPPs	5,760	29.4	5,954	30.1	3.4
3	Nuclear	462	2.4	462	2.3	0.0
4	KESC	1,690	8.6	1,884.0	9.5	11.5
	Total	19,566	100	19,754	100.0	1.0

* Share in WAPDA system

Source: Hydrocarbon Development Institute of Pakistan

15.5.1 National Electric Power Regulatory Authority (NEPRA)

NEPRA is the authority responsible for granting licenses, determining tariffs, prescribing performance standards and addressing the complaints of electric power consumers. During July-March 2008-09, ten applications for the grant of Generation License for conventional power plants including thermal and hydro with a cumulative capacity of 3300 MW were processed and one license was issued. An additional two generation licenses were granted to Wind Energy Projects.

NEPRA received generation license application from 21 existing captive power plants (CPPs), 12 CPPs were granted generation licenses after processing while the remaining cases are at different stages of processing currently.

Regarding addition of capacity for reducing the demand-supply gap, NEPRA processed the cases of six Rental Power thermal Power Plants and finalized the cases of four such plants. Further, the case for addition of a new 220 MW thermal power plant at Korangi was finalized for KESC and the application of another 150 MW is expected to be finalized shortly.

Five applications for the grant of Distribution License from Small Power Producers (SPPs) and Housing Colonies were processed out of which 2 SPPs were granted distribution licenses and the other cases were at different stages of processing.

Three companies were granted approval of tariffs under the Government of Pakistan's policy on Fast Track power Generation Projects.

Work on the Government of Pakistan's initiatives on power sector assistance and the Central Asia-South Asia transmission line continued as well along with continuous deliberations on the development of coal and hydel policies.

Supply Sources of Electricity:

15.5.2. WAPDA

The installed capacity of PEPCO system is 18,019 MW as of March 2009 with hydro 6555 MW and

thermal 11,464 MW. The hydropower capacity accounts for 36.38 percent and thermal 63.62 percent. Out of 11,464 MW of thermal power, 4899 MW is owned by ex-WAPDA GENCOs, 285 MW by rental, 325 by PAEC and 5954 by IPPs.

a). Power Development Programme

To meet the current and future energy demands, the government is working on different power generation projects expected to be completed by 2011-12 with total generation capacity of 9817 MW. These power generation projects, including 615 MW, have been planned to commission during 2008-09. The power generation projects having a capacity of 4039 MW are expected to be commissioned in the fiscal year 2009-10. Furthermore, 3370 MW of capacity will be added in 2010-11. In addition, 1793 MW capacity projects are expected to be commissioned during 2011-12.

b). Electricity Generation & Power Transmission

The long term (since 1998-99) energy consumption pattern exhibited a similar picture with the same mix of hydro-thermal in total energy consumption. The share of thermal generation remained higher than that of hydro generation which shows that hydro potential has not been fully utilized. The hydro potential which is located in the north is still largely untapped. During the fiscal year July-March 2008-09, the electricity generation from hydro and thermal decreased by 4.4 percent and 5.4 percent respectively as compared to the same period last year. Furthermore, the share in total energy generation by hydro generation remained at 33.7 percent while thermal generation stood at 66.3 percent during the period under review (see table 15.13).

By the end of June 2008, the total length of transmission line had increased to 49681 circuit kMs compared to 49645 ckm, at the end of June 2007. The length of transmission lines included 500-kV, 220-kV, 132-kV and 66-kV during the period under consideration (end June, 2008).

Table 15.13: Electricity Generation by WAPDA (GWh)

Year	Hydro	Share (%)	Thermal	Share (%)	Total
1998-99	22,448	41.8	31,235	58.2	53,683
1999-00	19,288	34.3	36,585	65.5	55,873
2000-01	17,259	29.5	41,196	70.5	58,455
2001-02	19,056	31.3	41,804	68.7	60,860
2002-03	22,350	34.9	41,690	65.1	64,040
2003-04	27,477	39.8	41,617	60.2	69,094
2004-05	25,671	34.9	47,849	65	73,520
2005-06	30,855	37.5	51,370	62.5	82,225
2006-07	31,942	36.4	55,895	63.6	87,837
2007-08	28,667	33.23	57,602	66.77	86,269
July-March					
2007-08	21,606	33.5	42,963	66.5	64,569
2008-09	20,665	33.7	40,653	66.3	61,318

Total generation includes purchase from IPPs and imports *Source: PEPCO*

c). Growth in Consumers.

With the expansion of the electricity network, the number of consumers has increased by 7,675 thousands since 1998-99. During July-march 2008-09, the growth of consumers stood at 4.2 percent as it reached 18.5 million consumers during July-

March 2008-09 as compared to 17.7 million in same period last year. The share of domestic consumers remained 84.9 percent followed by the commercial and industrial sectors having a 12.3 percent and a 1.4 percent share respectively (See table 15.14).

Table 15.14: Consumers by Economic Groups (Thousands)

Year	Domestic	Commercial	Industrial	Agriculture	Others	Total
1998-99	8,912	1,517	190	173	8	10,800
1999-00	9,554	1,654	195	175	8	11,586
2000-01	10,045	1,737	196	180	8	12,166
2001-02	10,483	1,803	200	184	8	12,678
2002-03	11,044	1,867	206	192	9	13,318
2003-04	11,737	1,935	210	199	10	14,092
2004-05	12,490	1,983	212	201	10	14,896
2005-06	13,390	2,068	222	220	10	15,911
2006-07	14,354	2,152	233	236	11	16,987
2007-08	15,226	2,229	242	245	11	17,955
July-March						
2007-08	15,026	2,214	240	243	11	17,734
2008-09	15,687	2,271	250	255	12	18,475

Source: Water and Power Development Authority

d). Village Electrification.

About 67.0 percent of the population of the country resides in rural areas with agriculture being the main occupation. Keeping this fact in view and in order to increase the productivity of a majority of the population, the village electrification programme is being highlighted as a

central component of the total power sector development programme. The number of villages electrified has increased to 66,280 since 1998-99. Furthermore, the village electrification facility has increased by 5.7 percent during the period of July-March 2008-09 as compared to same period last year. The detailed trend of village electrification is given in table 15.15.

Table 15.15: Village Electrification			(In Number)
Year	Addition During the Year	Progressive Total	Growth (%)
1998	1,232	67,183	
1999	1,109	68,292	1.7
2000	1,595	69,887	2.3
2001	1,674	71,561	2.4
2002	2,246	73,807	3.1
2003	7,193	81,000	9.7
2004	9,467	90,467	11.7
2005	12,764	103,231	14.1
2006	14,203	117,456	13.8
2007	10,441	127,897	8.9
July-March			
2007-08	8,840	126,296	
2008-09	5,566	133,463	5.7

***Including FATA** **Source: Water and Power Development Authority**

e). Electricity Consumption by Economic Group

The sectoral consumption of electricity by economic group identifies the domestic sector as the largest consumer of electricity for the past many years. During the current year (July-March

2008-09), the consumption pattern remained more or less the same since 1998-99 with a domestic share of 42.2 percent, industrial share of 25.2 percent and agricultural share of 13.3 percent. Table 15.16 shows detailed electricity consumption by economic groups.

Table 15. 16: Electricity Consumption by Economic Groups (% Share)								
Year	Domestic	Comm- ercial	Indus- trial	Agri- culture	Public Lighting	Bulk Supply	Trac- tion	Supply to KESC
1998-99	43.6	4.7	25.6	14.3	0.41	6.72	0.04	4.65
1999-00	46.3	4.9	26.3	11	0.37	6.54	0.04	4.5
2000-01	46.1	4.9	27.1	11.3	0.34	6.07	0.03	4.17
2001-02	45.5	5.1	28	12.3	0.33	5.89	0.03	2.94
2002-03	44	5.3	28.4	12.6	0.35	5.54	0.02	3.8
2003-04	44	5.6	28.1	12.9	0.37	5.43	0.02	3.58
2004-05	43.5	5.8	28.1	12.5	0.41	5.17	0.02	4.54
2005-06	43.3	6	26.6	12.6	0.45	4.86	0.02	6.15
2006-07	43	6.04	26.09	12	0.47	4.84	0.02	7.27
2007-08	43.21	6.55	26	12.59	0.51	5.01	0.01	6.12
July-March								
2007-08	43	6.5	26.1	12.7	0.5	5.1	0.02	6
2008-09	42.2	6.4	25.2	13.3	0.5	4.9	0.01	7.5

Source: Water and Power Development Authority

f). Power Losses.

The transmission and distribution losses exhibited decreasing trend during July-March 2008-09 with transmission and distribution losses declining at 19.4 percent as compared to 20.3 percent in the corresponding period of last year. NTDC and DISCOs have started a range of technical and administrative measures to enhance operational and managerial efficiency to reduce power losses.

These measures have showed positive signs resulting in the reduction of power losses and leading to an increase in revenue. Along with these, other measures which involve continuous processes like renovation, rehabilitation, capacitor installation and strengthening the distribution system network are being carried out to control the wastage of power. The Transmission and Distribution losses for the past 10 years are given in table 15.17.

TABLE 15.17: WAPDA Power Losses (%)

Year	T&D Losses*
1998-99	25.8
1999-00	24.6
2000-01	23.8
2001-02	23.6
2002-03	23.9
2003-04	23.5
2004-05	22.3
2005-06	21.9
2006-07	21.1
2007-08	20.92
July-March	
2007-08	20.3
2008-09	19.41

* T&D = Transmission and Distribution

Source: Water and Power Development Authority

15.5.3. Karachi Electric Supply Company Limited (KESC)

During July-March 2008-09, the company's own generation stood at 5837 Million units (kWh), 5.3 percent less than the previous year generation of 6164 Million Units (kWh) owing to "Planned Maintenance Outages" undertaken in the winter of 2008-09. The installed capacity of various generating stations increased to 1884 MW by the end of July-March 2008-09 compare to 1690 MW in the corresponding period last year (See table 15.18). KESC has increased the required supply of power by various sources including the purchase of 577 Million KWh from "Independent Power Producers" and 4398 Million KWh from WAPDA KANUPP & PASMIC.

The total units available to the company's system posted a decline of 0.8 percent by reaching 10,349 million KWh during July-March 2008-09 compared to 10,437 Million kWh in the corresponding period of last year. Transmission and Distribution losses have increased from 3216 million kWh during July-March 2007-08 to 3543 million kWh in the current fiscal year. The set-back in power purchase was due to the unavailability of DHA COGEN 80MW Power Station. KESC has made considerable progress in its comprehensive rehabilitation program for the restoration of its generating capacity. In addition to

the completion of 220 MW Combined Cycle Power Station, the addition of two rental power stations in the current Fiscal Year will add supply of 50MW to the system.

The addition of two power generating stations of 87MW each at KESCs existing locations is in full swing. These stations will come into the system in first quarter of fiscal year 2009-10.

Furthermore, as part of the generation expansion program, the "Financial Close" of the 560MW Combined Cycle Power Station at the existing Bin Qasim power Station Site is expected in the next quarter.

15.5.4. Nuclear Energy

Pakistan Atomic Energy Commission (PAEC) is responsible for the planning, construction and operation of nuclear power plants in the country. Presently, two nuclear power plants; Karachi Nuclear Power Plant (K-1) and Chashma Nuclear Power Plant unit-1 (C-1) are operational, while construction of a third plant, Chashma Nuclear Power Plant unit-2 (C-2), is in progress. K1, has been in commercial operation since 1971. After completing its design life of 30 years, K-1 is operating on extended life at 90 MWe. K-1 generated 317 million kWh of electricity during the period July-March 2008-09, raising its life-time generation to 12.21 billion kWh. C-1, a PWR type plant with a gross capacity of 325 MWe, and has been in commercial operation since September 2000. C-1 generated 602 million kWh of electricity during July-March 2008-09, raising its lifetime generation to 16.86 billion kWh. The construction and installation activities of C-2 are in progress as per schedule. The commercial operation of C-2 is expected in 2011.

Pakistan Atomic Energy Commission has been given the task of increasing nuclear power generation capacity to 8,800 MW by the year 2030 with increasing share of indigenization. Studies are in progress at six new sites to establish their suitability for installation of additional nuclear

power plants. PAEC is communicating with China additional nuclear power plants. National Nuclear Corporation for establishment of

Table 15.18: KESC Operating Results (Units in Million kWh)

S. No	Description	July-March (2007-08)	July-March (2008-09)	Change (%)
1	<u>POWER PURCHASE</u>			
	KANUPP	303.9	286.1	-5.8
	PASMIC	75.5	85.0	12.5
	TAPAL	604.0	441.6	-26.9
	GULAHMED	660.5	316.3	-52.1
	WAPDA	3,035.6	3,585.6	18.1
	ANOUD POWER	18.7	12.2	-34.8
	DHA COGEN	33.3	68.0	104.5
	INTL. INDUS. LTD	21.0	99.8	374.3
	AGGREKO	-	60.7	-
	Total	4,752.4	4,995.4	5.1
2	<u>Units Available for Distribution</u>	10,437.2	10,349.6	-0.8
3	<u>Unit Sold</u>	7,221.1	6,805.8	-5.8
4	<u>Trans. & Dist. Losses</u>	3,216.1	3,543.8	10.2
5	<u>Installed Capacity (MW)</u>	1,690.0	1,884.0	11.5

Source: KESC

15.5.5. Coal

Pakistan has huge coal resources estimated at over 185 billion tones, including 175 billion tones identified at the Thar, Sindh province. Pakistan's coal generally ranks from lignite to sub-bituminous. The production of coal has remained stagnant with no significant market demand. The production of coal decreased by 28.8 percent during July-March 2008-09 over the comparable period last year. About 60.4 percent of total coal production in the country has been consumed by the brick kilns industry followed by cement with the 37.3. percent consumption share of coal during

the period under consideration. The coal consumption shares of brick kilns and power sectors increased by 9.7 and 0.3 percentage points respectively during the first nine months of the current fiscal year over the corresponding period last year (table 15.19 & 15.20). Operational coal mines decreased production by 15 percent from 4.12 million tons in 2007-08 to 3.49 million tons in 2008-09. Almost the whole cement industry has been switched over to coal from furnace oil which has enhanced utilization of indigenous coal along and imported coal. Utilization of indigenous coal in cement manufacturing plants has saved considerable scarce foreign exchange.

Table 15.19: Consumption of Coal (Percentage Share)

Year	Household	Power	Brick Kilns	Cement
1998-99	0	12	88	-
1999-00	0	11	89	-
2000-01	0	5.1	70.2	24.7
2001-02	0	5.7	58.5	35.9
2002-03	0	4.2	53.3	42.5
2003-04	0	3	42.7	54.2
2004-05	-	2.3	49.5	48.2
2005-06	-	1.9	54.7	43.3
2006-07	0	2.1	41.5	56.4
2007-08	0	1.6	37.2	61.2
<u>Jul-March</u>				
2007-08 (e)	0.0	2.0	50.7	47.3
2008-09 (e)	0.0	2.3	60.4	37.3

- not available
e: Estimated

Source: Ministry of Petroleum Natural Resource
Hydrocarbon Development Institute of Pakistan

As part of promotional activity to increase the share of coal, the Government of Sindh has leased out a coal block for an integrated mining project and a 250 MW coal based power plant to M/s China National Chemical Engineering Group Corporation in Sonda Jherrick coalfield. The Government of Pakistan has developed the infrastructure of Thar coal field (i.e. roads, water

supply, communication network, airstrip & railway track). The Government of Sindh has incorporated “Thar Coal Energy Board” for the development of the coal resources of Thar to fulfill the energy requirements. The establishment of experimental small scale open-pit mining is also under consideration to collect data for large-scale mining, as a guideline for investors.

Table 15.20: Production of Coal (000 tones)

Year	Imports	Production	Total
1998-99	910	3,461	4,371
1999-00	957	3,168	4,125
2000-01	950	3,095	4,045
2001-02	1,081	3,328	4,409
2002-03	1,578	3,312	4,890
2003-04	2,789	3,275	6,064
2004-05	3,307	4,587	7,894
2005-06	2,843	4,871	7,714
2006-07	4,251	3,643	7,894
2007-08	5,987	4,124	10,111
<u>Jul-March</u>			
2007-08 (e)	4000	2559	6,559
2008-09 (e)	3000	1822	4,822

e: Estimated

Source: Ministry of Petroleum Natural Resource Hydrocarbon Development Institute of Pakistan

15.5.6 Private Power and Infrastructure Board (PPIB)

Private sector projects in the power sector are processed by the Private Power and Infrastructure Board. The potential of hydropower in Pakistan is around 50,000 MW, while total coal reserves in Pakistan are estimated to be around 185 Billion tones. PPIB is currently processing thirty three multiple fuel (Oil, Coal, Gas and Hydel) power projects with a cumulative capacity of 8,145 MW which are expected to be commissioned from year 2009 to 2013. The annual expected capacities of private power generation up to the year 2013 are as given in table 15.21

These include 12 Oil based Projects with 2261 MW capacity, 6 Hydel Projects with 667 MW capacity, 4 Pipeline Quality Dual Fuel/LNG Projects with 900 MW capacity, 5 Dedicated Gas projects with 1,218 MW capacity, four Oil based Rental Power Projects with 699 MW capacity, and two Imported Coal based power projects with a

cumulative capacity of 2,400 MW. Out of this, Implementation Agreements (IAs) have been signed with 14 projects of 2,757 MW, while twelve IPPs totaling 2,539 MW of power generation capacity have achieved Financial Close, out of which 165 MW oil based Attock Gen Limited has been commissioned during March 2009 and other companies are aggressively working to achieve the financial close/commissioning.

Table 15.21: Annual Expected Capacity (IPPs)

Year	(MW)
2009	2543
2010	1201
2011	1268
2012	482
2013	2651
Total	8145

In addition, three bids for establishing IPP projects totaling 964 MW of cumulative power generation capacity have been received under Package-II of the initiative for establishing Rental Projects/IPPs

launched in September 2008. These are expected to be commissioned during year 2010/2011.

15.5.7 Alternative Sources of Energy

To meet the growing demand of energy and the target of 9700 MW generation by the year 2030, the Alternate Energy Development Board (AEDB) has taken various initiatives. Under the remote village electrification program; AEDB is to electrify 7874 remote off-grid villages in the Sindh and Balochistan provinces through RE technologies.

(i) Mega Wind Power Projects

AEDB has developed Wind Resource Analysis for wind speed benchmarking and has prepared the first Energy Purchase Agreement (EPA) for Wind Energy in Pakistan. Furthermore, ZORLU Energy Pakistan Ltd has commissioned its first phase (6 MW) of a wind power plant in April 2009. Complete 50 MW will be commissioned by the end of the 1st quarter of the year 2010. AEDB has so far identified 50,000 acres of Government land in Sindh and 33,976 acres of land have been provisionally allocated. Eleven (11) IPPs have completed their Feasibility Studies for 50 MW wind power projects each.

(ii) Biodiesel

The Government of Pakistan has given a target for replacement of 5 percent of total annual petroleum diesel consumption with Biodiesel by the year 2015 and 10 percent by 2025. A pilot project for a production plant of biodiesel has been successfully implemented. The project includes the electrification of a remote village in District Thatta, Sindh using Biodiesel technology. Beside, that AEDB has engaged Pakistan State Oil (PSO)

for furthering the National Biodiesel Programme and provided a production plant of biodiesel to PSO for the optimization of processing techniques for Biodiesel.

(iii) Bio Gas Projects

AEDB is facilitating a New Zealand based firm with a pilot project for biogas at Landhi Cattle Colony, Karachi where waste from 400,000 cattle in the area would be utilized to generate electricity and high grade organic fertilizer. The pilot phase of the project (250 kW) has been initiated and the full scale plant is estimated to generate up to 50 MW of electricity and 1500 tons of organic fertilizer per day.

AEDB is working on fast track basis to assist and facilitate an American firm to undertake a feasibility study for generation of up to 10 MW of electricity from solid waste in Karachi.

AEDB is also facilitating cement industry for establishing Refuse Derived Fuel (RDF) plants by utilizing Municipal Solid Waste (MSW) that would replace imported coal.

(iv) Small Hydro

AEDB is facilitating TASAQ Energy (Pvt.) Limited for the establishment of a 16 MW Hydro Power Project at Gilgit river near Gilgit city as an IPP. This project will deliver 16 – 20 MW of energy to Gilgit city during the winter and up to 40 MW during the summer if required. The project will take 4 to 5 years to complete (i.e. by the year 2013).

AEDB is actively working to install 103 micro hydro power plants in Chitral and at other locations in the Northern areas.

TABLE 14.1

COMMERCIAL ENERGY CONSUMPTION

Fiscal Year	1. Oil/Petroleum (tonnes)						Total
	Households	Industry	Agriculture(a)	Transport	Power	Other Govt.	
1991-92	613,706	1,369,525	281,539	5,619,552	2,775,418	323,228	10,982,968
1992-93	622,075	1,479,935	287,181	6,107,416	3,158,124	357,115	12,011,846
1993-94	589,851	1,653,516	307,795	6,414,582	3,902,308	357,529	13,225,581
1994-95	585,173	1,889,443	268,631	6,646,175	4,215,635	355,110	13,960,167
1995-96	596,031	2,416,278	250,031	7,135,631	4,785,856	417,254	15,601,081
1996-97	509,738	2,141,065	268,866	7,172,269	5,110,233	403,795	15,605,966
1997-98	498,949	2,081,172	244,977	7,364,767	6,053,784	380,756	16,624,405
1998-99	492,768	2,139,889	249,229	7,864,063	5,525,669	376,133	16,647,751
1999-00	477,305	2,115,860	293,034	8,307,977	6,227,595	346,050	17,767,821
2000-01	450,960	1,924,048	254,833	8,157,893	6,487,988	372,176	17,647,898
2001-02	334,501	1,611,995	225,742	8,018,777	6,305,419	463,654	16,960,088
2002-03	282,521	1,604,068	196,747	8,082,273	6,019,958	266,387	16,451,954
2003-04	231,459	1,493,080	183,506	8,464,042	2,739,763	309,263	13,421,113
2004-05	192,750	1,542,398	142,062	9,024,783	3,452,581	316,686	14,671,260
2005-06	128,651	1,681,517	81,896	8,156,831	4,218,982	358,807	14,626,684
2006-07	106,148	1,595,981	97,232	7,981,893	6,740,559	325,318	16,847,131
2007-08	120,961	1,071,191	109,351	9,384,482	7,083,933	310,501	18,080,419
<u>Jul-Mar</u>							
2007-08	81,897	860,565	86,784	6,815,634	5,254,657	242,766	13,342,303
2008-09	75318	718053	50,076	6,306,840	5,496,505	244,845	12,891,637

(a): HSD consumption in agricultural sector is not available separately and is included under transport sector. Agricultural sector represents LDO only. (Contd.)

source: Oil Company Advisory Committee

TABLE 14.1

COMMERCIAL ENERGY CONSUMPTION

Fiscal Year	2. Gas (mm cft)(b)						Total
	Households	Commercial	Cement	Fertilizer	Power	Transport (CNG)	
1991-92	70,741	13,057	11,761	101,493	193,893	95,661	486,631
1992-93	75,783	14,326	11,914	119,628	186,853	102,991	511,526
1993-94	82,461	15,239	10,187	144,514	197,694	100,631	550,769
1994-95	97,045	16,064	6,730	141,697	181,107	104,098	546,788
1995-96	110,103	16,960	7,569	150,374	186,507	111,202	582,868
1996-97	115,488	18,403	8,718	150,483	193,984	110,365	597,799
1997-98	134,500	18,764	12,092	147,752	179,042	115,250	607,890
1998-99	131,656	21,466	7,988	167,474	183,694	121,431	635,891
1999-00	139,973	21,712	8,558	177,152	227,364	134,916	712,101
2000-01	140,899	20,618	6,977	175,393	281,255	138,503	768,068
2001-02	144,186	22,130	7,063	177,589	314,851	151,416	824,604
2002-03	153,508	22,776	3,445	180,611	335,636	164,968	872,264
2003-04	155,174	24,192	7,711	185,350	469,738	193,395	1,051,418
2004-05	172,103	27,191	13,383	190,409	507,398	226,116	1,161,043
2005-06	171,109	29,269	15,335	198,175	491,766	278,846	1,223,385
2006-07	185,533	31,375	14,686	193,682	433,672	306,600	1,221,994
2007-08	204,035	33,905	12,736	200,063	429,892	322,563	1,275,212
<u>Jul-Mar</u>							
2006-07	172,700	25,575	9,350	148,500	320,375	227,425	955,625
2007-08	171,875	26,400	6,050	149,600	278,300	233,750	931,700

- Not available.

* : (CNG) Compressed Natural Gas. (Contd.)

TABLE 14.1

COMMERCIAL ENERGY CONSUMPTION

Fiscal Year	3. Electricity (Gwh)								4. Coal (000 metric tonne)				Total
	Traction	Household	Commercial	Industrial	Agricultural	Street Light	Other Govt.	Total	Household	Power	Brick Kilns	Cement	
1991-92	29	11,458	2,143	12,289	5,847	..	2,112	33,878	6.8	39.5	3,052.4	..	3,098.7
1992-93	27	13,170	2,333	13,043	5,635	297	1,987	36,493	3.2	46.7	3,216.6	..	3,266.6
1993-94	27	14,080	1,786	12,637	5,772	298	2,781	37,381	3.3	43.6	3,487.0	..	3,533.9
1994-95	22	15,585	2,623	12,528	6,251	324	2,116	39,448	3.2	40.7	2,998.9	..	3,042.8
1995-96	20	17,116	2,962	12,183	6,696	378	2,382	41,737	3.1	398.9	3,235.8	..	3,637.8
1996-97	18	17,757	2,241	11,982	7,086	390	3,440	42,914	9.7	351.9	3,191.3	..	3,552.9
1997-98	16	18,750	2,334	12,297	6,937	387	3,851	44,572	2.3	346.5	2,809.9	..	3,158.7
1998-99	15	19,394	2,409	12,061	5,620	224	3,573	43,296	1.3	415.3	3,044.8	..	3,461.4
1999-00	15	21,455	2,544	13,202	4,540	239	3,591	45,586	1.0	348.1	2,818.8	..	3,167.9
2000-01	13	22,765	2,774	14,349	4,924	213	3,547	48,585	1.0	205.8	2,837.9	1,000.0	4,044.7
2001-02	11	23,210	2,951	15,141	5,607	212	3,490	50,622	1.1	249.4	2,577.5	1,580.6	4,408.6
2002-03	10	23,624	3,218	16,181	6,016	244	3,363	52,656	1.1	203.6	2,607.0	2,078.2	4,889.9
2003-04	9	25,846	3,689	17,366	6,669	262	3,650	57,491	1.0	184.9	2,589.4	3,289.2	6,064.5
2004-05	12	27,601	4,080	18,591	6,988	305	3,750	61,327	..	180.0	3,906.7	3,807.2	7,893.8
2005-06	13	30,720	4,730	19,803	7,949	353	4,035	67,603	..	149.3	4,221.8	3,342.8	7,714.0
2006-07	12	33,335	5,363	21,066	8,176	387	4,373	72,712	1.0	164.4	3,277.5	4,451.2	7,894.1
2007-08	8	33,704	5,572	20,729	8,472	415	4,500	73,400	1.0	162.0	3,760.7	6,186.9	10,110.6
<u>Jul-Mar</u>													
2007-08	7	25,168	4,101	15,713	6,477	321	3,421	55,208	1.0	132.6	3,325.4	3,100.0	6,559.0
2008-09	4	23,643	3,829	14,563	6,501	307	6,767	55,614	0.8	110.0	2,911.6	1,800.0 e	4,822.4

.. not available.

e: estimated for coal

Source: Hydrocarbon Development Institute of Pakistan (HDIP)
Ministry of Petroleum and Natural Resources

TABLE 14.2

COMMERCIAL ENERGY SUPPLIES

Fiscal Year	Oil		Gas (mcf) +	Petroleum Products		Coal		Electricity	
	Crude Oil	Local Crude		Imports (000 tonnes)	Produc- tion (000 tonnes)	Imports (000 tonnes)	Produc- tion (000 tonnes)	Installed Capacity (MW)(a)	Generation (Gwh)(b)
	Imports (000 barrels)	Extraction (000 barrels)							
1991-92	30,016	22,469	550,715	5,275	5,961	1,069	3,099	9,369	45,040
1992-93	29,407	21,895	583,545	6,612	5,694	994	3,266	10,586	48,750
1993-94	30,770	20,675	624,229	7,910	5,841	1,094	3,534	11,319	50,640
1994-95	28,386	19,858	628,211	8,737	5,434	1,096	3,043	12,100	53,545
1995-96	31,044	21,063	666,580	10,137	5,874	1,080	3,638	12,969	56,946
1996-97	28,588	21,270	697,763	10,398	5,495	840	3,553	14,818	59,125
1997-98	29,826	20,543	699,709	11,064	5,858	960	3,159	15,659	62,104
1998-99	32,855	19,986	744,942	10,926	5,925	910	3,461	15,663	65,402
1999-00	32,938	20,395	818,342	11,878	6,115	957	3,168	17,399	65,751
2000-01	52,505	21,084	857,433	10,029	8,337	950	3,095	17,488	68,117
2001-02	51,982	23,195	923,758	9,023	9,028	1,081	3,328	17,789	72,405
2002-03	52,512	23,458	992,589	8,437	9,084	1,578	3,312	17,787	75,682
2003-04	57,699	22,625	1,202,750	5,170	9,740	2,789	3,275	19,252	80,827
2004-05	61,161	24,119	1,344,953	5,676	10,474	3,307	4,587	19,379	85,629
2005-06	63,546	23,936	1,400,026	6,009	10,498	2,843	4,871	19,450	93,774
2006-07	60,694	24,615	1,413,581	8,330	10,314	4,251	3,643	19,420	98,384
2007-08	64,912	25,603	1,454,194	9,025	10,754	5,987	4,124	19,420	95,860
<u>Jul-Mar</u>									
2007-08	46,748	19,296	1,090,620	6,730	7,859	4,000 e	2,559	19,355	74,032
2008-09	44,151	18,230	1,092,309	7,094	7,138	3,000 e	1,822	19,575 p	60,793 p

+ Million cubic feet

(a) MW: Mega Watt

(b) Gwh: Giga Watt Hour

p: Provisional

e: Estimated for coal and electricity

Source: Hydrocarbon Development Institute of Pakistan (HDIP)
Ministry of Petroleum and Natural Resources

TABLE 14.3

COMMERCIAL ENERGY SUPPLIES

Fiscal Year	Electricity						
	Hydroelectric (Hydel)		Thermal		Nuclear		Imported (Gwh)
	Installed Capacity (MW) a	Generation (Gwh) b	Installed Capacity (MW) a	Generation (Gwh) b	Installed Capacity (MW) a	Generation (Gwh) b	
1990-91	2,898	18,343	5,741	22,354	137	385	
1991-92	3,330	18,647	5,902	26,375	137	418	
1992-93	4,626	21,112	5,823	27,057	137	582	
1993-94	4,726	19,436	6,456	30,707	137	497	
1994-95	4,826	22,858	7,137	30,176	137	511	
1995-96	4,826	23,206	8,006	33,257	137	483	
1996-97	4,826	20,858	9,855	37,921	137	346	
1997-98	4,826	22,060	10,696	39,669	137	375	
1998-99	4,826	22,449	10,700	42,669	137	284	
1999-00	4,826	19,288	12,436	46,064	137	399	
2000-01	4,857	17,194	12,169	48,926	462	1,997	
2001-02	5,041	18,941	12,286	51,174	462	2,291	
2002-03	5,041	22,351	12,285	51,591	462	1,740	0.36
2003-04	6,491	26,944	12,299	52,122	462	1,760	73
2004-05	6,494	25,671	12,423	57,162	462	2,795	109
2005-06	6,499	30,862	12,489	60,283	462	2,484	146
2006-07	6,479	31,953	12,478	63,972	462	2,288	171
2007-08	6,480	28,707	12,478	63,877	462	3,077	199
<u>Jul-Mar</u>							
2007-08	6,482	21,640	12,412	49,825	462	2,319	202
2008-09	6,481	20,526	12,632 p	39,154 p	462	918	195

(a) MW: Mega Watt.

Source: Hydrocarbon Development Institute of Pakistan (HDIP).

(b) Gwh: Giga Watt Hour.

Ministry of Petroleum and Natural Resources

e: import of electricity is estimated for the last three months

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Fixed/Min Charges (Rs/KwM)	Effective 10-5-2003			
		Energy Charges (Rs/Kwh)	F.A.S. (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	F.A.S Subsidies Rs/kwh
<i>GENERAL SUPPLY TARIFF A-1(including FATA)</i>					
Upto 50 Units	-	0.61		0.73	
For Consumption > 50 units upto 1000 units		-	-	-	
For First 100 units	-	0.41	0.50	1.58	0.44
For next 200 units (101-300)	-	0.58	0.50	2.29	0.44
For next 700 units (301-1000)	-	1.51	0.50	3.55	0.44
Above 1000 units	-	1.88	0.38	4.42	0.32
Minimum Monthly Charges:	a) Single Phase Connections Rs 45/- b) Three Phase Connection: Rs 100/-				
<i>GENERAL SUPPLY TARIFF A-2(including FATA)</i>					
For first 100 units	-	2.77	0	3.82	
Above 100 Units	-	3.01	0	3.92	
For peak load requirement above 20kv	220	1.09	0.19	2.83	
Minimum Monthly Charges:	a) Single Phase Connections Rs 150/- b) Three Phase Connection: Rs 300/-				
<i>INDUSTRIAL SUPPLY</i>					
B-1 upto 40 kw	-	1.81	0.20	3.07	
There shall be minimum monthly charges of Rs 70/Kw for first 20 Kilowatts of load and Rs 90/Kw for rest load between 21 - 40 kw					
B-2 (>41-500 kw)	300	1.3	0.20	2.09	
B-2 TOD (Peak)	300	1.98	0.20	2.78	
B-2 TOD (Off Peak)	300	1.2	0.20	2.07	
B-3 (Normal) 11&33 kv not exceeding 5000 k	290	1.29	0.20	2.01	
B-3 TOD (Peak)	290	1.97	0.20	2.26	
B-3 TOD (off Peak)	290	1.15	0.20	1.60	
B-4 Normal 66/132/220 kv - All loads	280	1.24	0.20	1.86	
B-4 TOD (Peak)	280	1.87	0.20	2.20	
B-4 TOD (off Peak)	280	1.11	0.20	1.49	

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted. (Contd.)

2) In addition to above, the "Surcharge" @ 10.4% of supply charges was also leviable

3) Supply charges include fixed charges, energy charges, FAS and low power factor penalty.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 10-5-2003				
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	F.A.S Subsidies Rs/kwh
BULK SUPPLY TARIFFS					
C-1(a) 400 Volts upto 20kw		1.24	0.41	3.42	
C-1(b) 400 Volts above 20kw upto 500 kw	220	1.09	0.41	3.21	
C-2 (a) 11/33KV upto 5000 kw	216	1.06	0.41	2.96	
C-3 66 / 132 / 220 kv - All loads	214	1.04	0.41	2.90	
AGRICULTURAL TUBE-WELL TARIFF-D					
D-1 SCARP	-	1.26	0.50	3.13	0.37
D-2 (i) Punjab & Sindh	82	0.9	0.50	1.59	0.37
D-2 (ii) NWFP & Baluchistan	72	0.75	0.50	1.38	0.37
District Mainwali, Bhawalpur and Tharparkar.					
TEMPORARY SUPPLY TARIFFS					
E-1 (I) Domestic Supply		2.11	0.50	3.68	
E-1 (ii) Commercial Supply		3.79	0	4.74	
Minimum charges E-1(i) and E-1(ii) Rs.46/- per day but not less than Rs.200/-.					
E-2 (I) Industrial Supply		2.36	0.20	3.51	
E-2(II)a Bulk Supply at (400KV)		1.76	0.41	3.85	
E-2(II)b Bulk Supply at (11KV)		1.64	0.41	3.62	
E-2 (III) Bulk Supply to Other Consumers		1.85	0.41	3.67	
F-Seasonal Supply to industries		125% of "Supply and Addition charges" cor. Industrial Tariff			
G-1 (I) Public Lighting Supply		Unit Charges as per Tariff A-1above			
G-1(ii) Other than above in G-1(i)		1.93	0.36	4.57	
RESIDENTIAL COLONIES OF INDUSTRIES					
H-1 Residential Colonies with own transformer		1.45	0.50	4.02	
H-2 Residential Colonies (others)		1.46	0.50	4.04	
OTHERS					
I Railway Traction		1.02	0.46	3.50	
J-1 Cogeneration Tariff (Sale by WAPDA)		1.74	0.37	3.36	
J-2 (a) COG. Tariff (Purchase by WAPDA Dec. July)		1.03			
J-2 (b) COG. Tariff (Purchase by WAPDA Aug-Nov)		0.78			
SPECIAL CONTRACT TARIFF					
K-a AJ&K		1.10	0.42	2.53	
K-b KESC				3.80	
K-c Rawat Lab.		1.88	0.25	2.11	

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted.

2) In addition to above, the "Surcharge" @ 10.4% of supply charges was also leviable

Source: WAPDA.

3) Supply charges include fixed charges, energy charges, FAS and low power factor penalty.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 19-8-2003				
	Fixed/Min	Energy	F.A.S.	Additional	F.A.S
	Charges (Rs/KwM)	Charges (Rs/Kwh)	(Rs/Kwh)	Surcharge (Rs/Kwh)	Subsidies Rs/kwh
<i>GENERAL SUPPLY TARIFF A-1(including FATA)</i>					
Upto 50 Units	-	0.61		0.73	
For Consumption > 50 units upto 1000 units		-	-	-	
For First 100 units	-	0.41	0.53	1.58	0.47
For next 200 units (101-300)	-	0.58	0.53	2.29	0.47
For next 700 units (301-1000)	-	1.51	0.53	3.55	0.47
Above 1000 units	-	1.88	0.41	4.42	0.35
Minimum Monthly Charges:	a) Single Phase Connections Rs 45/- b) Three Phase Connection: Rs 100/-				
<i>GENERAL SUPPLY TARIFF A-2(including FATA)</i>					
For first 100 units	-	2.77	0.03	3.82	
Above 100 Units	-	3.01	0.03	3.92	
For peak load requirement above 20kv	220	1.09	0.22	2.83	
Minimum Monthly Charges:	a) Single Phase Connections Rs 150/- b) Three Phase Connection: Rs 300/-				
<i>INDUSTRIAL SUPPLY</i>					
B-1 upto 40 kw	-	1.81	0.23	3.07	
There shall be minimum monthly charges of Rs 70/Kw for first 20 Kilowatts of load and Rs 90/Kw for rest load between 21 - 40 kw					
B-2 (>41-500 kw)	300	1.3	0.23	2.09	
B-2 TOD (Peak)	300	1.98	0.23	2.78	
B-2 TOD (Off Peak)	300	1.2	0.23	2.07	
B-3 (Normal) 11&33 kv not exceeding 5000 k	290	1.29	0.23	2.01	
B-3 TOD (Peak)	290	1.97	0.23	2.26	
B-3 TOD (off Peak)	290	1.15	0.23	1.60	
B-4 Normal 66/132/220 kv - All loads	280	1.24	0.23	1.86	
B-4 TOD (Peak)	280	1.87	0.23	2.20	
B-4 TOD (off Peak)	280	1.11	0.23	1.49	

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted

Contd.....

2) In addition to above, the "Surcharge" @ 10.4% of supply charges was also leviable

3) Supply charges include fixed charges, energy charges, FAS and low power factor penalty.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 19-8-2003				
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	F.A.S Subsidies Rs/kwh
BULK SUPPLY TARIFFS					
C-1(a) 400 Volts upto 20kw		1.24	0.44	3.42	
C-1(b) 400 Volts above 20kw upto 500 kw	220	1.09	0.44	3.21	
C-2 (a) 11/33KV upto 5000 kw	216	1.06	0.44	2.96	
C-3 66 / 132 / 220 kv - All loads	214	1.04	0.44	2.90	
AGRICULTURAL TUBE-WELL TARIFF-D					
D-1 SCARP	-	1.26	0.53	3.13	0.40
D-2 (i) Punjab & Sindh	82	0.9	0.53	1.59	0.40
D-2 (ii) NWFP & Baluchistan	72	0.75	0.53	1.38	0.40
District Mainwali, Bhawalpur and Tharparkar.					
TEMPORARY SUPPLY TARIFFS					
E-1 (I) Domestic Supply		2.11	0.53	3.68	
E-1 (ii) Commercial Supply		3.79	0.03	4.74	
Minimum charges E-1(i) and E-1(ii) Rs.46/- per day but not less than Rs.200/-.					
E-2 (I) Industrial Supply		2.36	0.23	3.51	
E-2(II)a Bulk Supply at (400KV)		1.76	0.44	3.85	
E-2(II)b Bulk Supply at (11KV)		1.64	0.44	3.62	
E-2 (III) Bulk Supply to Other Consumers		1.85	0.44	3.67	
F-Seasonal Supply to industries		125% of "Supply and Addition charges" cor. Industrial Tariff			
G-1 (I) Public Lighting Supply		Unit Charges as per Tariff A-1above			
G-1(ii) Other than above in G-1(i)		1.93	0.39	4.57	
RESIDENTIAL COLONIES OF INDUSTRIES					
H-1 Residential Colonies with own transformer		1.45	0.53	4.02	
H-2 Residential Colonies (others)		1.46	0.53	4.04	
OTHERS					
I Railway Traction		1.02	0.49	3.50	
J-1 Cogeneration Tariff (Sale by WAPDA)		1.74	0.4	3.36	
J-2 (a) COG. Tariff (Purchase by WAPDA Dec. July)		1.03			
J-2 (b) COG. Tariff (Purchase by WAPDA Aug-Nov)		0.78			
SPECIAL CONTRACT TARIFF					
K-a AJ&K		1.10	0.45	2.53	
K-b KESC				3.80	
K-c Rawat Lab.		1.88	0.28	2.11	

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA/ Source: WAPDA.
 2) In addition to above, the "Surcharge" @ 10.4% of supply charges was also leviable
 3) Supply charges include fixed charges, energy charges, FAS and low power factor penalty.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 1-11-2003				
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	F.A.S Subsidies Rs/kwh
<i>GENERAL SUPPLY TARIFF A-1(including FATA)</i>					
Upto 50 Units	-	0.61		0.73	
For Consumption > 50 units upto 1000 units		-	-	-	
For First 100 units	-	0.41	0.49	1.68	0.43
For next 200 units (101-300)	-	0.58	0.49	2.29	0.43
For next 700 units (301-1000)	-	1.51	0.49	3.55	0.43
Above 1000 units	-	1.88	0.37	4.42	0.31
Minimum Monthly Charges:	a) Single Phase Connections Rs 45/- b) Three Phase Connection: Rs 100/-				
<i>GENERAL SUPPLY TARIFF A-2(including FATA)</i>					
For first 100 units	-	2.7	0.0	3.82	
Above 100 Units	-	2.94	0.0	3.92	
For peak load requirement above 20kv	220	1.09	0.12	2.83	
Minimum Monthly Charges:	a) Single Phase Connections Rs 150/- b) Three Phase Connection: Rs 300/-				
<i>INDUSTRIAL SUPPLY</i>					
B-1 upto 40 kw	-	1.81	0.13	3.07	
There shall be minimum monthly charges of Rs 70/Kw for first 20 Kilowatts of load and Rs 90/Kw for rest load between 21 - 40 kw					
B-2 (>41-500 kw)	300	1.30	0.13	2.09	
B-2 TOD (Peak)	300	1.98	0.13	2.87	
B-2 TOD (Off Peak)	300	1.20	0.13	2.07	
B-3 (Normal) 11&33 kv not exceeding 5000 k	290	1.29	0.13	2.01	
B-3 TOD (Peak)	290	1.97	0.13	2.26	
B-3 TOD (off Peak)	290	1.15	0.13	1.60	
B-4 Normal 66/132/220 kv - All loads	280	1.24	0.13	1.86	
B-4 TOD (Peak)	280	1.87	0.13	2.20	
B-4 TOD (off Peak)	280	1.11	0.13	1.49	

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted Contd.....

2) In addition to above, the "Surcharge" @ 10.4% of supply charges was also leviable

3) Supply charges include fixed charges, energy charges, FAS and low power factor penalty.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 1-11-2003				
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	F.A.S Subsidies Rs/kwh
BULK SUPPLY TARIFFS					
C-1(a) 400 Volts upto 20kw		1.24	0.34	3.42	
C-1(b) 400 Volts above 20kw upto 500 kw	220	1.09	0.34	3.21	
C-2 (a) 11/33KV upto 5000 kw	216	1.06	0.34	2.96	
C-3 66 / 132 / 220 kv - All loads	214	1.04	0.34	2.90	
AGRICULTURAL TUBE-WELL TARIFF-D					
D-1 SCARP	-	1.26	0.49	3.13	0.36
D-2 (i) Punjab & Sindh	82	0.9	0.49	1.59	0.36
D-2 (ii) NWFP & Baluchistan	72	0.75	0.49	1.38	0.36
District Mainwali, Bhawalpur and Tharparkar.					
TEMPORARY SUPPLY TARIFFS					
E-1 (I) Domestic Supply		2.11	0.49	3.68	
E-1 (ii) Commercial Supply		3.72	0	4.74	
Minimum charges E-1(i) and E-1(ii) Rs.46/- per day but not less than Rs.200/-.					
E-2 (I) Industrial Supply		2.36	0.13	3.51	
E-2(II)a Bulk Supply at (400KV)		1.76	0.34	3.85	
E-2(II)b Bulk Supply at (11KV)		1.64	0.34	3.62	
E-2 (III) Bulk Supply to Other Consumers		1.85	0.34	3.67	
F-Seasonal Supply to industries		125% of "Supply and Addition charges" cor. Industrial Tariff			
G-1 (I) Public Lighting Supply		Unit Charges as per Tariff A-1above			
G-1(ii) Other than above in G-1(i)		1.93	0.39	4.57	
RESIDENTIAL COLONIES OF INDUSTRIES					
H-1 Residential Colonies with own transformer		1.45	0.49	4.02	
H-2 Residential Colonies (others)		1.46	0.49	4.04	
OTHERS					
I Railway Traction		1.02	0.49	3.50	
J-1 Cogeneration Tariff (Sale by WAPDA)		1.74	0.40	3.36	
J-2 (a) COG. Tariff (Purchase by WAPDA Dec. July)		1.03			
J-2 (b) COG. Tariff (Purchase by WAPDA Aug-Nov)		0.78			
SPECIAL CONTRACT TARIFF					
K-a AJ&K		1.10	0.41	2.53	
K-b KESC				3.69	
K-c Rawat Lab.		1.88	0.28	2.11	

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA Source: WAPDA.
2) In addition to above, the "Surcharge" @ 10.4% of supply charges was also leviable
3) Supply charges include fixed charges, energy charges, FAS and low power factor penalty.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 1-07-2004					
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. Subsidized (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	Surcharges @ 10.4% (Rs/Kwh)	Total Avg-Rate (Rs/Kwh)
<i>GENERAL SUPPLY TARIFF A-1(including FATA)</i>						
Upto 50 Units	-	0.61		0.73	0.06	1.40
For Consumption > 50 units upto 1000 units		0.00	0.00	0.00		
For First 100 units	-	0.41	0.43	1.48	0.09	2.41
For next 200 units (101-300)	-	0.58	0.43	2.19	0.11	2.31
For next 700 units (301-1000)	-	1.51	0.43	3.45	0.20	5.59
Above 1000 units	-	1.88	0.31	4.32	0.23	6.74
Minimum Monthly Charges:	a) Single Phase Connections Rs 45/- b) Three Phase Connection: Rs 100/-					
<i>GENERAL SUPPLY TARRIF A-2(including FATA)</i>						
For first 100 units	-	2.70	0.00	3.82	0.28	6.80
Above 100 Units	-	2.94	0.00	3.67	0.31	6.92
For peak load requirment above 20kv	220	1.09	0.12	2.83	0.23	5.27
Minimum Monthly Charges:	a) Single Phase Connections Rs 150/- b) Three Phase Connection: Rs 300/-					
<i>INDUSTRIAL SUPPLY</i>						
B-1 upto 40 kw	-	1.81	0.13	2.97	0.20	5.11
There shall be minimum monthly charges of Rs 70/Kw for first 20 Kilowatts of load and Rs 90/Kw for rest load between 21 - 40 kw						
B-2 (>41-500 kw)	300	1.30	0.13	1.99	0.26	4.76
B-2 TOD (Peak)	300	1.98	0.13	2.22	0.36	6.01
B-2 TOD (Off Peak)	300	1.20	0.13	2.07	0.24	4.57
B-3 (Normal) 11&33 kv not exceeding 5000 k	290	1.29	0.13	2.01	0.22	4.38
B-3 TOD (Peak)	290	1.97	0.13	2.68	0.28	4.61
B-3 TOD (off Peak)	290	1.15	0.13	1.60	0.19	3.62
B-4 Normal 66/132/220 kv - All loads	280	1.24	0.13	1.86	0.23	4.29
B-4 TOD (Peak)	280	1.87	0.13	1.69	0.27	4.57
B-4 TOD (off Peak)	280	1.11	0.13	1.49	0.19	3.50

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted.

2) The above tariffs are inclusive of GOP subsidy in FAS and discount in addl. Surcharges

Contd.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 1-07-2004					
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. Subsidized (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	Surcharges @ 10.4% (Rs/Kwh)	Total Avg-Rate (Rs/Kwh)
BULK SUPPLY TARIFFS						
C-1(a) 400 Volts upto 20kw		1.24	0.34	3.42	0.16	5.16
C-1(b) 400 Volts above 20kw upto 500 kw	220	1.09	0.34	3.21	0.20	5.29
C-2 (a) 11/33KV upto 5000 kw	216	1.06	0.34	2.96	0.20	5.09
C-3 66 / 132 / 220 kv - All loads	214	1.04	0.34	2.90	0.19	4.96
AGRICULTURAL TUBE-WELL TARIFF-D						
D-1 SCARP	-	1.26	0.36	3.13	0.17	4.92
D-2 (i) Punjab & Sindh	72	0.90	0.36	1.59	0.16	3.28
D-2 (ii) NWFP & Baluchistan	72	0.75	0.36	1.38	0.13	2.80
District Mainwali, Bhawalpur and Tharparkar.						
TEMPORARY SUPPLY TARIFFS						
E-1 (i) Domestic Supply		2.11	0.49	3.68	0.27	6.55
E-1 (ii) Commercial Supply		3.72	0.00	4.74	0.39	8.85
Minimum charges E-1(i) and E-1(ii) Rs.46/- per day but not less than Rs.200/-.						
E-2 (i) Industrial Supply		2.36	0.13	3.51	0.26	6.26
E-2(ii)a Bulk Supply at (400KV)		1.76	0.34	3.85	0.22	6.17
E-2(ii)b Bulk Supply at (11KV)		1.64	0.34	3.62	0.21	5.81
E-2 (iii) Bulk Supply to Other Consumers		1.85	0.34	3.67	0.23	6.09
F-Seasonal Supply to industries	125% of "Supply and Addition charges" cor. Industrial Tariff					
G-1 (i) Public Lighting Supply	Unit Charges as per Tariff A-1above					
G-1(ii) Other than above in G-1(i)		1.93	0.39	4.57	0.24	7.13
RESIDENTIAL COLONIES OF INDUSTRIES						
H-1 Residential Colonies with own transformer		1.45	0.49	4.02	0.20	6.16
H-2 Residential Colonies (others)		1.46	0.49	4.04	0.20	6.19
OTHERS						
I Railway Traction		1.02	0.49	3.50	0.16	5.17
J-1 Cogeneration Tariff (Sale by WAPDA)		1.74	0.40	3.36	0.22	5.72
J-2 (a) COG. Tariff (Purchase by WAPDA Dec.July)		1.03	0.00	0.00	0.00	1.03
J-2 (b) COG. Tariff (Purchase by WAPDA Aug-Nov)		0.78	0.00	0.00	0.00	0.78
SPECIAL CONTRACT TARIFF						
K-a AJ&K		1.10	0.41	2.53	0.16	4.20
K-b KESC		0.00	0.00	3.69	0.00	6.69
K-c Rawat Lab.		1.88	0.28	2.11	0.22	4.49

Source: WAPDA.

- Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted.
2) The above tariffs are inclusive of GOP subsidy in FAS and discount in addl. Surcharges

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 1-07-2005					
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. Subsidized (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	Surcharges @ 10.4% (Rs/Kwh)	Total Avg-Rate (Rs/Kwh)
<i>GENERAL SUPPLY TARIFF A-1(including FATA)</i>						
Upto 50 Units	-	0.61	0.00	0.73	0.06	1.40
For Consumption Exceeding 50 units						
For First 100 units (1-100)	-	0.41	0.43	1.48	0.09	2.41
For next 200 units (101-300)	-	0.58	0.43	2.19	0.11	2.31
For next 700 units (301-1000)	-	1.51	0.43	3.45	0.20	5.59
Above 1000 units	-	1.88	0.31	4.32	0.23	6.74
Minimum Monthly Charges:	a) Single Phase Connections Rs 45/- b) Three Phase Connection: Rs 100/-					
<i>GENERAL SUPPLY TARRIF A-2(including FATA)</i>						
For first 100 units	-	2.70	0.00	3.82	0.28	6.80
Above 100 Units	-	2.94	0.00	3.67	0.31	6.92
For peak load requirment above 20kv 220	220	1.09	0.12	2.83	0.23	5.27
Minimum Monthly Charges:	a) Single Phase Connections Rs 150/- b) Three Phase Connection: Rs 300/-					
<i>INDUSTRIAL SUPPLY</i>						
B-1 upto 40 kw	-	1.81	0.13	2.97	0.20	5.11
There shall be minimum monthly charges of Rs 70/Kw for first 20 Kilowatts of load and Rs 90/Kw for rest load between 21 - 40 kw						
B-2 (>41-500 kw)	300	1.30	0.13	1.99	0.26	4.76
B-2 TOD (Peak)	300	1.98	0.13	2.22	0.36	6.01
B-2 TOD (Off Peak)	300	1.20	0.13	2.07	0.24	4.57
B-3 (Normal) 11&33 kv not exceeding 5000 k	290	1.29	0.13	2.01	0.22	4.38
B-3 TOD (Peak)	290	1.97	0.13	1.68	0.28	4.61
B-3 TOD (off Peak)	290	1.15	0.13	1.60	0.19	3.62
B-4 Normal 66/132/220 kv - All loads	280	1.24	0.13	1.86	0.23	4.29
B-4 TOD (Peak)	280	1.87	0.13	1.69	0.27	4.57
B-4 TOD (off Peak)	280	1.11	0.13	1.49	0.19	3.50

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted.

2) The above tariffs are inclusive of GOP subsidy in FAS and discount in addl. Surcharges

Contd.

TABLE 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tariff Category/ Particulars	Effective 1-07-2005					
	Fixed/Min Charges (Rs/KwM)	Energy Charges (Rs/Kwh)	F.A.S. Subsidized (Rs/Kwh)	Additional Surcharge (Rs/Kwh)	Surcharges @ 10.4% (Rs/Kwh)	Total Avg-Rate (Rs/Kwh)
<i>BULK SUPPLY TARIFFS</i>						
C-1(a) 400 Volts upto 20kw		1.24	0.34	3.42	0.16	5.16
C-1(b) 400 Volts above 20kw upto 500 kw	220	1.09	0.34	3.21	0.20	5.29
C-2 (a) 11/33KV upto 5000 kw	216	1.06	0.34	2.96	0.20	5.09
C-3 66 / 132 / 220 kv - All loads	214	1.04	0.34	2.90	0.19	4.96
<i>AGRICULTURAL TUBE-WELL TARIFF-D</i>						
D-1 SCARP	-	1.26	0.36	3.13	0.17	4.92
D-2 (i) Punjab & Sindh	72	0.90	0.36	1.59	0.16	3.28
D-2 (ii) NWFP & Baluchistan District Mainwali, Bhawalpur and Tharparkar.	72	0.90	0.36	0.84	0.16	2.53
D-2 Normal	72	0.75	0.36	1.38	0.13	2.80
D-2 (II) TOD NWFP (OFF-PEAK)	72	0.75	0.36	0.63	0.13	2.05
<i>TEMPORARY SUPPLY TARIFFS</i>						
E-1 (I) Domestic Supply		2.11	0.49	3.68	0.27	6.55
E-1 (ii) Commercial Supply		3.72	0.00	4.74	0.39	8.85
Minimum charges E-1(i) and E-1(ii) Rs.46/- per day but not less than Rs.200/-.						
E-2 (I) Industrial Supply		2.36	0.13	3.51	0.26	6.26
E-2(II)a Bulk Supply at (400KV)		1.76	0.34	3.85	0.22	6.17
E-2(II)b Bulk Supply at (11KV)		1.64	0.34	3.62	0.21	5.81
E-2 (III) Bulk Supply to Other Consumers		1.85	0.34	3.67	0.23	6.09
F-Seasonal Supply to industries	125% of "Supply and Addition charges" cor. Industrial Tariff					
G-1 (I) Public Lighting Supply	Unit Charges as per Tariff A-1above					
G-1(ii) Other than above in G-1(i)		1.93	0.39	4.57	0.24	7.13
<i>RESIDENTIAL COLONIES OF INDUSTRIES</i>						
H-1 Residential Colonies with own transformer		1.45	0.49	4.02	0.20	6.16
H-2 Residential Colonies (others)		1.46	0.49	4.04	0.20	6.19
<i>OTHERS</i>						
I Railway Traction		1.02	0.49	3.50	0.16	5.17
J-1 Cogeneration Tariff (Sale by WAPDA)		1.74	0.40	3.36	0.22	5.72
J-2 (a) COG. Tariff (Purchase by WAPDA Dec. July)		1.03	0.00	0.00	0.00	1.03
J-2 (b) COG. Tariff (Purchase by WAPDA Aug-Nov)		0.78	0.00	0.00	0.00	0.78
<i>SPECIAL CONTRACT TARIFF</i>						
K-a AJ&K		1.10	0.41	2.53	0.16	4.20
K-b KESC		0.00	0.00	3.69	0.00	6.69
K-c Rawat Lab.		1.88	0.28	2.11	0.22	4.49

Source: WAPDA.

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted.
2) The above tariffs are inclusive of GOP subsidy in FAS and discount in addl. Surcharges

Table 14.4

SCHEDULE OF ELECTRICITY TARIFFS OF DISCO

TARIFF CATEGORY	Effective from 24-02-2007	
	Fixed Charges (Rs/KW)	Variable Charges (RS/KW)
A-1 GENERAL SUPPLY TARIFF- RESIDENTIAL		
Upto 50 Units per month		1.40
FOR CONSUMPTION EXCEEDING 50 UNITS		
1 - 100 Units per month		2.65
101 - 300 Units per month		3.64
301 - 1000 Units per month		6.15
Above 1000 Units per month		7.41
Time of Day (TOD) - Peak	365.00	6.00
Time of Day (TOD) - Off-Peak	365	3.55
Min. Charges: single & 3/ Phase		Rs 75/- & 150/-
A-2 GENERAL SUPPLY TARIFF - COMMERCIAL		
a) For Sanctioned Load upto 20 KW		
i) For First 100 units		7.48
ii) Above 100 units		7.61
b) For Sanctioned Load exceeding 20 KW	267.17	4.59
c) Time of Use - Peak	365.00	6.00
Time of Use -Off- Peak	365.00	3.55
Min. Charges/month: Single & 3 Phase		Rs 75/- & 350/-
B- INDUSTRIAL SUPPLY TARIFFS		
B-1 upto 40 KW (400 Volts)		5.62
B-2 Load >40 to 500 KW at 400 Volts.	364.32	3.93
B-2 TOD (Peak)	364.32	5.01
B-2 TOD (Off-Peak)	364.32	3.89
B-3 11/33kV TOD -Peak	352.18	4.40
B-3 11/33kV TOD Off-Peak	352.18	3.31
B-4 66/132kV TOD-Peak	340.03	4.29
B-4 TOD (Off-Peak)	340.03	3.15
Min. Charges/month B-1, B-2, B-3 & B-4		
C-SINGLE POINT BULK SUPPLY TARRIFS		
C-1 (a) 400/230 Volts Load upto 20 kW	267.17	5.68
C-1 (b) 400-V- Load 21-500kW	365.00	5.27
C-1 (c) TOD Opt. Peak	365.00	6.00
TOD Off-Peak	262.31	3.55
C-2(a) at 11/33-kV load upto 5000kW	355.00	4.96
C-2 (b) load upto 5000 kW -peak	355.00	5.95
Off-Peak	259.88	3.45
C-3 supply at 66kV & above	340.00	4.86
Time of Day (TOD) Peak	340.00	5.90
Time of Day (TOD) Off-Peak	340.00	3.40
D-AGRICUTURAL TUBEWELL TARIFFS		
D-19(a) - SCARP less than 20kW		5.41
D-2- Agri. T/Wells- Punjab & Sindh	87.44	3.28
D-2- Agri. T/Wells NWFP & Blochistan	87.44	2.87
D-1(b) TOD SCARP & Agri>20kW Peak	3.55	6.00
Off-Peak	3.55	3.55
E-TEMPORARY SUPPLY TARRIFS		
E-1(i) Residential Supply		
E-1(ii) Commercial Supply		
E-2 Industrial Supply		
Min. Charges per day E-1 (i & ii)		Rs 50. Min. 500/-
F- SEASONAL INDUSTRIAL SUPPLY		
		125% of Industrial Tarrif
G- PUBLIC LIGHTINING		
Minimum charges per month per Kw	Rs. 500	7.59
H- Residential Colonies Attached to Industiral Premises		
I- Railway Traction		
J- Special Contracts		
J-1 AJ& K		
Time of use peak		
Off Peak		
J-2 Rawat Lab.		

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted.

Table 14.4

SCHEDULE OF ELECTRICITY TARIFFS OF DISCO

TARIFF CATEGORY	EFFECTIVE FROM 01-03-2008								
	Fixed Charges Rs/KW	Variable Charges Rs/KWh							
		IESCO	LESCO	GEPSCO	FESCO	MEPCO	QESCO	PESCO	HESCO
A-1 GENERAL SUPPLY TARIFF- RESIDENTIAL									
Upto 50 Units per month		1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
FOR CONSUMPTION EXCEEDING 50 UNITS									
1 - 100 Units per month		3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
101 - 300 Units per month		4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
301 - 1000 Units per month		6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53
Above 1000 Units per month		7.79	7.79	7.79	7.79	7.79	7.79	7.79	7.79
Time of Day (TOD) - Peak	315	7.24	7.13	7.22	7.04	7.73	7.84	9.45	9.99
Time of Day (TOD) - Off-Peak	315	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
Min. Charges: single & 3/ Phase	Rs 75/- & 150/-								
A-2 GENERAL SUPPLY TARIFF - COMMERCIAL									
a) For Sanctioned Load upto 20 KW									
i) For First 100 units		7.86	7.86	7.86	7.86	7.86	7.86	7.86	7.86
ii) Above 100 units		7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99
b) For Sanctioned Load exceeding 20 KW	365.00	4.97	4.97	4.97	4.97	4.97	4.97	4.97	4.97
c) Time of Use - Peak	315.00	7.24	7.13	7.22	7.04	7.73	7.84	9.45	9.99
Time of Use -Off- Peak	315.00	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
Min. Charges/month: Single & 3 Phase	Rs 75/- & 360/-								
B- INDUSTRIAL SUPPLY TARIFFS									
B-1 upto 40 KW (400 Volts)		6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
B-2 Load >40 to 500 KW at 400 Volts.	315.00	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63
B-2 TOD (Peak)	315.00	7.24	7.13	7.22	7.04	7.73	7.84	9.45	9.99
B-2 TOD (Off-Peak)	315.00	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
B-3 11/33kV TOD -Peak	305.00	6.99	6.88	6.97	6.79	7.48	7.59	9.2	9.59
B-3 11/33kV TOD Off-Peak	305.00	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88
B-4 66/132kV TOD-Peak	295.00	6.74	6.63	6.72	6.54	7.23	7.34	8.95	9.19
B-4 TOD (Off-Peak)	395.00	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
Min. Charges/month B-1, B-2, B-3 & B-4	Rs. 350, 2000, 50,000 & 500,000 respectively								
C-SINGLE POINT BULK SUPPLY TARRIFS									
C-1 (a) 400/230 Volts Load upto 20 kW		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
C-1 (b) 400-V- Load 21-500kW	315.00	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68
C-1 (c) TOD Opt. Peak	315.00	7.24	7.13	7.22	7.04	7.73	7.84	9.45	9.99
TOD Off-Peak	315.00	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
C-2(a) at 11/33-kV load upto 5000kW	305.00	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38
C-2 (b) load upto 5000 kW -peak	305.00	6.99	6.88	6.97	6.79	7.48	7.59	9.2	9.59
Off-Peak	305.00	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88
C-3 supply at 66kV & above	295.00	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28
Time of Day (TOD) Peak	295.00	6.74	6.63	6.72	6.54	7.23	7.34	8.95	9.19
Time of Day (TOD) Off-Peak	295.00	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
D-AGRICUTURAL TUBEWELL TARIFFS									
D-19(a) - SCARP less than 20kW		5.99	5.88	5.97	5.94	6.48	7.59	7.7	7.59
D-2- Agri. T/Wells- Punjab & Sindh	90.00	3.73	3.73	3.73	3.73	3.73	3.73	3.73	3.73
D-2- Agri. T/Wells NWFP & Blochistan	90.00	3.73	3.73	3.73	3.73	3.73	3.73	3.73	3.73
D-1(b) TOD SCARP & Agri>20kW Peak	305.00	7.24	7.13	7.22	7.04	7.73	7.84	9.45	9.99
Off-Peak	305.00	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13
E-TEMPORARY SUPPLY TARRIFS									
E-1(i) Residential Supply		7.90	7.79	7.97	7.94	8.48	9.59	10.7	11.19
E-1(ii) Commercial Supply		8.10	7.99	8.17	8.19	8.88	9.79	11.2	12.59
E-2 Industrial Supply		6.11	6	6.47	6.94	6.98	7.09	6.7	8.59
Min. Charges per day E-1(i & ii)		Rs. 500, Min. 500/-							
F- SEASONAL INDUSTRIAL SUPPLY		125% of relvent industrial tariff							
G- PUBLIC LIGHTINING		8.08	7.97	8.22	8.19	8.48	8.34	8.7	11.59
Minimum charges per month per Kw		500.00							
H- Residential Colonies Attached to Industiral Premises		7.27	7.16	7.47	7.44	7.73		7.8	10.59
I- Railway Traction		6.07							
J- Special Contracts									
J-1 AJ& K	355	2.59		2.59				2.59	
Time of use peak	295	7.24		7.22				9.45	
Off Peak	295	3.99		3.97				4.2	
J-2 Rawat Lab.		5.43							

Note: 1) The above figures cover some portion of the tariffs schedule. For full details, WAPDA may be consulted.

Table 14.4

SCHEDULE OF ELECTRICITY TARIFFS

Tarrif Category	Effective from Feb, 2009 (FOR ALL DISCOs)	
	Fixed Charges (Rs/Kwh)	Variables Charges (Rs/Kwh)
A-1 General Supply Tarrif - Domestic		
Schedule-II		
A-1(a) For Sanctioned Load upto 5 KW		
i. Upto 50 Units		1.40
For Consumption Exceeding 50 Units		
ii. 1 - 100 Units		3.29
iii. 101-300 Units		4.96
iv. 301 - 700 Units		8.03
v. Above 700 Units		10.00
A-1(b) For Sanctioned Load exceeding 5 KW		
Time of Use (TOU) - Peak		9.21
Time of Use (TOU) - Off Peak		5.62
<i>Minimum Monthly Charges for: S/ Phase Rs. 75/- & 3/Phase Rs. 150/-</i>		
A-2 GENERAL SUPPLY TARIFF - COMMERCIAL		
A-2(a) For Sanctioned Load upto 5 KW	315	9.81
A-2(b) For Sanctioned Load exceeding 5 KW	315	6.12
A-2(c) Time of Use - Peak	315	8.65
Time of use - Off Peak		5.28
<i>Minimum Monthly Charges for: S/ Phase Rs. 175/- & 3/Phase Rs. 350/-</i>		
B- INDUSTRIAL SUPPLY TARRIFS		
B-1 Upto 5 KW (400/230 Volts)		7.38
B-2(a) Load 6 - 500 KW (at 400 volts)	315	5.71
B-2(b) 6 - 500 KW TOU Peak	315	8.65
B-2(b) 6 - 500 KW TOU Off Peak	315	5.28
B-3 For All Loads upto 5000 KW (at 11/33kv) - Peak	305	8.34
B-3 For All Loads upto 5000 KW (at 11/33kv) - Off Peak	305	4.79
B-4 For All Loads (at 66, 132 kv & above) - Peak	295	8.04
B-4 For All Loads (at 66, 132 kv & above) - Off Peak	295	4.49
<i>Fixed Min. Charges/month for B-1 Rs. 350/-, B-2 Rs. 2000/-, B-3 Rs. 50,000/- & B-4 Rs. 500,000/-</i>		
C-BULK SUPPLY TARIFFS		
C-1(a) For supply at 400/230 volts, load upto 5 KW	-	7.46
C-1(b) Load above 5 KW & upto 500 KW	315	6.88
C-1(c) load > 5 & upto 500 KW Peak	315	8.51
C-1(c) load > 5 & upto 500 KW Off Peak	315	5.20
C-2(a) 11/33 kV upto load 5000 KW	305	6.52
C-2(b) 11/33 kV upto load 5000 KW Peak	305	8.21
C-2(b) 11/33 kV upto load 5000 KW Off Peak	305	4.72
C-3(a) 66 kV & above, loads > 5000 KW	295	6.40
C-3(b) 66 kV & above, loads > 5000 KW Peak	295	7.91
C-3(b) 66 kV & above, loads > 5000 KW Off Peak	295	4.42
D-AGRICULTURE TUBEWELL TARIFFS		
D-1(a) Scarp less than 5 KW		6.37
D-2 Agricultural Tube Wells	90	4.00
D-1(b) TOU for SCARP & Agri. - Peak	315	7.61
TOU for SCARP & Agri. - Off Peak	315	3.42
E- TEMPORARY SUPPLY TARIFFS		
E-1(i) Residential Supply	-	10.00
E-1(ii) Commercial Supply	-	10.50
E-2 Industrial Supply	-	7.50
<i>Minimum Monthly charges for E1 (i & ii) Rs. 50/day subject to a minimum of Rs. 500/-</i>		
OTHERS TARIFFS		
F - SEASONAL SUPPLY TARIFF		
G - PUBLIC LIGHTING TARIFF		9.62
<i>Minimum Monthly Charges Rs. 500/- per KW month of lamp capacity installed</i>		
H-RESIDENTIAL COLONIES OF INDUSTRIES		8.65
I - RAILWAYS Traction		7.50
K - SPECIAL CONTRACTS		
K(1) AJ&K	295	3.17
K(1) AJ&K TOU - Peak	295	8.72
K(1) AJ&K TOU - Off Peak	295	4.82
Rawat Lab		6.58

TABLE 14.5
OIL SALE PRICES

Date	01-07-2005	01-08-2005	16-08-2005	01-09-2005	16-09-2005	Rs/Ltrs 01-10-2005
Ex-Depot Sale Price						
Motor Gasoline	48.94	48.94	48.94	52.61	52.29	56.29
HOBC (Automotive 100 Octane)	54.33	54.33	54.33	58.40	58.40	62.77
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	29.53	29.53	29.53	31.00	31.00	32.87
HSD	31.74	31.74	31.74	34.59	34.59	37.18
LDO	27.84	27.84	27.84	29.22	29.22	30.97
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	31.27	30.48	32.10	33.75	34.88	34.07
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	31.54	31.51	33.53	35.31	36.9	35.93

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	01-11-2005	16-11-2005	01-12-2005	16-12-2005	01-01-2006	
Ex-Depot Sale Price						
Motor Gasoline	56.29	56.29	56.29	56.29	56.29	
HOBC (Automotive 100 Octane)	62.77	62.77	62.77	62.77	62.77	
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	32.87	32.87	32.87	32.87	32.87	
HSD	37.18	37.18	37.18	37.18	37.18	
LDO	30.97	30.97	30.97	30.97	30.97	
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight		31.59	28.34	28.78	29.89	32.15
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4		33.87	31.44	31.33	32.36	33.37

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	16-01-2006	01-02-2006	16-02-2006	01-03-2006	16-03-2006	01-04-2006
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	56.29	56.29	56.29	56.29	56.29	56.29
HOBC (Automotive 100 Octane)	62.77	62.77	62.77	62.77	62.77	62.77
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	32.87	32.87	32.87	32.87	32.87	32.87
HSD	37.18	37.18	37.18	37.18	37.18	37.18
LDO	30.97	30.97	30.97	30.97	30.97	30.97
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	32.57	33.93	33.61	32.89	33.72	34.37
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	34.04	35.50	35.11	34.83	35.86	36.52

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	16-04-2006	01-05-2006	16-05-2006	01-06-2006	16-06-2006	1-07-2006
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	56.29	57.70	57.70	57.70	57.70	57.70
HOBC (Automotive 100 Octane)	62.77	64.88	64.88	64.88	64.88	64.88
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	32.87	35.23	35.23	35.23	35.23	35.23
HSD	37.18	38.73	38.73	38.73	38.73	38.73
LDO	30.97	32.57	32.57	32.57	32.57	32.57
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	35.86	39.22	38.73	37.51	38.66	37.98
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	37.75	40.33	40.35	39.22	40.24	40.09

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	16-07-2006	01-08-2006	16-08-2006	01-09-2006	16-09-2006	01-10-2006
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	57.70	57.70	57.70	57.70	57.70	57.70
HOBC (Automotive 100 Octane)	64.88	64.88	64.88	64.88	64.88	64.88
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	35.23	35.23	35.23	35.23	35.23	35.23
HSD	38.73	38.73	38.73	38.73	38.73	38.73
LDO	32.57	32.57	32.57	32.57	32.57	32.57
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	38.64	39.48	40.00	39.40	38.04	34.22
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	41.30	44.71	41.52	40.48	38.39	35.41

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	16-10-2006	01-11-2006	16-11-2006	01-12-2006	16-12-2006	01-01-2007
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	57.70	57.70	57.70	57.70	57.70	57.70
HOBC (Automotive 100 Octane)	64.88	64.88	64.88	64.88	64.88	64.88
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	35.23	35.23	35.23	35.23	35.23	35.23
HSD	38.73	38.73	38.73	38.73	38.73	38.73
LDO	32.57	32.57	32.57	32.57	32.57	32.57
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	33.49	33.05	32.66	33.25	35.20	34.32
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	35.03	34.86	34.82	35.34	37.09	36.49
JP-8						39.61

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	16-01-2007	01-02-2007	16-02-2007	01-03-2007	16-03-2007	01-04-2007
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	53.70	53.70	53.70	53.70	53.70	53.70
HOBC (Automotive 100 Octane)	64.88	64.88	64.88	64.88	64.88	64.88
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	35.23	35.23	35.23	35.23	35.23	35.23
HSD	37.73	37.73	37.73	37.73	37.73	37.73
LDO	32.57	32.57	32.57	32.57	32.57	32.57
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	31.52	30.57	31.66	31.75	33.22	33.53
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	33.93	33.30	35.02	35.63	37.87	38.11
JP-8	36.65	35.64	36.80	36.89	38.46	38.78

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	1-05-2007	16-05-2007	01-06-2007	10-06-2007	16-06-2007	01-07-2007
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	53.70	53.70	53.70	53.70	53.70	53.70
HOBC (Automotive 100 Octane)	64.88	64.88	64.88	64.88	64.88	64.88
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	35.23	35.23	35.23	35.23	35.23	35.23
HSD	37.73	37.73	37.73	37.73	37.73	37.73
LDO	32.57	32.57	32.57	32.57	32.57	32.57
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	36.48	36.58	37.03	36.96	36.90	38.07
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	40.89	41.29	42.23	41.91	40.86	41.30
JP-8	41.91	42.01	42.49	42.06	42.00	43.22

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	16-07-2007	01-08-2007	16-08-2007	01-09-2007	16-09-2007	01-10-2007
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	53.70	53.70	53.70	53.70	53.70	53.70
HOBC (Automotive 100 Octane)	64.88	64.88	64.88	64.88	64.88	64.88
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	35.23	35.23	35.23	35.23	35.23	35.23
HSD	37.73	37.73	37.73	37.73	37.73	37.73
LDO	32.37	32.57	32.57	32.57	32.57	32.57
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	38.67	39.34	38.36	37.38	39.19	40.96
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	42.44	42.32	41.15	40.50	41.94	43.83
JP-8	43.86	44.55	43.53	42.49	44.40	46.26

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	16-10-2007	01-11-2007	16-11-2007	02-12-2007	16-12-2007	01-01-2008
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	53.70	53.70	53.70	53.70	53.70	53.70
HOBC (Automotive 100 Octane)	64.88	64.88	64.88	64.88	64.88	64.88
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	35.23	35.23	35.23	35.23	35.23	35.23
HSD	37.73	37.73	37.73	37.73	37.73	37.73
LDO	32.57	32.57	32.57	32.57	32.57	32.57
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	41.12	44.13	49.68	50.89	47.89	48.85
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	44.21	46.89	51.42	52.69	50.61	51.73
JP-8	46.43	49.58	55.42	56.68	53.53	54.54

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	17-01-2008	01-02-2008	17-02-2008	01-03-2008	17-03-2008	01-04-2008
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	53.70	53.70	53.70	58.70	62.81	62.81
HOBC (Automotive 100 Octane)	64.88	64.88	64.88	64.88	74.77	74.77
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	35.23	35.23	35.23	38.37	41.13	41.13
HSD	37.73	37.73	37.73	41.23	44.13	44.13
LDO	32.57	32.57	32.57	36.07	38.59	38.59
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	49.98	47.39	48.83	52.77	56.45	59.47
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	53.07	51.06	52.06	55.46	57.79	59.17
JP-8	55.72	53.02	54.51	58.66	62.53	65.69

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	18-04-2008	01-05-2008	16-05-2008	01-06-2008	21-06-2008	29-06-2008
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	65.81	68.81	68.81	68.81	68.81	75.23
HOBC (Automotive 100 Octane)	77.77	80.77	80.77	80.77	80.77	88.85
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	41.44	41.44	41.44	41.44	41.44	49.73
HSD	47.13	50.13	50.13	50.13	50.13	55.14
LDO	41.59	44.59	44.59	44.59	44.59	49.05
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	62.31	67.33	72.25	84.90	80.07	81.40
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	61.32	65.70	70.02	80.05	73.59	76.13
JP-8	65.69	73.95	79.11	92.39	83.29	84.62

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	01-07-2008	21-07-2008	01-08-2008	16-08-2008	01-09-2008	16-09-2008
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	75.69	86.66	86.66	86.66	86.66	81.66
HOBC (Automotive 100 Octane)	88.85	96.08	96.08	96.08	96.08	96.08
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	49.73	58.37	58.37	58.37	58.37	61.87
HSD	55.14	64.64	64.64	64.64	64.64	68.14
LDO	49.05	56.50	56.50	56.50	56.50	60.00
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	82.10	90.36	86.11	77.07	75.34	71.44
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	76.79	83.75	79.45	72.59	72.13	68.56
JP-8	85.35	93.6	89.34	80.31	78.57	74.66

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5
OIL SALE PRICES

Date	01-10-2008	16-10-2008	01-11-2008	16-11-2008	01-12-2008	16-12-2008
Rs/Ltrs						
Ex-Depot Sale Price						
Motor Gasoline	81.66	81.66	76.66	66.66	57.66	57.66
HOBC (Automotive 100 Octane)	96.08	96.08	96.08	81.08	72.08	72.08
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)						
Kerosene	61.87	61.87	61.87	56.87	51.87	51.87
HSD	68.14	68.14	68.14	61.14	57.14	57.14
LDO	60.00	60.00	60.00	53.00	48.00	48.00
Aviation gasoline (100LL)						
JP-1:						
i) For sale to PIA Domestic Flight	69.01	59.75	50.90	48.57	42.54	36.40
ii) For sale to PIA foreign flights & foreign airline						
iii) For Cargo & Technical Landing Flights						
JP-4	64.36	55.26	42.66	37.67	33.55	30.73
JP-8	72.22	62.96	54.10	51.77	45.75	39.61

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.5

OIL SALE PRICES

Date	Rs/Ltrs			
	01-01-2009	01-02-2009	01-03-2009	01-04-2009
Ex-Depot Sale Price				
Motor Gasoline	57.66	57.66	57.66	57.66
HOBC (Automotive 100 Octane)	72.08	72.08	72.08	72.08
Super (90 Octane) Blend of Motor Gasoline @ 60% and HOBC 40%)				
Kerosene	51.87	51.87	51.87	51.87
HSD	57.14	57.14	57.14	57.14
LDO	48.00	48.00	48.00	48.00
Aviation gasoline (100LL)				
JP-1:				
i) For sale to PIA Domestic Flight	35.89	35.62	31.24	31.83
ii) For sale to PIA foreign flights & foreign airline				
iii) For Cargo & Technical Landing Flights				
JP-4	31.40	33.54	32.60	33.50
JP-8	39.09	38.84	34.45	35.04

Source: Hydrocarban Development Institute of Pakistan(HDIP)

TABLE 14.6

GAS SALE PRICES

Category	(Rs/mcft)							
	20-08-2002	25-10-2002	21-03-2002	20-08-2008	1-7-2003	1-7-2004	1.12.2004	2-2-2005
DOMESTIC (Slab)								
i Upto 1.77 M cu.ft./ Month	66.86	67.95	67.95	67.95	69.31	73.95	73.95	73.95
ii Upto 1.77 to 3.55 M cu.ft./ Month	100.73	102.37	102.37	102.37	104.42	111.42	111.42	120.61
iii Upto 3.55 to 7.1 M cu.ft./ Month	161.16	163.78	163.78	163.78	167.06	178.25	178.25	192.96
iv Upto 7.1 to 10.64 M cu.ft./ Month	201.45	213.06	213.06	213.06	217.32	231.88	231.88	251.01
v Upto 10.64 to 14.20 M cu.ft./ Month								
vi Upto 4.20 to 17.75 M cu.ft./ Month	217.85							
vii All over 17.75								
COMMERCIAL	186.98	190.02	190.02	190.02	193.82	204.88	204.88	221.78
General Industry	166.18	168.88	168.88	168.88	172.26	182.09	182.09	197.11
Cement	222.32	222.32	222.32	222.32	209.78	209.78	209.78	227.09
CNG Station	166.18	168.88	168.88	168.88	172.26	182.09	182.09	197.11
Pakistan Steel							182.09	
Captive Power								
Independent Power Projects								
FERTILIZER								
<u>SNGPL'S SYSTEM</u>								
i For Feed Stock								
Pak.Americal Fertilizer Ltd.PAFL	36.77	36.77	36.77	36.77	36.77	36.77	36.77	36.77
F.F.C Jordan	36.77	36.77	36.77	36.77	36.77	36.77	36.77	36.77
Dawood Hercules/ Pak Arab	62.57	62.57	62.57	62.57	67.26	73.99	73.99	73.99
Pak china/ Hazara	66.40	66.40	66.40	66.40	71.38	78.52	78.52	78.52
ii For Fuel Generation	166.18	168.88	168.88	168.88	172.26	182.09	182.09	197.11
Dawood and Pak Arab	168.88	168.88	168.88					
<u>FOR MARI GAS CO. SYSTEM</u>								
i For Feed Stock								
(a) Engro Chemical	13.09	13.09	61.68	61.68	66.31	72.94	72.94	72.94
FFC	61.68	61.68	61.68	61.68	66.31	72.94	72.94	72.94
(b) Pak Saudi	61.68	61.68	61.68	61.68	66.31	72.94		72.94
ii For Power Generation	166.18	166.88	168.88	168.88	172.26	182.09	182.09	182.09
POWER Stations								
SNGPL & SSGCL'S SYSTEM	166.18	168.88	168.88	168.88	172.26	182.09	182.09	197.11
Liberty Power Ltd.	190.80	190.80	190.80	222.89	235.77	234.33	235.76	262.03
GAS DIRECTLY SOLD TO								
<u>WAPDA'S GUDDU POWER STATION</u>								
SUI FIELD (917 BTU)	145.51							
KANDHKOT FIELD (866 BTU)	160.54	163.15	163.15	163.15	166.41	175.90	175.90	190.41
MARI FIELD (754 BTU)	156.14	158.68	158.68	158.68	161.85	171.08	171.08	185.19
SARA/SURI FIELD	156.14	158.68	158.68	158.68	161.85	171.08	171.08	185.19

(Contd.)

Billing/pricing system changed from Rs. Per thousand cubic feet to Rs. Per million btu w.e.f.1-1-2002

TABLE 14.6

GAS SALE PRICES

	(Rs/mcft)						
Category	1-7-2005	1-1-2006	1-7-2006	1-2-2007	1-1-2008	30-6-2008	01-01-2009
DOMESTIC (Slab)							
i Upto 1.77 M cu.ft./ Month	73.95	80.98	85.03	78.38	78.38	78.38	82.30
ii Upto 1.77 to 3.55 M cu.ft./ Month	127.62	147.41	89.03	82.07	82.07	82.07	86.17
iii Upto 3.55 to 7.1 M cu.ft./ Month	204.17	235.84	162.07	149.40	149.40	149.40	156.87
iv Upto 7.1 to 10.64 M cu.ft./ Month	265.59	306.79	259.29	239.01	239.01	313.10	332.12
v Upto 10.64 to 14.20 M cu.ft./ Month			337.30	310.92	310.92	407.31	432.06
vi Upto 4.20 to 17.75 M cu.ft./ Month						529.50	561.67
vii All over 17.75							730.17
COMMERCIAL	234.67	271.07	298.03	268.23	283.05	370.80	393.33
General Industry	208.56	240.91	264.87	238.38	251.55	329.54	339.43
Cement	240.28	277.55	305.15	305.15	335.67	428.89	454.95
CNG Station	208.56	240.91	264.87	238.38	291.36	388.32	427.15
Pakistan Steel	208.56						
Captive Power	208.56	240.91	264.87	238.38	251.55	422.60	339.43
Independent Power Projects							295.03
FERTILIZER							
i For Feed Stock							
(i)For Feed Stock							
Pak.Americal Fertilizer Ltd.PAFL	36.77	36.77	36.77	36.77	36.77	36.77	36.77
F.F.C Jorden	36.77	36.77	36.77	36.77	36.77	36.77	102.01
Dawood Hercules/ Pak Arab	83.24	83.24	91.52	91.52	91.52	91.52	96.14
ii For Fuel Generation	88.34	88.34	97.11	97.11	97.11	97.11	102.01
(ii)For Fuel Generation	208.56	240.91	264.87	238.38	251.55	329.54	339.43
Dawood and Pak Arab							
i For Feed Stock							
(i)For Feed Stock							
(a) Engro Chemical	82.06	82.06	90.22	90.22	90.22	90.22	94.78
FFC	82.06	82.06	90.22	90.22	90.22	90.22	94.78
ii For Power Generation	82.06						
(ii)For Power Generation	208.56		264.87	238.38	251.55	329.54	339.43
POWER Stations							
SNGPL & SSGCL'S SYSTEM	208.56		264.87	238.38	251.55	329.54	349.56
Liberty Power Ltd.	303.25	303.25	467.52	445.98	443.06	443.06	848.10
GAS DIRECTLY SOLD TO							
WAPDA'S GUDDU POWER STATION							
SUI FIELD (917 BTU)							
KANDHKOT FIELD (866 BTU)	201.47	232.72	255.86	230.28	243.00	318.34	337.68
MARI FIELD (754 BTU)	195.95	226.34	248.85	223.96	236.34	309.61	328.42
SARA/SURI FIELD	195.95		248.85	223.96	236.34	309.61	

Source : Hydrocarbon Development Institute of Pakistan

Billing/pricing system changed from Rs. Per thousand cubic feet to Rs. Per million btu w.e.f.1-1-2002