CHAPTER-I

INTRODUCTION, OBJECTIVES AND DATA COLLECTION

INTRODUCTION

This report is the twenty-sixth in the series compiled by Federal Bureau of Statistics (FBS). The first census report was brought out for the year 1962-63. This report presents data for the year 2003-04 (July-June) at national and provincial levels.

The census covered all public and private sector electricity establishments engaged in generation, transmission and distribution of electricity whether Hydel, Thermal or Nuclear during the year 2003-04.

OBJECTIVES

The main objective of the census is to derive value addition of electricity sub-sector in the national economy. The census aims at collecting information on fixed assets, installed capacity by type of plants, electricity generated, electricity consumption and number of consumers by sectors, industrial cost, gross value of production, value added, electricity consumed in auxiliaries.

DATA COLLECTION

The census of electricity establishments is conducted through mail. Census questionnaires (Annexure-I) were dispatched to all the 50 electricity establishments (public & private). The frame of electricity establishments was obtained from the Ministry of Water & Power. As a result of hectic efforts and vigorous follow up, response from all the 41 functioning electricity establishments (Annexure-II) was obtained.

CHAPTER-II

CONCEPTS AND DEFINITIONS

ELECTRICITY ESTABLISHMENTS: Any public/private utility establishment, which is engaged in generation, transmission and distribution of electricity

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WATT: Watt is a unit of power. A watt is defined as the rate of doing one joule (J) of work in one second. Common units of power are multiple of the watt. These are as under:

One Watt (W)	=	01 J/S
One kilowatt (KW)	=	10^3 J/S
One Megawatt (MW)	=	10^6 J/S
One Gigawatt (GW)	=	10^9 J/S

KILOWATT HOUR: Kilowatt hour is a precise measure of energy and work. It is the work equivalent to 1000 watts (Joules per second) over one hour time.

Work	=	Power x Time
One Kilowatt hour (Kwh)	=	$3.6x10^3$ Joules
One Million watt hour (Mwh)	=	$3.6x10^6$ Joules
One Giga watt hour (Gwh)	=	$3.6x10^9$ Joules

AUXILIARIES CONSUMPTION: Electricity consumed in the power station during electricity generation.

SYSTEM LOSSES: Electricity lost in the process of transmission and distribution of electricity.

BULK SUPPLY: Electricity sold in bulk to distributing licensees.

VALUE ADDED: It is the difference between the value of output and industrial cost.

INDUSTRIAL COST: It consists of cost of fuel, lubricants and spare parts.

FIXED ASSETS: Consists of land, buildings, plant & machinery, transport equipment, furniture and fixtures etc which are expected to have productive life of more than one year and are in use by the establishment for generation, transmission and distribution of electricity.

CHAPTER-III

MAIN FINDINGS

INSTALLED CAPACITY

The installed capacity of all electricity establishments during the census year 2003-04 stood at 20,360 Mega watts (MW) as compared to 17,564 MW in the year 1999-00 showing average per annum increase of 3.75%. Year-wise installed capacity of electricity and percent change since 1990-91 is given in Table-1.

TABLE-1

INSTALLED CAPACITY OF ELECTRICITY GENERATION

(MW)

YEAR	INSTALLED CAPACITY	PERCENT CHANGE	YEAR	INSTALLED CAPACITY	PERCENT CHANGE
1990-91	9,094	-	1996-97	14,893	13.2
1991-92	9,533	4.8	1997-98	15,860	6.5
1992-93	10192	6.9	1998-99	15,860	-
1993-94	11,721	15.0	1999-00	17,564	10.7
1994-95	12,894	2.0	2003-04	20,360	3.75
1995-96	13,154	10.0			

ELECTRICITY GENERATION:

The power generation increased sharply in the current financial year (2003-04) which is likely to lift the Gross Domestic Product (GDP) to a higher level. The generation of electricity during the year 2003-04 stood at 83,607 GWH as against 66,562 GWH in the year 1999-00. It was 5.9% per annum average increase as compared to the year 1999-00. Year-wise electricity generation and annual percent change since 1990-91 is given in Table-2.

TABLE-2

ELECTRICITY GENERATION

(GWH)

YEAR	ELECTRICITY GENERATION	PERCENT CHANGE	YEAR	ELECTRICITY GENERATION	PERCENT CHANGE
1990-91	41,918	8.9	1996-97	59,894	3.7
1991-92	45,876	10.3	1997-98	62,915	5.0
1992-93	48,912	5.8	1998-99	65,871	4.7
1993-94	51,474	5.2	1999-00	66,562	1.0
1994-95	54,530	5.9	2003-04	83,607	5.9
1995-96	57,732	5.9			

INSTALLED CAPACITY BY TYPE OF PLANT:

Installed capacity by type of plant i.e. Hydel, Thermal and Nuclear for the years 1990-91 to 2003-04 is given in Table-3

TABLE-3

INSTALLED CAPACITY BY TYPE OF PLANT

(MW)

YEAR	TOTAL	HYDEL	THERMAL	NUCLEAR
1990-91	9,094	2,898	6,059	137
1991-92	9,534	3,330	6,067	137
1992-93	10,192	3,761	6,294	137
1993-94	11,721	4,725	6,859	137
1994-95	12,894	4,826	7,931	137
1995-96	13,154	4,826	8,191	137
1996-97	14,983	4,826	10,020	137
1997-98	15,860	4,826	10,897	137
1998-99	15,860	4,826	10,897	137
1999-00	17,564	4,826	12,601	137
2003-04	20,360	6,464	13,434	462

ELECTRICITY GENERATION BY TYPE OF PLANT

The electricity generation by type of plant i.e. Hydel, Thermal and Nuclear for the years 1990-91 to 2003-04 is given in Table-4.During the year under report, the energy generated from all sources was 83,607 GWH. This includes generation from WAPDA, KESC, IPPs and Captive units. The power generation from Hydel and Thermal during 2003-04 remained at 81847 GWH given in Table-4 average per annum increase of 5.5% over the years 1999-2000.

TABLE-4

ELECTRICITY GENERATION BY TYPE OF PLANT

GWH)

YEAR	TOTAL	HYDEL	THERMAL	NUCLEAR
1990-91	41,918	18,298	23,235	385
1991-92	45,876	18,647	26,811	418
1992-93	48,912	21,112	27,218	582
1993-94	51,474	19,436	31,541	497
1994-95	54,530	22,858	31,161	511
1995-96	57,732	23,206	34,043	483
1996-97	59,894	20,858	38,690	346
1997-98	62,915	22,060	40,480	375
1998-99	65,871	22,449	43,138	284
1999-00	66,562	19,288	46,875	399
2003-04	83,607	27,372	54,475	1,760

Figure-1

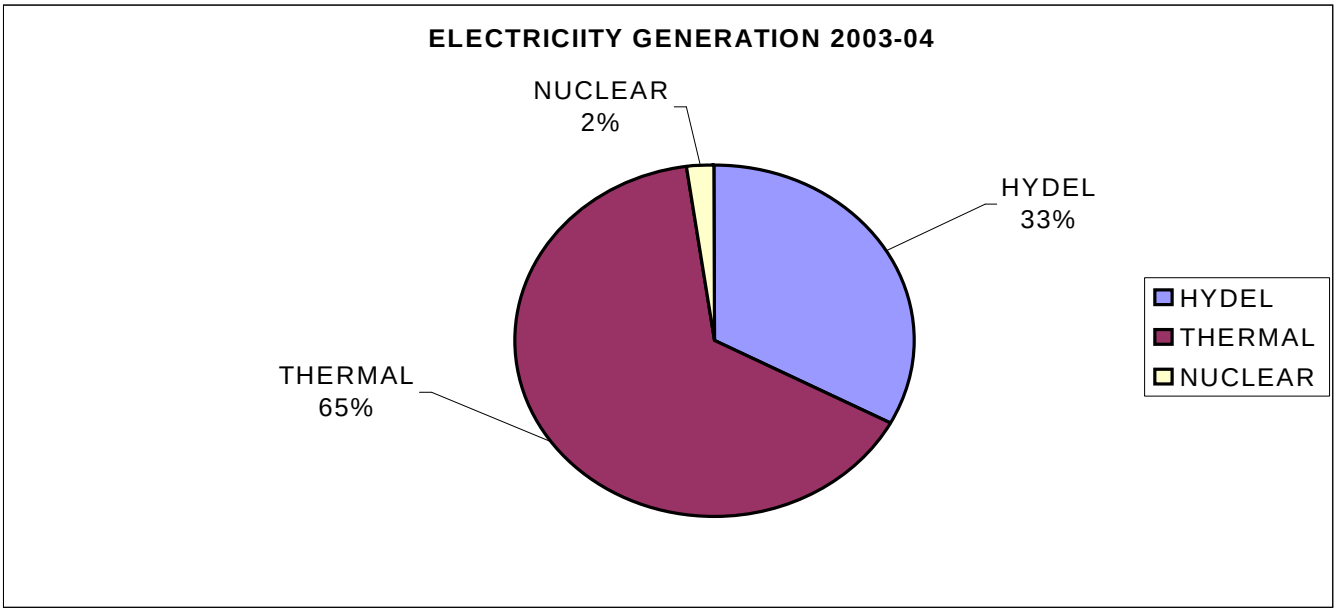


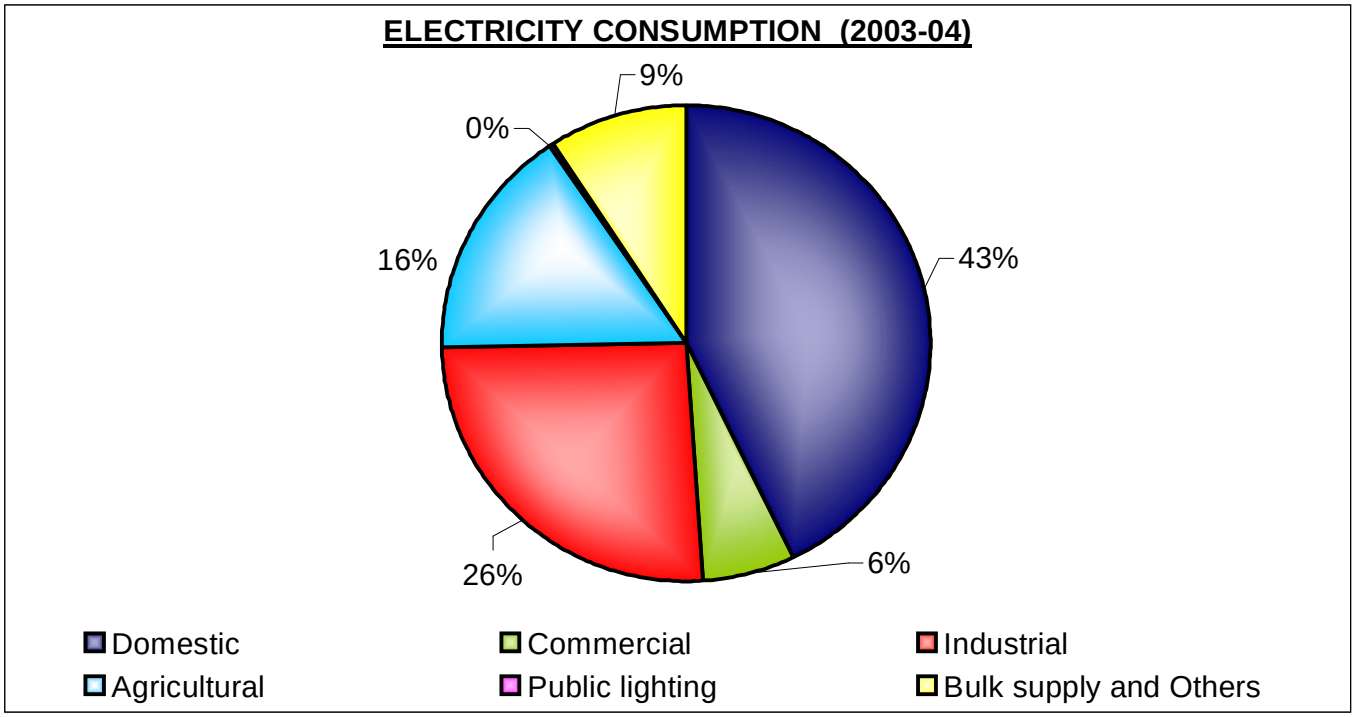
TABLE-5

ELECTRICITY CONSUMPTION BY SECTOR

(GWH)

SECTOR	1998-99		1999-00		2003-04	
	Units	%	Units	%	Units	%
Total	45,756	100.0	46,358	100.0	59,316	100.00
Domestic	19,268	42.1	21,485	46.4	25,394	42.81
Commercial	2,381	5.2	2,544	5.5	3,586	6.05
Industrial	12,924	28.3	13,972	30.1	15,354	25.88
Agriculture	5,620	12.3	4,542	9.8	9,344	15.75
Public Lighting	225	0.5	239	0.5	271	0.46
Bulk Supply & others	5,338	11.6	3,576	7.7	5,367	9.05

Figure-2



NUMBER OF CONSUMERS:

The number of consumers during the year 2003-04 was recorded as 15,841 thousand as compared to 13,192 thousand in the year 1999-00 showing average increase of 4.7% per annum. Sector-wise number of consumers is given in Table-6

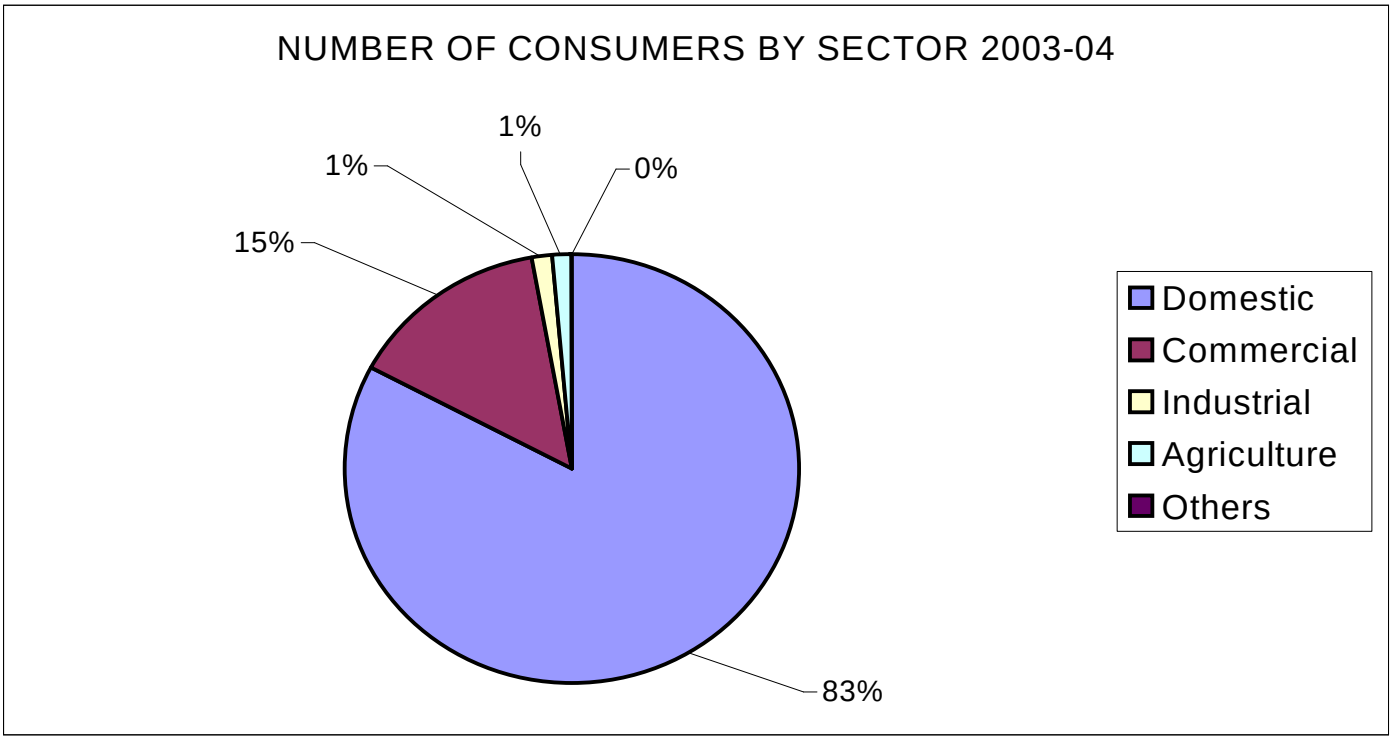
TABLE-6

NUMBER OF CONSUMERS BY SECTOR

(000 Nos.)

SECTOR	1998-99	1999-00	2003-04
Total	12,248	13,192	15,841
Domestic	10,005	10,783	13,086
Commercial	1,840	2,001	2,313
Industrial	220	224	230
Agriculture	174	175	201
Others	09	09	11

Figure-3



ELECTRICITY CONSUMED IN AUXILIARIES AND SYSTEM LOSSES:

The electricity consumed in auxiliaries of power stations was 3,174 GWH in 2003-04 as compared to 2,540 GWH in 1999-00. The electricity lost in the transmission and distribution process was 21,117 GWH in the year 2003-04 as against 17,664 GWH in the year 1999-00.

Data on electricity consumed in auxiliaries of power stations and system losses (transmission & distribution losses) is given in Table-7.

TABLE-7

ELECTRICITY CONSUMED IN AUXILIARIES AND SYSTEM LOSSES

(GWH)

YEAR	UNITS GRENERATED	AUXILIARIES CONSUMPTION		SYSTEM LOSSES	
		UNITS	%	UNITS	%
1	2	3	4	5	6
1990-91	41,918	1,345	3.2	8,445	20.8
1991-92	45,876	1,480	3.2	9,434	21.2
1992-93	48,912	1,564	3.2	10,168	21.5
1993-94	51,474	1,768	3.4	11,460	23.0
1994-95	54,530	1,829	3.4	12,316	23.4
1995-96	57,632	2,094	3.6	13,159	23.7
1996-97	59,894	2,236	3.7	14,172	24.6
1997-98	62,915	2,350	3.7	15,453	25.5
1998-99	65,402	2,467	3.8	17,179	25.5
1999-00	66,562	2,540	3.8	17,664	27.6
2003-04	83,607	3,174	3.8	21,117	25.3

VALUE OF ELECTRICITY SOLD, INDUSTRIAL COST AND VALUE ADDED:

The value of electricity sold i.e. energy charges billed (Revenue from sale of power and other charges) during the year 2003-04 stood at Rs.243,606 million rupees as against 164,895 million rupees during the year 1999-00 showing average per annum increase of 10% over the year 1999-00.

The industrial cost incurred during the year 2003-04 was 108,601 million rupees as compared to 69548 million rupees during the year 1999-00. It worked out to be 12% per annum average increase.

The total value added during the year 2003-04 stood at 135,005 million rupees as against 95,347 million rupees in the year 1999-00 showing average per annum increase of 9%.

Data on value of electricity sold, industrial cost and value added for the years 1990-91 to 2003-04 is given in Table-8.

TABLE-8

VALUE OF ELECTRICITY SOLD, INDUSTRIAL COST AND VALUE ADDED

(Million Rs)

YEAR	VALUE OF ELECTRICITY SOLD	INDUSTRIAL COST	VALUE ADDED
1990-91	38,928	12,750	26,178
1991-92	44,896	15,934	28,962
1992-93	49,345	18,761	30,584
1993-94	56,986	22,738	34,248
1994-95	68,654	27,862	40,792
1995-96	99,687	36,742	62,945
1996-97	113,746	48,315	65,431
1997-98	134,592	58,140	76,452
1998-99	148,620	61,534	87,086
1999-00	164,895	69,548	95,347
2003-04	243,606	108,601	135,005

STATISTICAL TABLES

TABLE-1

ENERGY STATISTICS AT A GLANCE

S. No.	DESCRIPTION	UNIT	1997-98	1998-99	1999-00	2003-04
1.	INSTALLED GENERATING CAPACITY	MW	15,860	15,860	17,564	20,360
	i) Thermal	"	10,897	10,897	12,601	13,434
	Ii) Hydel	"	4,826	4,826	4,826	6,464
	Iii) Nuclear	"	137	137	137	462
2.	MAXIMUM LOAD DEMAND	"	10,554	10,922	11,145	13,151
3.	ELECTRICITY GENERATION	Mn. Kwh	62,915	65,402	66,562	83,607
	i) Thermal	"	40,480	42,669	46,875	54,475
	Ii) Hydel	"	22,060	22,449	19,288	27,372
	Iii) Nuclear	"	375	284	399	1,760
4.	*UNITS CONSUMED	"	45,112	45,756	46,358	59,316
5.	VALUE OF UNITS CONSUMED	Mn Rs	134,592	148,620	164,895	243,606
6.	INDUSTRIAL COST	"	58,140	61,534	69,548	108,601
7.	VALUE ADDED	"	76,452	87,086	95,347	135,005
8.	NUMBER OF CONSUMERS	000	11,605	12,248	13,192	15,841
9.	AUXILIARIES CONSUMPTION	%	3.7	3.8	3.8	3.8
10.	SYSTEM LOSSES	%	25.5	27.3	27.6	25.3

* Including self consumption of Captive Units

TABLE-2

SUMMARY STATISTICS BY PROVINCE (2003-04)

S. No.	DESCRIPTION	UNIT	PAKISTAN	PUNJAB	SINDH	NWFP	BALOCHISTAN
1	2	3	4	5	6	7	8
1.	INSTALLED-GENERATING CAPACITY	(MW)	20,360	8,478	6,005	3,762	2,115
	i) Thermal	(")	13,434	5,451	5,868	-	2,115
	ii) Hydel	(")	6,464	2,702	-	3,762	-
	iii) Nuclear	(")	462	325	137		-
2.	ELECTRICITY GENERATION	(GWH)	83,607	31,970	28,776	16,210	6,651
	i) Thermal	(")	54,475	19,493	28,331	-	6,651
	ii) Hydel	(")	27,372	11,162	-	16,210	-
	iii) Nuclear	(")	1,760	1,315	445	-	-
3.	ELECTRICITY CONSUMPTION	(")	59,316	36,246	12,573	7,230	3,267
4.	POPULATION	Mill Nos.	148.72	83.58	34.20	23.50	7.44
5.	PER CAPITA CONSUMPTION	(KWH)	399	434	368	308	439
6.	NO OF CONSUMERS	(000)	15,841	10,281	2,962	2,212	386

Note: Mangla Hydel Power included in Punjab

TABLE-3

INSTALLED CAPACITY BY PROVINCE AND TYPE OF PLANT 2003-04

(MW)

PROVINCE	INSTALLED CAPACITY			
	TOTAL	THERMAL	HYDEL	NUCLEAR
1	2	3	4	5
Pakistan	20,360	13,434	6,464	462
Punjab	8,478	5,451	2,702	325
Sindh	6,005	5,868	-	137
NWFP	3,762	-	3,762	-
Balochistan	2,115	2,115	-	-

TABLE-4

ELECTRICITY GENERATION BY PROVINCE AND TYPE OF PLANT 2003-04

(Mill. KHW)

PROVINCE	ELECTRICITY GENERATION			
	TOTAL	THERMAL	HYDEL	NUCLEAR
1	2	3	4	5
Pakistan	83,607	54,475	27,372	1,760
Punjab	31,970	19,493	11,162	1,315
Sindh	28,776	28,331	-	445
NWFP	16,210	-	16,210	-
Balochistan	6,651	6,651	-	-

TABLE-5

INSTALLED CAPCITY BY PROVINCE AND AGENCY 2003-04

(MW)

PROVINCE	INSTALLED CAPCITY				
	TOTAL	WAPDA	IPPs	CAPTIVE UNITS	OTHERS
1	2	3	4	5	6
Pakistan	20,360	11,243	5,808	1,091	2,218
Punjab	8,478	4,617	2,878	658	325
Sindh	6,005	2,829	947	336	1,893
NWFP	3,762	3,762	-	-	-
Balochistan	2,115	35	1,893	97	-

TABLE-6

ELECTRICITY GENERATION BY PROVINCE AND AGENCY 2003-04

(Mill. KWH)

PROVINCE	ELECTRICITY-GENERATION				
	TOTAL	WAPDA	IPPs	CAPTIVE UNITS	OTHERS
1	2	3	4	5	6
Pakistan	83,607	48,426	21,097	2,600	11,484
Punjab	31,970	19,472	9,489	1,694	1,315
Sindh	28,776	12,718	5,059	830	10,619
NWFP	16,210	16,210	-	-	-
Balochistan	6,651	26	6,549	76	-

TABLE-7

POWER ALLOCATION

(Mill. KWH)

YEAR	UNITS GENERATED	CONSUMPTON IN AUXILIARIES		UNITS SENT OUT	UNITS SOLD	SYSTEM LOSSES		SYSTEM LOSSES AND AUXILIARIES CONSUMPTION	
		UNITS	%			UNITS	%	UNITS	%
1	2	3	4	5	6	7	8	9	10
1990-91	41,918	1,345	3.2	40,573	32,128	8,445	20.8	9,790	23.4
1991-92	45,876	1,480	3.2	44,396	34,962	9,434	21.2	10,914	23.8
1992-93	48,912	1,564	3.2	47,348	37,180	10,168	21.5	11,732	24.0
1993-94	51,474	1,768	3.4	49,706	38,246	11,460	23.0	13,228	25.7
1994-95	54,530	1,829	3.4	52,701	40,385	12,316	23.4	14,145	25.9
1995-96	57,632	2,094	3.6	55,638	42,479	13,159	23.7	15,253	26.4
1996-97	59,894	2,236	3.7	57,658	43,486	14,172	24.6	16,408	27.4
1997-98	62,915	2,350	3.7	60,565	45,112	15,453	25.5	17,803	28.3
1998-99	65,402	2,467	3.8	62,935	45,756	17.179	27.3	19,646	30.0
1999-00	66,562	2,590	3.8	64,022	46,358	17,664	27.6	20,204	30.4
2003-04	83,607	3,174	3.8	80,433	59,316	21,117	25.3	24,291	29.0

TABLE-8

ELECTRICITY CONSUMPTION BY PROVINCE AND SECTOR 2003-04

(Mill. KWH)

SECTOR	PAKSITAN	PUNJAB	SINDH	NWFP	BALOCHISTAN
1	2	3	4	5	6
Total	59,316	36,246	12,573	7,230	3,267
Domestic	2,394	15,837	4,480	4,723	354
Commercial	3,586	2,244	950	318	74
Industrial	15,354	13,054	3,705	1,205	80
Agricultural	9,344	2,900	564	529	2,661
Public lighting	271	127	122	18	4
Bulk supply and Others	5,367	2,084	2,752	437	94

TABLE-9

ELECTRICITY CONSUMPTION BY PROVINCE

(Mill. KWH)

YEAR	PAKISTAN	PUNJAB	SINDH	NWFP	BALOCHISTAN
1	2	3	4	5	6
1990-91	32,128	18,476	8,682	3,847	1,123
1991-92	34,962	20,372	9,137	4,156	1,297
1992-93	37,180	21,879	9,248	4,688	1,365
1993-94	38,246	21,947	9,919	4,976	1,404
1994-95	40,385	23,635	9,653	5,625	1,472
1995-96	42,679	24,556	10,070	6,257	1,586
1996-97	43,486	25,121	10,062	5,638	1,665
1997-98	45,112	25,638	10,976	6,794	1,704
1998-99	45,756	25,245	12,581	6,243	1,687
1999-00	46,358	27,033	10,975	6,528	1,822
2003-04	59,316	36,246	12,573	7,230	3,267

TABLE-10

ELECTRICITY CONSUMPTION BY SECTOR

(Mill. KWH)

YEAR	TOTAL	DOMESTIC	COMMERCIAL	INDUSTRIAL	AGRI	PUBLIC LIGHTING	BULK SUPPY & OTHERS
1	2	3	4	5	6	7	8
1990-91	32,128	10,400	2,066	11,690	5,619	262	2,091
1991-92	34,962	11,458	2,144	12,824	5,848	310	2,378
1992-93	37,180	13,205	1,726	13,658	5,620	287	2,684
1993-94	38,246	14,134	1,786	13,392	9,772	298	2,864
1994-95	40,385	15,583	1,941	13,306	6,252	325	2,978
1995-96	42,479	17,116	2,174	12,885	6,696	378	3,230
1996-97	43,486	17,684	2,241	12,754	7,086	390	3,331
1997-98	45,112	18,670	2,334	13,042	6,937	387	3,742
1998-99	45,756	19,268	2,381	12,924	5,620	225	5,338
1999-00	46,358	21,485	2,544	13,972	4,542	239	3,576
2003-04	59,316	25,394	3,586	15,354	9,344	271	5,367

TABLE-11

PATTERN OF ELECTRICITY CONSUMPTION

(%)

YEAR	TOTAL	DOMESTIC	COMMERCIAL	INDUSTRIAL	AGRI	PUBLIC LIGHTING	BULK SUPPY & OTHERS
1	2	3	4	5	6	7	8
1990-91	100.00	32.37	7.43	36.30	17.49	0.62	6.51
1991-92	100.00	32.77	6.13	36.68	16.73	0.89	6.80
1992-93	100.00	35.52	6.26	35.66	15.12	0.77	6.67
1993-94	100.00	36.43	6.57	35.00	14.90	0.77	6.56
1994-95	100.00	38.02	6.40	32.95	15.26	0.79	6.98
1995-96	100.00	40.29	5.12	30.34	15.76	0.89	7.60
1996-97	100.00	40.67	5.15	29.33	16.29	0.90	7.66
1997-98	100.00	41.38	5.17	28.92	15.38	0.86	8.29
1998-99	100.00	42.11	5.20	28.25	12.28	0.49	11.67
1999-00	100.00	46.35	5.49	30.14	9.80	0.52	7.70
2003-04	100.00	42.81	6.05	25.88	15.75	0.46	9.05

TABLE-12

NUMBER OF CONSUMERS BY PROVINCE AND SECTOR 2003-04

(000)

SECTOR	PAKSITAN	PUNJAB	SINDH	NWFP	BALOCHISTAN
1	2	3	4	5	6
Total	15,841	10,281	2,962	2,212	386
Domestic	13,086	8,583	2,300	1,910	293
Commercial	2,313	1,395	598	247	73
Industrial	230	164	39	24	03
Agricultural	201	133	22	29	17
Bulk supply and Others	11	06	03	02	-

-- Negligible:

TABLE-13

NUMBER OF CONSUMERS BY PROVINCE

(000)

YEAR	PAKISTAN	PUNJAB	SINDH	NWFP	BALOCHISTAN
1	2	3	4	5	6
1990-91	8,316	5,268	1,718	1,159	171
1991-92	8,845	5,649	1,788	1,224	184
1992-93	9,342	5,984	1,864	1,301	193
1993-94	9,805	6,290	1,949	1,362	204
1994-95	10,326	6,661	2,028	1,415	222
1995-96	10,768	6,954	2,096	1,483	235
1996-97	11,206	7,241	2,184	1,534	247
1997-98	11,605	7,502	2,255	1,592	256
1998-99	12,248	7,884	2,425	1,652	287
1999-00	13,192	8,443	2,680	1,750	318
2003-04	15,841	10,281	2,962	2,212	386

TABLE-14

NUMBER OF CONSUMERS BY SECTOR

(000)

YEAR	TOTAL	DMOESTIC	COMMERCIAL	INDUSTRIAL	AGRI.	OTHERS
1990-91	8,316	6,601	1,371	185	153	07
1991-92	8,845	7,054	1,436	192	156	07
1992-93	9,342	7,499	1,486	196	154	07
1993-94	9,815	7,914	1,535	200	159	07
1994-95	10,326	8,324	1,626	205	163	08
1995-96	10,768	8,756	1,631	207	166	08
1996-97	11,206	9,165	1,652	212	169	08
1997-98	11,605	9,502	1,708	214	172	09
1998-99	12,248	10,005	1,840	220	174	09
1999-00	13,192	10,783	2,001	224	175	09
2003-04	15,841	13,086	2,313	230	201	11

TABLE-15

FUEL CONSUMPTION AND FUEL COST

(Mill. Rs)

FUEL ITEMS	UNIT	FUEL CONSUMED	FUEL COST
1	2	3	4
Natural Gas	MMCF	485,496	49,647
Furnace Oil	M. Ton	5,236,337	56,880
Diesel Oil	Litre	13,019,269	263
Coaltar	M. Ton	17,724	159
Coal	M. Ton	184,992	152
Blast Furnace Gas	TCM	827,973	407
Coke Oven Gas	TCM	79,010	238
Others	-	-	855

TABLE-16

POWER ENERGY IN PAKISTAN

YEAR	INSTALLED CAPACITY (MW)	ELECTRICTY GENERATION (Mill. KWH)	ELECTRICTY CONSUMPTION (Mill. KWH)	NUMBER OF CONSUMERS (000)
1	2	3	4	5
1990-91	9,094	41,918	32,128	8,316
1991-92	9,533	45,876	34,962	8,845
1992-93	10,192	48,912	37,180	9,342
1993-94	11,721	51,474	38,246	9,815
1994-95	12,894	54,530	40,385	10,326
1995-96	13,154	57,732	42,479	10,768
1996-97	14,983	59,894	43,486	11,206
1997-98	15,860	62,915	45,112	11,605
1998-99	15,860	65,402	45,756	12,248
1999-00	17,564	66,562	46,358	13,192
2003-04	20,360	83,607	59,316	15,841

TABLE-17

POWER ENERGY IN PUNJAB

YEAR	INSTALLED CAPACITY (MW)	ELECTRICTY GENERATION (Mill. KWH)	ELECTRICTY CONSUMPTION (Mill. KWH)	NUMBER OF CONSUMERS (000)
1	2	3	4	5
1990-91	2,370	10,562	18,476	5,268
1991-92	2,585	12,063	20,732	5,649
1992-93	2,585	12,045	21,879	5,984
1993-94	3,104	12,943	21,947	6,290
1994-95	4,133	15,844	23,635	6,661
1995-96	4,343	19,116	24,556	6,954
1996-97	4,754	16,928	25,121	7,241
1997-98	5,498	18,829	25,638	7,502
1999-00	6,042	18,993	27,033	8,443
2003-04	8,478	31,970	36,246	10,281

TABLE-18

POWER ENERGY IN SINDH

YEAR	INSTALLED CAPACITY (MW)	ELECTRICTY GENERATION (Mill. KWH)	ELECTRICTY CONSUMPTION (Mill. KWH)	NUMBER OF CONSUMERS (000)
1	2	3	4	5
1990-91	4,607	18,695	8,682	1,718
1991-92	4,383	20,860	9,137	1,788
1992-93	4,610	21,261	9,248	1,864
1993-94	4,755	23,887	9,919	1,949
1994-95	4,899	22,463	9,653	2,028
1995-96	4,949	22,210	10,070	2,096
1996-97	5,075	21,,289	10,062	2,184
1997-98	5,208	21,923	10,976	2,255
1999-00	5,642	23,766	10,975	2,180
2003-04	6,005	2,8776	12,573	2,962

TABLE-19

POWER ENERGY IN NWFP

YEAR	INSTALLED CAPACITY (MW)	ELECTRICTY GENERATION (Mill KWH)	ELECTRICTY CONSUMPTION (Mill. KWH)	NUMBER OF CONSUMERS (000)
1	2	3	4	5
1990-91	2,034	12,354	3,847	1,159
1991-92	2,465	12,512	4,156	1,224
1992-93	2,897	15,141	4,688	1,301
1993-94	3,762	14,210	4,976	1,362
1994-95	3,762	15,847	5,625	1,415
1995-96	3,762	16,029	6,267	1,483
1996-97	3,762	14,996	6,638	1,534
1997-98	3,762	15,742	6,794	1,592
1998-99	3,762	17,468	6,243	1,652
1999-00	3,762	15,927	6,528	1,751
2003-04	3,762	16.210	7,230	2,212

TABLE-20

POWER ENERGY IN BALOCHISTAN

YEAR	INSTALLED CAPACITY (MW)	ELECTRICITY GENERATION (Mill. KWH)	ELECTRICITY CONSUMPTION (Mill. KWH)	NUMBER OF CONSUMERS (000)
1	2	3	4	5
1990-91	83	307	1,123	171
1991-92	100	441	1,297	184
1992-93	100	465	1,365	193
1993-94	100	434	1,404	204
1994-95	100	376	1,472	222
1995-96	100	377	1,586	235
1996-97	1,392	6,681	1,665	247
1997-98	1,392	6,421	1,704	256
1998-99	1,404	5,648	1,687	287
1999-00	2,018	6,636	1,822	318
2003-04	2,115	6,651	3,267	386

TABLE-21

GROSS FIXED CAPITAL FORMATION (GFCF)

(000 Rs)

SECTOR	ADDITION OF FIXED ASSETS	DISPOSAL OF FIXED ASSETS	DEPRECIATION	GFCF
Public sector	22,443,418	5,937,552	6,258,579	22,764,442
Private sector	7,843,050	999,248	806,458	7,650,260
Total	30,286,465	6,936,800	7,065,037	30,414,702

QUARTERLY ESTIMATES:

Efforts were made to gather the quarterly information on Power Sector in pursuance to one of the recommendations to put Pakistan on International Standards. However the establishments declined to provide quarterly data on Gross Fixed Capital Formation. The limited quarterly information for 2003-04 provided by the concerned establishments are aggregated in Table-22.

TABLE-22

QUARTERLY ELECTRICITY GENERATION BY TYPE OF PLANT 2003-04

QUARTERS	TOTAL	HYDEL	THERMAL	NUCLEAR
Annual	83607	27372	54475	1760
Quarter-1	23419	10619	12464	336
Quarter-2	18363	7080	10686	597
Quarter-3	18484	3092	14717	675
Quarter-4	23341	6581	16608	152

ANNEXURE-I

Government of Pakistan
FEDERAL BUREAU OF STATISTICS
Energy & Mining Statistics Section

Address 17/C, RR Ahmad Plaza, G-8 Markaz, Islamabad
Tel: 9261247 Fax: 2250894-9206284 E-mail: statpak@isb.paknet.com.pk & techcell@isb.paknet.com.pk
Internet: www.statpak.gov.pk.

Information required in this Form is obligatory as per General Statistics Act, 1975. However, it is assured that as per provision of the same Act, the information collected will be kept strictly confidential and used in aggregates for statistical purpose only.

CENSUS OF ELECTRICITY ESTABLISHMENTS (July 2003 to June 2004)

SECTION-I GENERAL PARTICULARS OF THE ESTABLISHMENT

1. Name & address of Establishment

1.2 Telephone Number

1.3 Fax Number

1.4 Email

1.5 Website

2. Type of Ownership

Pakistani				**Foreign** controlled Enterprise
Public Sector		**Private Sector**		
i. Local	ii. Foreign Collaboration	iii. Local	iv. Foreign Collaboration	

3.Type of Organization

i. Individual Ownership	ii. Partnership	iii. Private Ltd. Company	iv. Public Ltd. Company	v. Corporation	vi. Others (Pl. specify)

SECTION-II INSTALLED CAPACITY & GENERATION OF ELECTIRICITY

S. NO.	Type of Plant	Installed Capacity	Electricity Generated	Electricity Consumed in auxiliaries
		(MW)	(000KWH)	(000KWH)
1. 2. 3.	Thermo-Electric Hydero-Electric Nuclear Power Electric			

	Total			

SECTION-III EMPLOYMENT & EMPLOYMENT COST

Cost in "000" Rs

Period	**Regular Employees (Officers & staff)**					**Contract Employees**	
		Total Employment Cost					
	Num-ber	Wages & Salaries	Other Cash Payments	Non-Cash Benefits	Total	Num-ber	Total payments made
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Jul-Sep Oct-Dec Jan-Mar Apr-Jun							
TOTAL							

SECTION-IV GROSS FIXED CAPITAL FORMATION (GFCF)

Cost in "000" Rs

S.No.	**Item**	**Acquisitions/ Additions**	**Disposal of Assets**	**Accumulated Depreciation on Assets disposed of**	**Gross Fixed Capital Formation (GFCF)**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)=(3)-(4)+(5)**
		July-September			
1 2 3 4 5 6 7	Land improvement Buildings i. Residential ii. Non-Residential Other construction Plant & Machinery i. Electrical ii. Non-Electrical Transport equipment Furniture & fixtures/ Office equipment Major Improvements (Pl. specify) **Total**				
		October-December			
1 2 3 4 5 6 7	Land improvement Buildings i. Residential ii. Non-Residential Other construction Plant & Machinery i. Electrical ii. Non-Electrical Transport equipment Furniture & fixtures/ Office equipment Major Improvements (Pl. specify)				

	Total				
S.No.	**Item**	**Acquisitions/ Additions**	**Disposal of Assets**	**Accumulated Depreciation on Assets disposed of**	**Gross Fixed Capital Formation (GFCF)**
		January-March			
1 2 3 4 5 6 7	Land improvement Buildings i. Residential ii. Non-Residential Other construction Plant & Machinery i. Electrical ii. Non-Electrical Transport equipment Furniture & fixtures/ Office equipment Major Improvements (Pl. specify) **Total**				
		April-June			
1 2 3 4 5 6 7	Land improvement Buildings i. Residential ii. Non-Residential Other construction Plant & Machinery i. Electrical ii. Non-Electrical Transport equipment Furniture & fixtures/ Office equipment Major Improvements (Pl. specify) **Total**				
		Annual Total			
1 2 3 4 5 6 7	Land improvement Buildings i. Residential ii. Non-Residential Other construction Plant & Machinery i. Electrical ii. Non-Electrical Transport equipment Furniture & fixtures/ Office equipment Major Improvements (Pl. specify) **Total**				

SECTION-V ELECTRICITY PURCHASES

Quantity purchased (000 KWH

Cost in "000" Rs

S. No.	Name of Agency from whom purchased	Jul-Sep		Oct-Dec		Jan-Mar		Apr-Jun		Total	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
1. 2. 3. 4. 5. 6.											
TOTAL											

SECTION-VI ELECTRICITY SALES

Quantity Sold (000 KWH

Cost in "000" Rs

S. No.	Agency/ Category to whom sold	No of Cons-umers	Jul-Sep		Oct-Dec		Jan-Mar		Apr-Jun		Total	
			Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1.	Residential											
2.	Commercial											
3.	Industrial											
4.	Agricultural											
5.	Public Lighting											
6.	Traction											
7.	Free of charge											
8.	Supply in bulk to Distributing Licensees											
	i.											
	ii.											
	iii.											
TOTAL												

SECTION-VII INCOME AND EXPENSES

Cost in "000" Rs

No.	Item		Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Total
1.	Receipts						
	A	Energy Charges					
	B	Other Income					
		i. Meter rent					
		ii. Govt. Duty/GST					
		iii. Late payments surcharge					
		iv. Connection charges					
		v. *Other receipts (Pl. specify)					
TOTAL							

2	Expenses						
	A	Electricity Purchases					
	B	Fuel cost i. Coal ii. B.F.Gas iii. Furnace Oil iv. H.S.D. v. L.D. Oil vi. Natural Gas vii. Other Fuels viii. Lubricants ix. Other materials and spare parts					
TOTAL							
3	Other Expenses						
	i. Utility charges ii. Telephone charges iii. Insurance charges iv. Minor Repair & Maintenance v. Bank charges vi. Travelling Expenses vii. Legal & Audit fees viii. Store & Stationery ix. Entertainment charges x. Indirect Taxes xi. Rent of Building/Machinery xii. Subsidies xiii. Education/Training etc. xiv. ** Other Expenses						
TOTAL							

* Except interest, dividend, property income

** Other than wages, salaries and depreciation

Signature_____

Name _____

Designation_____

ANNEXURE-II

DATA SOURCE AGENCIES (POWER SECTOR)

WAPDA (Hydel) WAPDA (Thermal) KESC	
IPPs	Captive Units
1. AES LALPIR 2. AES PAK GEN. 3. ALTERN ENERGY 4. FAUJI KABIRWALA 5. GUL AHMAD 6. HABIBULLAH COASTAL 7. HUBCO 8. JAPAN POWER 9. KAPCO 10. KOHINOOR ENERGY 11. ROUSCH POWER 12. SABA POWER 13. SOUTHERN ELECTRIC 14. TAPAL ENERGY 15. LIBERTY ENERGY 16. UCH POWER	1. CRESCENT ENERGY 2. CRESCENT BAHUMAN 3. CENTURY POWER 4. D.G. KHAN CEMENT 5. GENERTECH PAKISTAN 6. GATRON POWER 7. IBRAHIM FIBERS 8. ICI PAKISTAN 9. IDEAL ENERGY 10. MAPLE LEAF CEMENT 11. MAHMOOD POWR 12. MARI GAS CO 13. NISHAT MILLS 14. PAKISTAN STEEL 15. QUETTA TEXTILE MILLS 16. QUETTA SARENA 17. SITARA POWER 18. SAPPHIRE POWER 19. SUI SOUTHERN GAS CO 20. ZEESHAN ENERGY