Arab Republic of Egypt
Ministry of Electricity and Energy

Egyptian Electricity Holding Company

Annual Report
2011 / 2012

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Organizational Structure

Minister of Electricity and Energy
Chairman of General Assembly for
Egyptian Electricity Holding Company
Eng.Ahmed Moustafa Imam

Chairman of Board of Directors
Chairman of General Assembly for Affiliated Companies
Eng. Gaber Desouki Moustafa
EEHC Board Member for Financial & Administration Affairs
Dr. Mounir Abd El Hakim Ahmed Atwa
EEHC Board Member for Planning, Research & Electric service Companies Affairs
Eng. Mohamed Helmy Habib
EEHC Board Member for Production, Transmission & Distribution companies Affairs
Eng. Medhat Ramadan Ali

Production Companies

Cairo
Eng.Ali Hassan Ibrahim

East Delta
Eng. Hamdy Ibrahim Azab

Middle Delta
Eng. Ahmed Abd El Magid Sawan

West Delta
Eng. Mahmoud Mohamed EL Naquib

Upper Egypt
Eng. Fathy El sayed Ibrahim

Hydro Plants
Eng. Abd El Nabi Abd El Ghani Anber

Egyptian Electricity Transmission Co.
Eng. Fathalla Mohamed Shalaby

Distribution Companies

North Cairo
Eng. Awad Mansour Mobarak

South Cairo
Eng. Osama Ali Asrran

Alex.
Eng. Mohamed Ali bakr

Canal
Eng. Hamdy El said Salem

North Delta
Eng. Salah El Din Mahmoud

South Delta
Eng. Hamdy Mahros Okasha

El- Behera
Eng. Ramadan Mohamed Bekhit

Middle Egypt
Eng. Mohamed Moustafa Ahmed

Upper Egypt
Eng. Alaa Eldieen Abo El Wafa

Introduction

The Egyptian Electricity Holding Company (EEHC) and its affiliated companies always do their best endeavors to realize EEHC mission towards the society; to provide continuous and safe supply of electricity to all types of consumers on economic bases and according to international performance standards taking into consideration all the environmental, social and economic determinants.

EEHC`s efforts during the period from 2007/2008-2011/2012 resulted in a lot of achievements which could be summarized in the following:

- Increase in Peak load from 19738 MW to 25705 MW.
- Increase in energy generated from about 125 Twh to 157 TWh.
- Increase in the number of customers from 23.8 million customers to 28.1 million customers.
- Increase of the per capita consumption from 1650 Kwh to 1910 KWh.
- Reduction of the average fuel consumption rate for thermal power plants from 217.3 gm/KWh gen. to 209 gm/KWh gen.
- Reduction of network losses from 11.24% to 10.79% .
- The average availability of power plants reached about 84.84 % due to the execution of maintenance program.
- The optimum use of all available resources especially the use of natural gas in thermal power plants in coordination with the petroleum sector and the renewable energy (wind-solar-hydro) in cooperation with other power sector authorities.
- Provide electricity supply services to all consumers with high quality according to the technical standards.
- Development of customer service centers in order to facilitate, improve and modernize the services provided to the customers.
- Reinforcement of the interconnection projects with neighboring countries.

- One of the EEHC major activities is future planning to meet the forecasted growth rate of demand by optimizing the use of all available energy resources and investments. EEHC produces high accuracy level of forecast using long past period of historical data, and the most recent international forecast software models for generation, transmission and distribution.
- EEHC always oversees the implementation of the five-year plans to ensure availability of supply once needed as follows:
  - EEHC is following up implementation of the sixth, five-year plan which includes the addition of a generation capacity of 7000 MW to meet the expected increase of demand during the period (2007-2012) in addition to executing a fast track program by adding 2600 MW gas turbines to meet the unexpected high demand during the summer. Out of the (2007-2012) plan, 4400 MW of generation capacity have already been commissioned till 30/6/2012, while Abu Kir and El Ein El Sokhna (projects plan) are under execution, the first unit of Abu Kir power plant (650 MW) has been commissioned July 2012. Through the fast track program, 2100 MW have been accomplished through 3 projects at New Shabab, Damietta and 6 October power stations up to June 2012. Domiat west is under implementation.
  - EEHC also prepared the seventh, five-year plan (2012-2017) which includes execution of 12400 MW of thermal generation capacity from which 11100 MW will be commissioned during the plan years and 1300 MW to be commissioned during FY 2017/2018.
  - The plans also included expansion of transmission and distribution networks to evacuate the generated power, transmit, distribute and supply the large increase in the number of customers and improve the quality of supply.
- EEHC is also keen for the following:
  - Cooperation and coordination with all local Egyptian firms and entities in order to maximize the local contribution in different planned electricity projects. The local manufacturing reached 100% of distribution networks and transmission networks components up to 220kV , 42% from conventional thermal power plants components, 30% from wind power plants and 50% from the first solar thermal power plant at Kuriemat.
  - Cooperation with international companies and firms and participation in international conferences, workshops and seminars in order to acquire and get benefit of the latest international experience to serve its customers
  - Optimizing the huge investments required for new expansions and ensuring sustainability of electric energy by forcing and supporting the implementation of energy conservation, demand side management and energy efficiency programs.
- Acknowledging the importance of data documentation, the Egyptian Electricity Holding Company issues this annual report to document EEHC and its affiliated companies activities, and achievements for the FY 2011/2012 and its future vision to ensure sustainable supply of electric energy.

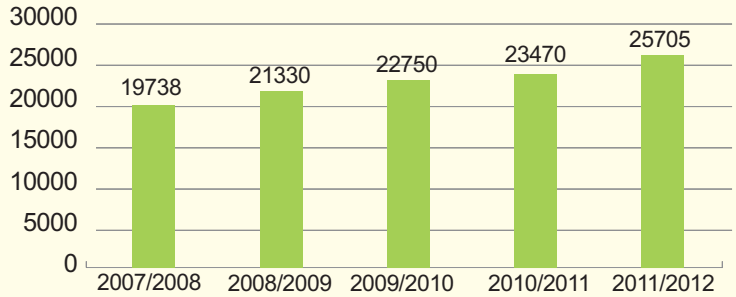
Electricity for 2011/2012

Description		2010/2011	2011/2012	Variance%
Peak load	**MW**	**23470**	**25705**	**9.5**
Total energy generated	GWh	146796	157406	7.2
Hydro	GWh	13046	12934	(0.9)
Thermal(1)	GWh	118500	129361	9.2
Renewable(2)	GWh	1704.4	2004	17.6
Energy Purchased from IPP's(3)	GWh	27.3	29	6.2
Private Sector (BOOTs)	GWh	13309	12855	(3.4)
Isolated Plants	GWh	209	223	6.7
Net Energy Exchange with interconnected countries	GWh	1443	1576	9.2
Sent energy from production companies (without Boot)	GWh	127427	137891	8.2
Total fuel consumption	**K toe**	27430	29728	8.4
• Production companies	K toe	24698	27083	9.7
H.F.O	K toe	5204	4560	(12.4)
N.G	K toe	19404	22458	15.7
L.F.O	K toe	90	65	(27.8)
• Private sector BOOTs	K toe	2732	2645	(3.2)
Fuel consumption rate for Production company	gm/Kwh gen	208.4	209.4	0.5
Fuel Consumption Rate including BOOTS	gm/kwh gen	208.1	209.0	0.4
Thermal efficiency (Without private sector BOOTs)	%	42.1	41.9	(0.5)
N.G Ratio to Total Fuel Including BOOTs	%	80.4	84.3	4.9
N.G Ratio for Power Plants Connected to Gas Grid Including BOOTs	%	83.8	86.5	3.2
Total Installed Capacity(4)	MW	27049	29074	7.5
Hydro	MW	2800	2800	--
Thermal	MW	21514	23539	9.4
Renewable	MW	687	687	--
Private Sector BOOTs (Thermal)	MW	2048	2048	--
Total length of transmission lines and cables	**km**	**42223**	**43634**	**3.3**
Total power transformers capacities	**MVA**	**87400**	**91865**	**5.1**
Total length of distribution MV&LV lines & cables	**km**	**397429**	**405199**	**2**
Total capacity for distribution transformers MV&LV	**MVA**	**57925**	**59958**	**3.5**
Total no. of customers in distribution companies	Million	26.6	28.1	5.6

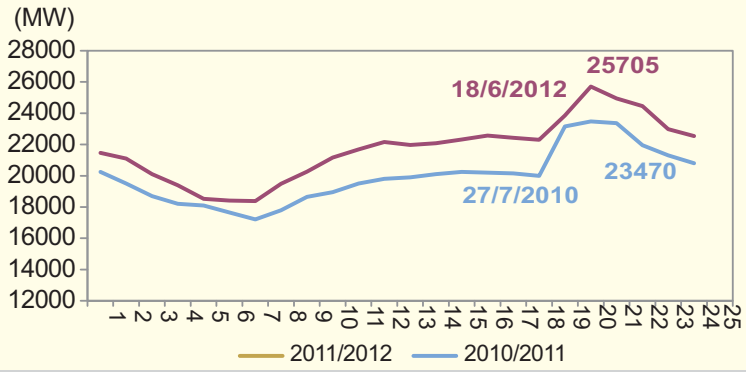
(1) Includes commissioning tests (2)Connected to National Grid (Wind & Solar energy)
(3) Power purchased from industrial plants self generation (IPPs) year 2011/2012 as follows:
Petrochemicals (17.74 Gwh), Carbon Black (0.5 Gwh), Talkha Fertilizer (5.29 Gwh) and Ghazl El-Mahala (5.41 Gwh) Medelec (0.03 Gwh).
(4) There are Isolated Plants with total capacity of 238 M.W

Load Development

Yearly Peak Load Development (MW)



Peak load curve 2010/2011-2011/2012



Electric Power Production

Electricity Production companies:

- Cairo Electricity Production Company.
- East Delta Electricity Production Company.
- Middle Delta Electricity Production Company.
- West Delta Electricity Production Company.
- Upper Egypt Electricity Production Company.
- Hydro- Power Plants Electricity Production Company.

Objectives

1. Production of electric energy from their own power plants.
2. Management, operation, maintenance, rehabilitation and overhauling of the power plants in accordance with international best practices.
3. Rehabilitation , overhauling maintenance and loading of their power plants, to be executed in full compliance with the instructions of the National Control Center, to ensure optimum technical and economic operation of the system.
4. Sale of the electric power produced from the power plants to the Egyptian Electricity Transmission Company and to the Distribution Companies (in case power delivered on medium voltages).
5. Implementing power plant projects upon the approval of EEHC's Board of Directors, and in accordance with the planned time schedules.
6. Conducting researches and studies within the company's activities.
7. Carrying out any activities or works related to the company's objectives, in addition to any other work to be entrusted thereto by EEHC.
8. Carrying out any work entrusted thereto by other parties as long as it is within the company's scope of work and realizes economic benefit to the company

Information about Production Companies

Company	Geographical zone	Headquarter	Equity Capital (million EGP)	No. of Shares	Address	Tel.
Cairo	Great Cairo	Cairo	551.835	5518350	22 Shanan St. Sabteia	02-25793054 02-25740550
East Delta	Damietta, Ismailia, Port Said, Suez, South Sinai, North Sinai & Red Sea Governorates	Ismailia	532.830	5328300	Sheben Elkom St. Ismailia	064-3205146 064-3204590
Middle Delta	Kalyobeya Governorate (Except for Great Cairo Extension), Mhmodeya City , Kom Hamada Center from Behera Governorate, Dakahlya Governorate.	Dakahlya	507.195	5071950	Electricity & Compost road Talkha , El-Dakahlya Governorate	050-2524149 045-3473804
West Delta	Alexandria, Matrouh & El Behera Governorates (Except for Mahmodeya city & kom Hamada Center)	Alexandria	501.945	5019450	7 Riad Khalaf St., behind Yehia Mosque-Gleem	03-5761375 03-5756722
Upper Egypt	Giza (Except for extension of Great Cairo) , Fayoum, Beni-Suef, El-Minia, Assiut, New Valley, Sohag, Qena , Aswan,& Luxor Governorates	El-Giza	750.410	7504100	El Kuriemat Atfih	02-33710578 088-2321915 082-9210751
Hydro Power Plants	Affiliated Hydro Plants All over the Country	Aswan	391.660	3916600	High Dam – West Sahara	097-3480412 097-3481974

Thermal power plant projects

The five year plan is set to ensure the availability of electric power to different purposes of consumption based on the following:

1. The expected annual growth rate of peak load.
2. Adequate reserve to meet programmed outages, forced outages and derating of existing generation units.
3. Diversification of power plants technologies (steam, combined cycle, gas turbines and renewable).

First: The sixth five year plan (2007-2012):

- Five-year plans are prepared for the establishment of thermal power plants to provide electricity for all purposes on the following basis:

- 3000 MW combined cycle at El Atf, Sidi Krir, El Nubaria (3), Kuriemat (3) power plants.
- 4000 MW steam units at El Tebein, Cairo West, Abu Kir and El Sokhna power plants.

- The delay in Abu Kir and El Sokhna projects up to years 2012//2013 and the cancellation of Newibaa project, in addition to the unexpected high weather temperatures during the summer in the last few years resulted in drastic shortage of electricity supply, a fast track program for constructing gas turbines with total installed capacity of 2600 MW was set to meet the peak demand during summer. 1500 MW was commissioned before summer 2011 at El Shabab (1000 MW) and Damietta (500 MW) sites and construction of another (1100 MW) at Damietta West (500 MW) and 6th of October (600 MW) sites to be commissioned before the summer of 2012.

Second: The seventh five year plan (2012-2017):

- The seventh five year plan includes implementation of 12400 MW thermal power projects from which the following 6900 MW will be built, owned and operated by EEHC:
  - ⁎ 3000 MW combined cycle at North Giza (1, 2, 3) and Banha Sites.
  - ⁎ 3900 MW steam units at El Suez, South Helwan and Safaga Sites or any altrnative site.
- The total investments needed for the execution of generation projects for the seventh five year plan have been estimated to be about EGP 77 billion.
- EEHC opened the door to allow participation of the private sector in the financing plan, where EEHC with its affiliated companies will finance EGP 43 billion, and the private sector will finance the remaining EGP 34 billion.
- The private sector will be invited to build, own and operate three giant conventional power plants with total installed capacity of 5500MW (3 *750 MW) combined cycle power plant at Dayrout site, (2*650 MW) steam power plant at Kena site and (3*650 MW) steam power plant at El Ayat site or any altrnative site.

The electricity sector in Egypt has successfully attracted investors to implement three private steam power plants (2*341 MW each); Sidi Krir 3&4, Suez Gulf and Port Said East, which are effectively operating since 2002.

Installed Capacities of Generation Power Plants (30/6/2012)

Comp.	Station		No. of Units	Installed Capacity. (MW)	Fuel	Commissioning Date
Cairo	Shoubra El-Kheima	(St)	4 x 315	1260	N.G-H.F.O	84-85-1988
	Shoubra El-Kheima	(G)	1 x 35	35	N.G-L.F.O	1986
	Cairo West(1)	(St)	2 x 87.5	175	N.G-H.F.O	66-1979
	Cairo West Ext	(St)	2 x 330 + 2 x 350	1360	N.G-H.F.O	1995-2011
	Cairo South 1	(CC)	3 x 110 + 2 x 60	450	N.G-H.F.O	57-65-1989
	Cairo South II	(CC)	1 x 110 + 1 x 55	165	N.G	1995
	Cairo North	(CC)	4x 250 +2 x 250	1500	N.G-L.F.O	2005-2006
	El-Tebeen	(St)	2 x 350	700	N.G-H.F.O	2010
	Wadi Hof	(G)	3 x 33.3	100	N.G-L.F.O	1985
	6 October	(G)	3 x 150	450	N.G-L.F.O	2012
East Delta	Damietta	(CC)	6 x 132 + 3 x 136	1200	N.G-L.F.O	89-1993
	Ataka	(St)	2 x 150 + 2 x 300	900	N.G-H.F.O	85-86-1987
	Abu Sultan	(St)	4 x 150	600	N.G-H.F.O	83-84-1986
	Shabab	(G)	3 x 33.5	100	N.G-L.F.O	1982
	New Gas Shabab (3)	(G)	8 x 125	1000	N.G-L.F.O	2011
	New Gas Damietta (4)	(G)	4 x 125	500	N.G-L.F.O	2011
	Port Said	(G)	2 x 23. 96 + 1 x 24. 6	73	N.G-L.F.O	77-1984
	Arish	(St)	2 x 33	66	N.G-H.F.O	2000
	Oyoun Mousa	(St)	2 x 320	640	N.G-H.F.O	2000
	Sharm El-Sheikh	(G)	2 x 23.7 + 4 x 24. 27 + 4 x 5.8 + 2 x 5	178	L.F.O	--
	Hurghada	(G)	3 x 23. 5 + 3 x 24.3	143	L.F.O	--
	Zafarana (Wind)	(W)	105 x 0.6 + 117 x 0.66 + 478 x 0.85	546.5	Wind	2007-2008-2009-2010
	Suez Gulf (BOOT)	(St)	2 x 341.25	682.5	N.G-H.F.O	2002
	PortSaid East(BOOT)	(St)	2 x 341.25	682.5	N.G-H.F.O	2003
Middle Delta	Talkha	(CC)	8 x 24.72 + 2 x 45.94	290	N.G-L.F.O	79-80-1989
	Talkha 210	(St)	2 x 210	420	N.G-H.F.O	93-1995
	Talkha 750	(CC)	2 x 250 +1 x 250	750	N.G-L.F.O	2006
	Nubaria 1,2	(CC)	4 x 250 + 2 x 250	1500	N.G-L.F.O	2005-2006
	Nubaria 3	(CC)	2 x 250 +1 x 250	750	N.G-L.F.O	2009
	Mahmoudia	(CC)	8 x 25 + 2 x 58.7	316	N.G-L.F.O	83-1995-2009
	El-Atf	(CC)	2 x 250 + 1 x 250	750	N.G-L.F.O	2010
West Delta	Kafr El-Dawar	(St)	4 x 110	440	N.G-H.F.O	80-84-1986
	Damanhour Ext	(St)	1 x 300	300	N.G-H.F.O	1991
	Damanhour (Old)	(St)	3 x 65	195	N.G-H.F.O	68-1969
	Damanhour	(CC)	4 x 24.62 + 1 x 58	156.5	N.G-L.F.O	1985-1995
	El-Seiuf	(G)	6 x 33.3	200	N.G-L.F.O	81-82-83-1984
	Karmouz	(G)	1 x 11.37 + 1 x 11.68	23.1	L.F.O	1980
	Abu Kir	(St)	4 x 150 + 1 x 311	911	N.G-H.F.O	83-84-1991
	Abu Kir	(G)	1 x 24.27	24.3	N.G.-L.F.O	1983
	Sidi Krir 1.2	(St)	2 x 320	640	N.G-H.F.O	99-2000
	Sidi Krir	(CC)	2 x 250 + 1 x 250	750	N.G-H.F.O	2010
	Matrouh	(St)	2 x 30	60	N.G-H.F.O	1990
	Sidi Krir 3.4 (BOOT)	(St)	2 x 341.25	682.5	N.G-H.F.O	2001
Upper Egypt	Walidia	(St)	2 x 312	624	H.F.O	92-1997
	Kuriemat 1	(St)	2 x 627	1254	N.G-H.F.O	98-1999
	Kuriemat 2	(CC)	2x250+1x250	750	N.G.-L.F.O	2009
	Kuriemat 3 (5)	(CC)	2x250+1x250	750	N.G-H.F.O	2009
	Assiut	(St)	3 x 30	90	H.F.O	66-1967
	Kuriemat Solar / Thermal	(S/G)	1 x 70 + 1 x 50 + 1 x 20	140	Solar/ N.G	2011
Hydro Plants	High Dam		12 x 175	2100	Hydro	1967
	Aswan Dam I		7 x 40	280	Hydro	1960
	Aswan Dam II		4 x 67.5	270	Hydro	85-1986
	Esna		6 x 14.28	86	Hydro	1993
	New Naga Hamadi		4 x16	64	Hydro	2008

1-Retirement units 2 & 3 of Cairo West P.P 2×78.5 MW on 1/4/ 2012.

2- Commerical operotion of 3 units (3× 150MW) of 6 th October Gas P.P.in6/2012 and the 4th unit (1×150 MW) in 7/2012.

3-Commercial operation for units 1.2.3.4.5.6.7.8 of New Shabab Gas P. P (8×125 Mw) on 14/11/2012,8/11/2012,23/10/2011,24/10/2011,2/11/2011,5/11/2011, 12/10/2011,12/10/2011.

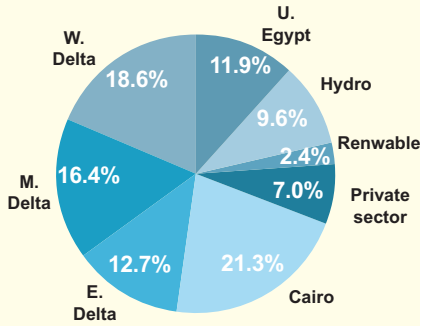
4- Commercial operation for units of New Damietta Gas P. P (4×125 Mw) on 10/2011.

5- Commercial operation of steam unit (1×250 MW) add-on ELL- Kuriemat 3 (cc) P.P.on October 2011.

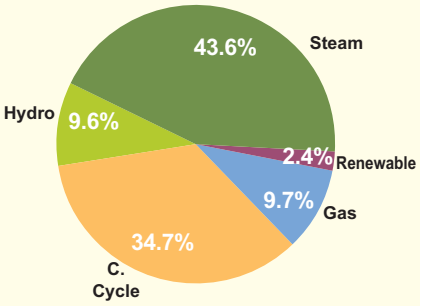
Development of Installed Capacities*

The total installed capacity reached 29074 MW in 30/6/2012, with an increase of 7.5% compared to the previous year.

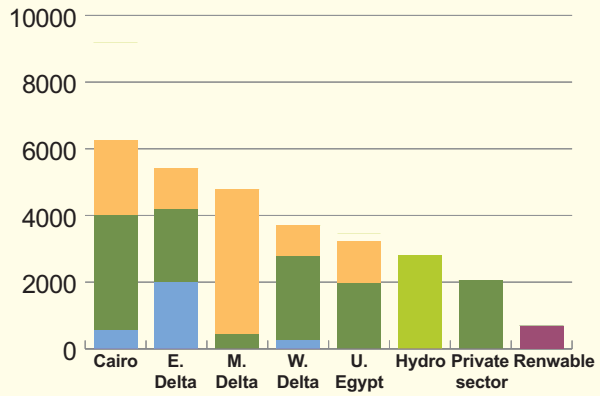
Installed Capacity by company



Installed Capacity by Type

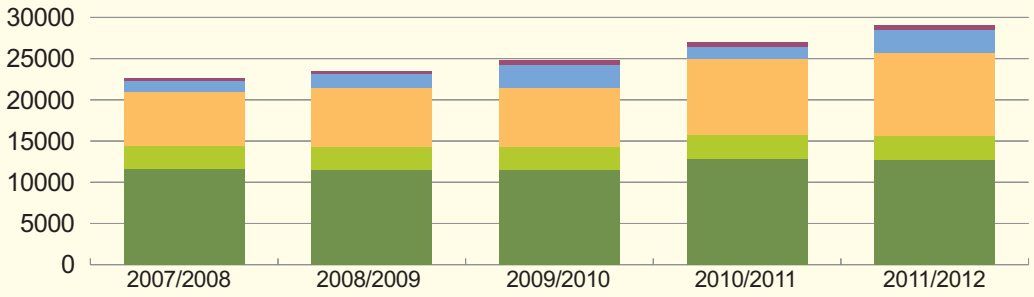


Installed Capacity by Type (MW*)



	Cairo	E. Delta	M. Delta	W. Delta	U. Egypt	Hydro	Private sector	Renewable
Hydro	0	0	0	0	0	2800	0	0
C C	2115	1200	4356	906	1500	0	0	0
Steam	3495	2206	420	2547	1968	0	2048	0
Gas	585	1994	0	247	0	0	0	0
Renewable			0	0	0	0	0	687
Total	6195	5400	4776	3700	3468	2800	2048	687

Installed Capacity Development by type of Generation (MW)



	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
Renewable	305	425	490	687	687
Gas	1416	1641	2841	1376	2826
C Cycle	6449	7178	7137	9327	10077
Hydro	2842	2800	2800	2800	2800
Steam	11571	11458	11458	12859	12684
Total	22583	23502	24726	27049	29074

* In addition, there are Isolated Plants with total capacity of (238 MW).

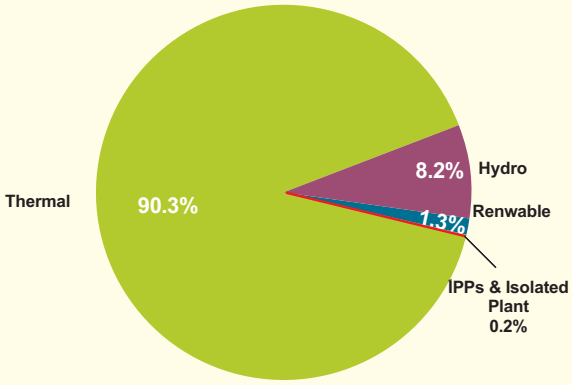
* Renewable includes Wind farms capacity (547 Mw), and Solar / Thermal at Kuriemat P.P (140 Mw).

Energy Generated and Purchased (GWh)

By Type and Technology:

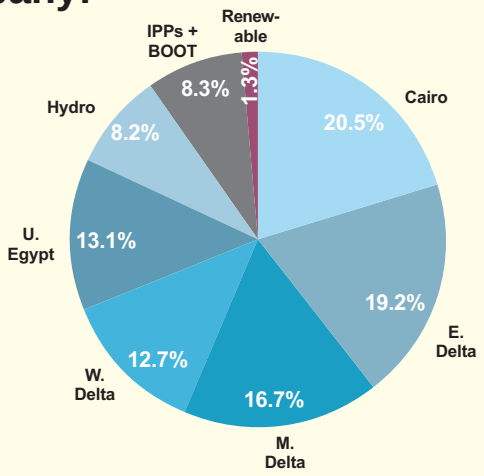
Type		2010/2011	2011/2012	Variance %
Steam	Affiliated Companies	56502	57718	2.2
	Private Sector	13309	12855	(3.4)
Gas Turbine		3795	10238	169.8
Comb. Cycle		58203	61405	5.5
Total Thermal*		**131809**	**142216**	**7.9**
Hydro		13046	12934	(0.9)
Renewable	Wind	1485	1525	2.7
	Solar/Thermal	219.4	479	118.3
Total Grid		146559	157154	7.2
Isolated Plants		209	223	6.7
Purchased from (IPP's)		27.3	29	6.2
Grand Total		**146796**	**157406**	**7.2**

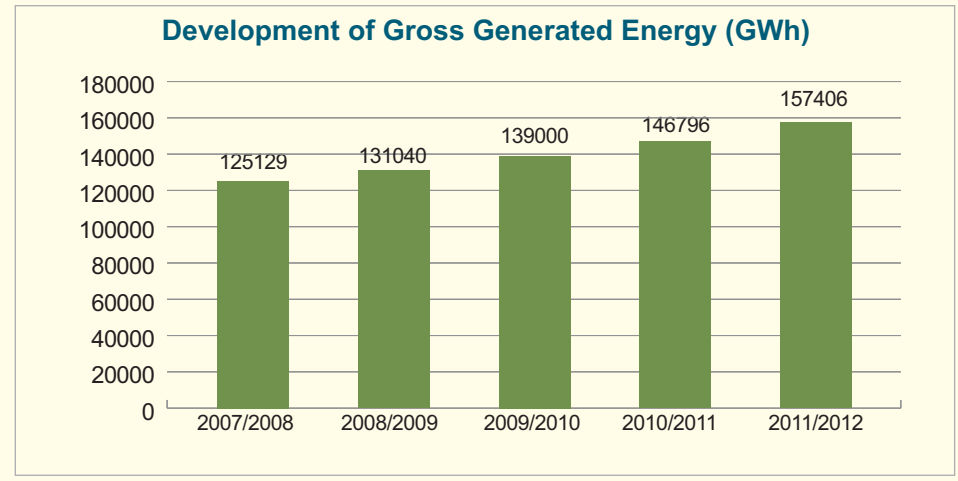
* The Energy generated includes commissioning tests



By Production Company:

Company	Generated Energy Gwh
Cairo	32200
East Delta	30267
Middle Delta	26230
West Delta	19984
Upper Egypt	20680
Hydro plants	12934
Total Production Companies	**142296**
Renewable	2004
Generated from BOOT's, Isolated Plants and Purchased from IPPs	13107
Total	**157406**





* The Energy generated includes commissioning tests

Performance Statistics of Power Plants (2011/2012)

Comp.	Station	Gross Gen. GWh	Net Gen. GWh	Net/ Gross %	Fuel Consump. gm/ kWh gen.	Peak Load MW	Load Factor %	Cap. Factor %	Eff. %	Av. Factor %
Cairo	Shoubra El-Kheima	5473.3	5168.4	94.4	243.147	1220	51	48	36.5	71
	Cairo West	682.5	625.0	91.6	334.514	195	40	22	26.2	53
	Cairo West Ext.	7180.6	6803.7	94.8	214.689	1320	62	60	40.9	81
	Tebbin	4275.6	4010.052	93.8	198.251	730	67	70	44.3	84
	Wadi Hof	127.321	126.202	99.1	383.618	76	19	14	22.8	96
	Cairo South 1	2681.192	2630.833	98.1	231.063	416	73	68	37.8	89
	Cairo South II	718.936	709.213	98.6	261.261	142	58	50	33.5	66
	Cairo North	10431.598	10207.184	97.8	160.743	1553	76	79	54.5	94
	6 October*	628.42	625.338	99.5	235.62	-	-	-	-	-
East Delta	Ataka	4259.74	3974.77	93.3	255.73	770	63	54	34.3	82
	Abu Sultan	3673.79	3399.47	92.5	260.04	595	70	70	33.7	89
	Arish	366.56	338.7	92.4	257.9	66	63	63	34	78
	Oyoun Mousa	5187.9	5012.7	96.6	214.4	640	92	92	40.9	94
	Shabab	105.92	104.82	99	364.456	86	14	12	24.2	99
	New Gas Shabab*	6013.05	5978.02	99.4	275.183	1063	64	68	31.9	95
	Port Said	61.99	61.6	99.3	366.382	38	19	10	24	65
	New Gas Damietta*	2989.67	2963	91.1	256.3	536	63	68	34.2	98
	Damietta	7522.3	7352.8	97.7	193.1	1135	75	71	45.5	81
	Sharm El-Shikh	42.61	40.5	95	400.1	-	-	-	-	-
	El-Huraghda	43.85	42.49	96.9	439.5	-	-	-	-	-
Middle Delta	Talkha steam (210)	2197.022	2039.72	92.8	243.7	420	60	60	36	75
	Talkha	1698.2	1670.4	98.4	236.8	246	79	67	37	88
	Talkha (750)	3462.24	3393.926	98	165.872	768	51	53	92.9	67
	Nubaria (1,2,3)	11169.304	10994.823	98.4	163.931	2023	63	57	53.5	73
	Mahmoudia	2051.852	2031.78	99	235.2	600	39	74	37.3	91
	El-Atf	5651.7	5549.4	98.2	160.825	823	78	86	54.5	95
West Delta	Kafr El-Dawar	2115.6	1957.70	92.5	276.5	410	59	55	31.7	66
	Damanhour Ext.	538.20	522.53	97.1	251.70	249	25	20	34.8	31
	Damanhour steam	1050.15	982.67	93.6	293.01	165	72	61	29.9	89
	Abu Kir	5178.94	4871.3	94.2	247	855	69	65	35.5	88
	Sidi Krir 1,2	4004.087	3848.41	96.1	211.678	657	69	71	41.5	94
	Matrouh	366.014	339.909	92.9	289.631	59	71	69	30.7	91
	El-Seiuf gas	213.47	209.141	98	390.442	144	17	12	22.9	95
	Karmouz	6.2	6.029	97.2	407.607	18	4	3	21.3	98
	Damanhour	1049.2	1035.261	98.7	215.282	152	79	76	40.8	93
	Sidi Krir (C.C)	5461.026	5315.944	97.3	158.913	791	79	83	55.5	95
Upper Egypt	Walidia	3166	3043.85	96.1	234.63	550	66	58	27.3	81
	Assiut	406.04	371.48	91.5	305.76	66	70	51	28.6	75
	Kuriemat steam	7601.7	7397.7	97.3	211.820	1270	67	69	41.1	83
	Kuriemat 1(C.C)	5072.17	4986.38	98.3	156	793	73	77	56.2	94
	Kuriemat 2 (C.C)*	4434.92	4348.29	98	173.8	787	64	67	50.5	89
Hydro Plants	High Dam	8919.87	8849.50	99.2	-	2300	44	48	86.8	93
	Aswan Dam I	1498.07	1465.33	97.8	-	270	63	53	83.6	95
	Aswan Dam II	1567	1553.76	99.2	-	270	66	66	89.5	92
	Esna	498.9	492.347	98.7	-	84	68	66	85.8	97
	Naga Hamadi	450.576	443.878	98.5	-	70	73	80	82.7	96
Total	Total-Hydro	12934.81	12804.82	99	-	2848	52	52	86.5	93
	Total-Thermal	129361	125086	96.7	209.4	21301	69	64	41.9	-
	Total-Wind	1525	1495	98	-	505	34	32	-	-
	Kuriemat Solar / Thermal	479	463	96.7	-	-	-	-	-	-
	Purchased from IPPs	29	29	-	-	-	-	-	-	-
	Private Sector BOOT	12855	12084.8	94	205.7	-	-	70	-	-
	Isolated Plants	222.9	218	97.8	-	-	-	-	-	-
	Grand Total	157406	152180	96.7	-	25705	-	-	-	-

*Includes commissioning tests.

Development of Gross Energy Generation (GWh)

Comp.	Station		04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12
Cairo	Shoubra El-Kheima	(St)	8610	8099	7543	7395	8647	7581	7730	5473
	Cairo West	(St)	1963	1918	1837	1828	1785	1889	1560	682
	Cairo West Ext.	(St)	3893	3941	3829	3092	2360	4184	5160	7181
	Cairo South 1	(CC)	3619	3753	3673	3456	3556	3321	3008	2681
	Cairo South II	(CC)	904	1131	1177	1239	1239	1015	1103	719
	Cairo North	(CC)	2635	4475	7325	8511	7625	9545	9915	10432
	Wadi Hof	(G)	64	107	101	158	148	156	131	127
	Tebbin	(St)	-	-	-	-	-	171	4250	4276
	6 October *	(G)	-	-	-	-	-	-	-	628
East Delta	Ataka	(St)	4139	4455	3715	4543	4362	3762	3291	4260
	Abu Sultan	(St)	3041	2110	2952	3264	2983	2783	3222	3674
	Shabab	(G)	122	147	75	104	115	178	249	106
	New Gas Shabab*	(G)	-	-	-	-	-	-	-	6013
	Port Said	(G)	53	69	25	51	62	77	69	62
	Arish	(St)	555	533	534	521	545	546	504	367
	Oyoun Mousa	(St)	4319	4192	4074	4402	4512	4605	4907	5188
	Damietta	(CC)	7387	8137	7876	8377	7589	7798	7603	7522
	New Gas Damietta*	(G)	-	-	-	-	-	-	-	2989
	Sharm El-Sheikh	(G)	84	74	59	115	117	100	75	43
	El-Huraghda	(G)	50	66	41	121	127	148	92	44
Middle Delta	Talkha	(CC)	1828	1834	1570	1743	1970	2056	1984	1698
	Talkha steam 210	(St)	2678	2601	2187	2354	2436	2555	1242	2197
	Talkha 750	(CC)	-	-	2488	2823	3557	4420	5575	3462
	Nubaria1, 2	(CC)	5203	5884	8022	9636	10356	10082	11046	11169
	Nubaria 3	(CC)	-	-	-	-	431	1604		
	Mahmoudia	(CC)	2049	2068	2046	1998	2194	2210	2161	2052
	Mahmoudia	(G)	76	28	4	8	6	2	-	-
	El-Atf	(CC)	-	-	-	-	29	3040	4926	5652
West Delta	Kafr El-Dawar	(St)	1696	2174	2383	2661	2875	2540	2109	2116
	Damanhour Ext. 300	(St)	1468	1787	1797	1925	1829	1824	1658	539
	Damanhour	(St)	1054	982	982	1034	1148	1049	886	1050
	Damanhour	(CC)	1112	1040	909	1059	1059	1014	1045	1049
	Abu Kir	(St)	4872	5026	4682	4743	5285	4432	4149	5179
	El-Seiuf	(St)	409	296	278	125	-	-	-	-
	El-Seiuf	(G)	97	91	36	94	148	197	171	214
	Karmouz	(G)	4.3	5	1	6	6	351	7	6
	Sidi Krir 1, 2	(St)	3974	3548	3758	4166	4003	4527	4139	4004
	Sidi Krir	(CC)	-	-	-	-	25	3140	4673	5461
	Matroh	(St)	324	107	282	273	313	11	389	366
Upper Egypt	Walidia	(St)	2477	2253	2663	1898	3325	2713	1850	3166
	Kuriemat	(St)	8077	8540	8041	8336	9235	7556	902	7602
	Kuriemat 1	(CC)	-	-	1350	3202	3820	5117	5047	5072
	Kuriemat 2 *	(CC)	-	-	-	-	1543	2825	3118	4435
	Assiut	(St)	549	531	542	556	523	452	431	406
Total	Total-Thermal		74560	81565	88862	95782	101898	111576	118500	129361
	Total-Hydro		12644	12644	12925	15510	14682	12863	13046	12934
	Total-Wind (Zafarana)		523	552	616	831	931	1133	1485	1525
	Kuriemat Solar / Thermal *		-	-	-	-	-	-	219.4	479
Private Sector (BOOT)	Sidi Krir 3&4	(St)	4749	4847	4574	4582	4908	4759	4564	4614
	Suez Gulf North West	(St)	4301	4415	4061	4127	4204	4189	4274	3994
	Port Said East	(St)	4150	4309	3990	3933	4129	4236	4471	4247
	Total BOOT	(St)	13200	13571	12625	126424	13241	13184	13309	12855
Total	Purchased from IPP›s		69	36	32	14	17	26	27.3	29
	Total		100996	108368	115060	124779	130752	138782	146587	157183
	Isolated plant units		303	322	347	350	271	218	209	223
	Grand Total*		101299	108690	115407	125129	131040	139000	146796	157406

Note: (St) Steam, (G) Gas, (CC) combined cycle *The Energy Generated includes commissioning tests

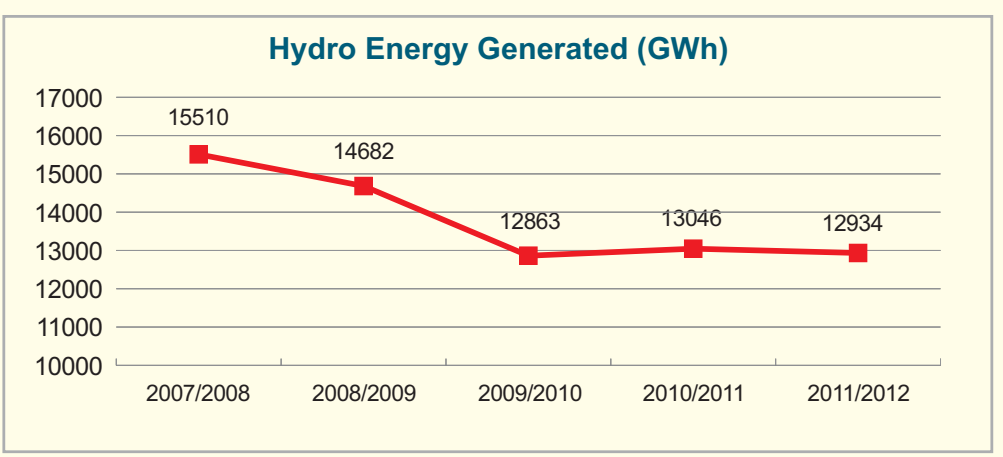
Hydro Power

Hydro power is considered one of the cheapest and cleanest sources of power generation in Egypt, the power generation from hydro resources started in 1960, with the construction of Aswan Dam to control the Nile water discharge for irrigation. In 1967 the 2.1 GW High Dam hydro power plant was commissioned, followed by the commissioning of Aswan 2 power plant in 1985 and in cooperation with the Ministry of Water Resources and Public Works; Isna hydropower plant was commissioned in 1993 and Naga-Hamadi in year 2008. The share of hydro generation to the total generation represents about 8.2 % in 2011/2012.

Energy Generated from Hydro - Power Plants (GWh)

Plant	10/11	11/12	Variance %
High Dam	9000	8920	(0.9)
Aswan Dam 1	1461	1498	2.5
Aswan Dam 2	1632	1567	(4)
Esna	495	499	0.8
Naga Hamady	458	450	(1.7)
Total (MW)	13046	12934	(0.9)

The Hydro Power Plants Execution Authority and the Egyptian Electricity Holding Company are coordinating in planning, preparation of feasibility studies and follow up the execution of New Assiut Barrage Hydro power plant with a total installed capacity of 32 MW and expected to be commissioned by the year 2017.



Hydro Power Indicators (2011/2012)

Description		High Dam	Aswan1	Aswan2	Esna	New Naga Hammady
Peak Load	(MW)	2300	270	270	84	70
Max. daily generated energy	(GWh)	41.6	6	6.2	1.9	1.6
Min. daily generated energy	(GWh)	9.5	1.6	2.5	0.4	0.6
Efficiency	(%)	86.8	83.6	89.5	85.8	82.7

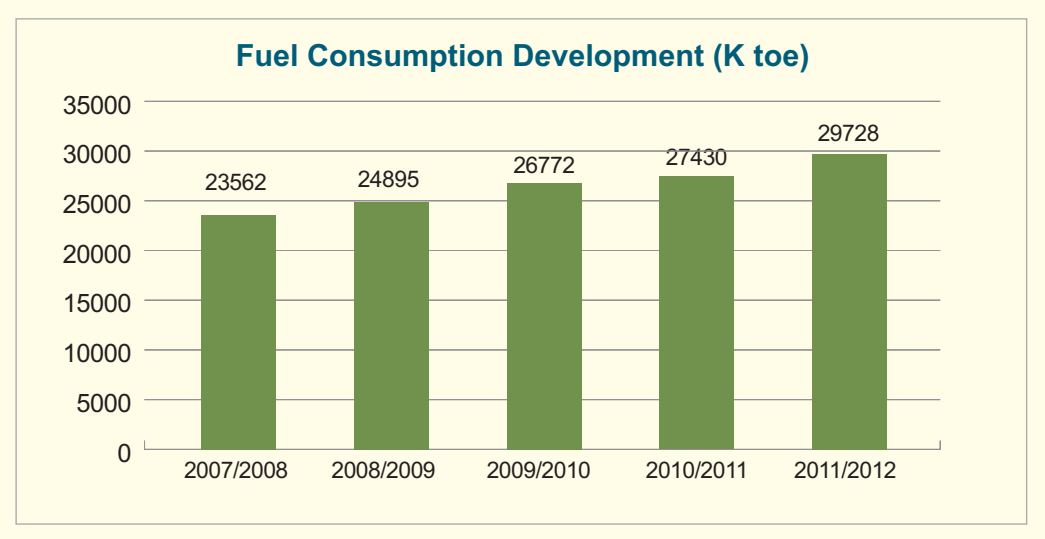
Fuel

- The operation policy of the existing power plants depends on the maximum utilization of natural gas in thermal power generation due to its economic and environmental benefits.
- Usage of N.G (Including BOOT) in thermal power plants connected to the gas grid reached (86.5%) in 2011/2012 representing (84.3%) of total fuel consumption in power generation.

Fuel Consumption (by Type)*

Item		10/11	11/12	Variance %
H.F.O	Ktons	5302	4605	(13.1)
N.G	Million m³	25894	29210	12.8
L.F.O	Ktons	3.3	3.5	6.1
Special L.F.O	Ktons	81.7	59.2	(27.5)
Total	**Ktoe**	**27430**	**29728**	**8.4**

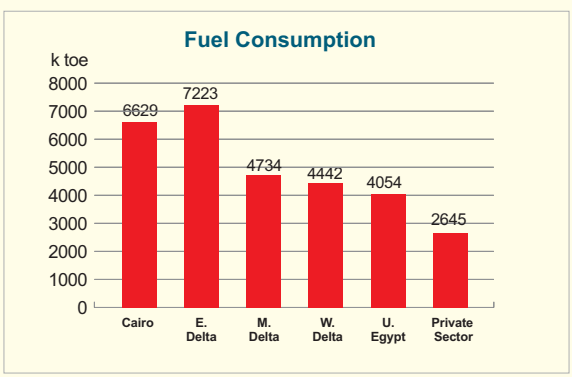
* Including fuel for commissioning tests and BOOTs.
* Without fuel consumed in Isolated plants (76.3 ktoe).
* The consumed fuel in BOOT power plants during 2011/2012 was 2880 million m3 of N.G. in addition to 39 Kton of HFO and with total fuel of 2645 Ktoe.

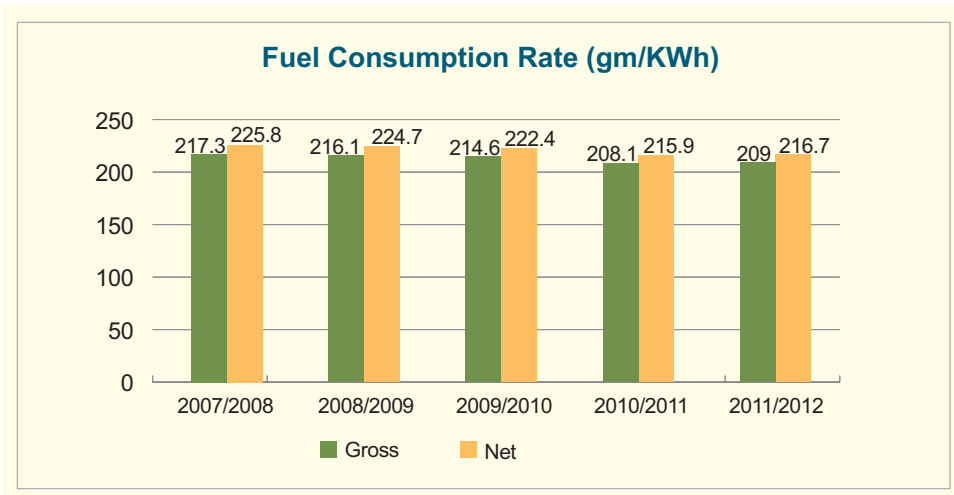


* Including fuel for commissioning tests. BOOTs and without Isolated Plants.

Fuel Consumption

Company	N.G million m³	Special L.F.O (k ton)	L.F.O (K ton)	H.F.O (K ton)	Total (K toe)
Cairo	6562.1	-	0.52	1048.3	6629.4
East Delta	7500.6	45.45	0.278	733.8	7222.5
Middle Delta	5534.4	0.003	-	55.6	4734.3
West Delta	3825.6	13.76	0.79	1182.9	4442.1
Upper Egypt	2906.7	-	1.89	1545.9	4054.3
Total of Production Comp.	26329.4	59.21	3.49	4566.5	27082.6
Private sector	2880.1	-	-	38.8	2645.10
Total Fuel Consumption	29209.5	59.21	3.49	4605.3	29727.7





* Including fuel for commissioning tests. BOOTs and without Isolated Plants.

Development of Fuel Consumption by Power Plants (ktoe)*

Comp.	Station		04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12
Cairo	Shoubra El-Kheima	(St)	1936	1849	1779	1700	1996	1776	1853	1331
	Cairo West	(St)	507	492	481	484	483	516	429	228
	Cairo West Ext.	(St)	862	869	854	687	547	931	1176	1541
	Tebbin	(St)	-	-	-	-	-	-	838	848
	Cairo South 1	(CC)	808	830	811	773	792	727	668	619
	Cairo South II	(CC)	218	233	216	229	229	204	224	188
	Cairo North	(CC)	650	880	1443	1561	1296	1577	1614	1677
	Wadi Hof	(G)	25	41	41	65	60	62	51	49
	6 October *	(G)	-	-	-	-	-	-	-	148
East Delta	Ataka	(G)	977	1073	896	1076	1055	937	854	1089
	Abu Sultan	(St)	797	571	765	859	787	728	840	955
	Shabab	(G)	42	56	29	38	43	65	79	39
	Port Said	(G)	19	25	9	19	24	30	25	23
	EL-Arish	(St)	137	133	129	123	131	132	132	94
	Oyoun Mousa	(St)	914	893	876	944	971	991	1056	1112
	Damietta	(CC)	1422	1539	1507	1602	1467	1521	1478	1453
	Sharm El-Sheikh	(G)	32	30	27	50	49	42	31	17
	Huraghda	(G)	20	26	17	51	55	63	40	19
	New Gas Damietta*	(G)	-	-	-	-	-	-	-	766
	New Gas Shabab*	(G)	-	-	-	-	-	-	-	1655
Middle Delta	Talkha	(CC)	427	433	368	419	463	473	463	402
	Talkha steam 210	(St)	632	616	525	577	609	633	317	535
	Talkha 750	(CC)	-	-	639	682	816	784	870	575
	Nubaria 1,2	(CC)	31	1258	1366	1583	1670	1679	1944	1831
	Nubaria 3	(CC)	-	-	-	-	118	438		
	Mahmoudia	(CC)	428	440	436	437	473	479	466	483
	Mahmoudia	(G)	29	11	2	3	2	0.7	-	-
	El-Atf	(CC)	-	-	-	-	2	646	811	909
West Delta	Kafr El-Dawar	(St)	478	606	668	724	810	721	600	585
	Damanhour Ext. 300	(st)	333	411	417	446	444	445	409	136
	Damanhour	(St)	294	273	270	284	326	306	261	308
	Damanhour	(CC)	230	217	192	229	231	247	233	226
	Abu Kir	(St)	1097	1108	1133	1148	1283	1098	1037	1279
	El-Seiuf	(St)	173	124	170	58	-	-	-	-
	El-Seiuf	(G)	41	38	16	39	61	82	70	83
	Karmouz	(G)	1.6	2	0.44	2	2	4	3	3
	Sidi Krir	(St)	831	730	809	871	839	952	879	848
	Sidi Krir	(CC)	-	-	-	-	6	750	782	868
	Matroh	(St)	102	100	87	84	93	109	124	106
Upper Egypt	Walidia	(St)	588	556	640	452	782	639	431	743
	Assiut	(St)	163	160	163	166	158	138	132	124
	Kuriemat	(St)	1689	1806	1688	1755	1965	1611	1912	1625
	Kuriemat 1	(CC)	-	-	323.1	750	773	760	780	791
	Kuriemat 2 *	(CC)	-	-	-	-	266	755	787	771
Total			17028	18448	19689	20969	22179	24052	24698	27083
Private Sector (BOOT)	Sidi krir 3 , 4	(St)	926	943	786	886	959	940	897	915.0
	Suez Gulf North	(St)	905	931	859	873	892	891	925	847
	Port Said East	(St)	866	913	862	834	865	889	910	883
	Total Boot		2697	2787	2597	2593	2716	2720	2732	2645.0
** **Grand Total**			19725	21235	22286	23562	24895	26772	27430	29728

* Includes Commissioning tests.
* * There are 76.3 ktoe consumed in isolated power plants.

Isolated Power Plants

There are (34) power plants mainly diesel and gas turbine units and one 5MW Wind farm in Hurghada installed in remote areas and connected to the distribution networks of such areas.

Installed Capacity and Energy Generated from Isolated Power Plants 2011/2012

Company	Number of Plants	Installed Capacity* (MW)	Energy Generated** (GWh)	
			Gross	Net
East Delta P.C.	1	22.4	0.26	0.156
Canal * D.C.	21	155.76	176.4	173.78
El-Behera D.C.	5	15.64	25.20	23.15
Middle Egypt D.C.	6	41.28	21.24	20.40
Upper Egypt D.C.	1	2.7	0.02	0.02
Total	**34**	**238**	**223**	**218**

* In addition to Installed capacity, there are 5 MW wind form in Hurghada.
** Energy Generated includes Marsa Alam, Halayeb & Shalateen, Alhasna, and Nakhl which are owned by the Local Council of Red Sea Governorate and operated by Canal Distribution Company.
*** Total fuel consumption of Isolated power plants in 2011/2012 is 76.3 ktoe.

Disseminating the Use of New & Renewable Energy

Within the framework of the Energy Strategy of Egypt, the strategy of the power sector has focused on the diversification of the use of fuel resources, promoting the use of renewable energy and rational use of conventional energy resources.

Egypt is endowed with abundance of wind energy resources especially in Suez Gulf area which is considered one of the best sites in the world due to high and stable wind speeds.

The West of Suez Gulf is one of the most promising sites to construct large wind farms due to high wind speeds which ranges between 8-10 meter/second in average and also due to the availability of large un-inhabitant desert area.

Also there are other promising sites having wind speeds in the range of 7-8 meters/second in the East and West of River Nile near Beni Sweif and Menia Governorates and El-Kharga Oasis in New Valley Governorate.

New and Renewable Energy Authority (NREA) built and operated 547 MW of Wind farm capacities and 140 MW solar thermal power plant using parabolic concentrators through technology integrated with combined cycle power plant.

EEHC and NREA, cooperate in the following areas:

- Generation and Operational Planning taking into consideration the contribution of the renewable energy.
- Wind Integration Studies and Network Planning to ensure the safe and reliable power transfer of wind and other renewable power generation from renewable projects to the load centers.
- Purchase of energy generated from the renewable projects at reasonable price to encourage the use of renewable energy.
- EEHC/EETC and NREA cooperates to achieve the ambitious targets of the Country Strategy to reach 20 % of the energy generated by year 2020 from renewable projects (Hydro, Wind and Solar). In order to achieve these targets, the Government of Egypt set a program to encourage private sector to build own and operate (BOO) wind power plants in Egypt. The program started with the BOO model through competitive bidding where the Egyptian Electricity Transmission Company (EETC) in cooperation with NREA select experienced independent power producers / developers/wind turbine manufacturers through competitive bidding to build, own, and operate wind power plants on predetermined sites on the shores of the Gulf of Suez and East and West of River Nile and sell electricity to EETC for a term of (20-25) years. The Competitive bidding program is expected to add wind power capacities of about 2500 MW (10*250 MW).

Renewable Energy Development Program

First: Wind Energy

- On April 10, 2007, The Supreme Energy Council in Egypt adopted a resolution on an ambitious plan aiming at increasing the contribution of renewable energy to reach 20% of total energy generated in 2020, where hydro power represents 6 % , wind 12% and 2% from other renewable energy resources especially solar energy. The target will be met by scaling up wind energy capacities to reach 7200 MW in year 2020.
- About 7647 square kilometers state-owned land have been already allocated from the Government of Egypt to build large scale wind power projects in Gulf of Suez as well as East and West of River Nile.

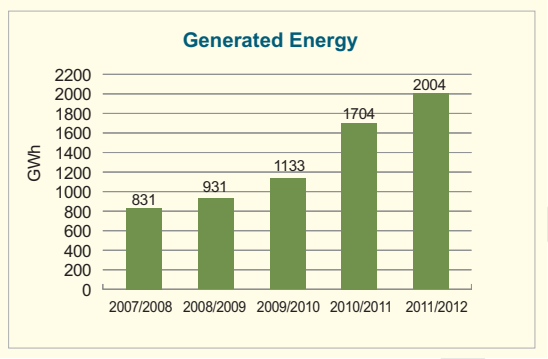
Second: Solar Energy:

- On 30/6/2011 the first Solar Thermal Power Plant at Kuriemat was put into commercial operation. The power plant has a total installed capacity of 140 MW of which 20 MW is the capacity of the solar component, based on parabolic through technology integrated with combined cycle power plant using natural gas as fuel. The power plant is financed from the Global Environment Facility (GEF) and the Japan Bank for International Development.
- A Solar Energy Program is to be implemented during the five year plan 2012-2017 for the construction of:
  - Two concentrated solar power plants, with total capacity of 100 MW at Kom Ombo.
  - Four photovoltaic plants with total capacity of 20 MW.

Renewable Statistics (Wind & Solar)

Item	07/08	08/09	09/10	10/11	11/12
Installed Capacity (M.W)	305	425	490	687*	687*
Generated energy (GWh)	831	931	1133	1704	2004

* Installed Capacity in Hurghada includes (547 Wind & 140 MW Solar/Thermal).
* There is 5 Mw Wind farm at Hurghada connected to Canal Distribution Network.



Electric Power Transmission

Egyptian Electricity Transmission Company (EETC)

Objectives:

1. Management, operation and maintenance of electric power transmission grids on extra and high voltages all over the country, with the optimal economic usage of these grids.
2. Organization of the energy transmission on extra and high voltage grids all over the country through the national dispatch center and the regional control centers.
3. Purchase of electric power produced from the power plants according to the needs and selling it to the consumers on the extra and high voltages and to the electricity distribution companies.
4. Co-ordination with the production and distribution companies for providing electric energy on the various voltages for all uses with high efficiency.
5. Co-operation with Egyptian electricity holding company in preparing technical and economical studies to meet the demand on electricity and its stability.
6. Implementation of electric power transmission projects on extra and high voltages approved by EEHC management and in according with the time schedules.
7. Implementation of the interconnection projects approved by EEHC board of directors, exchange of electric power grids interconnected to the Egyptian grid.
8. Carry out demand forecast for its direct customers as well as financial and economic forecasts for the company.
9. Carry out all other works or activities related to fulfilling the company's objectives as well as any work that may be entrusted to it within its scope of work.
10. Carry out any work that may be entrusted to it by other party, within its scope of work, so as to realize economical benefit to the company.

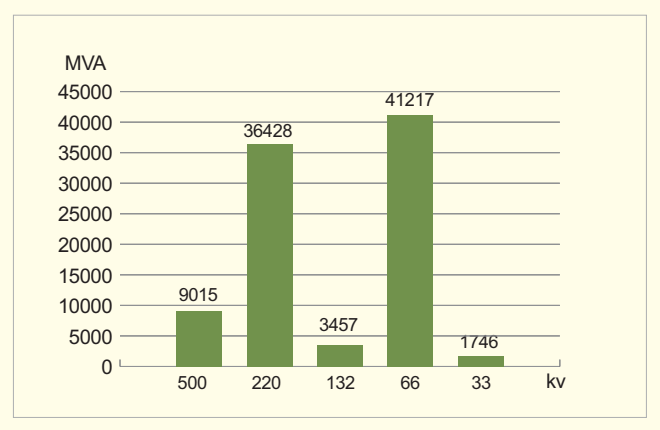
Company	Geographical zone	Headquarter	Address	Tel
Egyptian Electricity Transmission Company	Electricity Transmission Grids on extra and high voltages all over the country	Cairo	Abbassia – Nasr City P.Code 11517	02/22618579 02/26843824

- Total Number of shares: 5140788 shares
- Total Equity Capital: 5.141 million EGP

Transmission Network Statistics (30/06/2012)

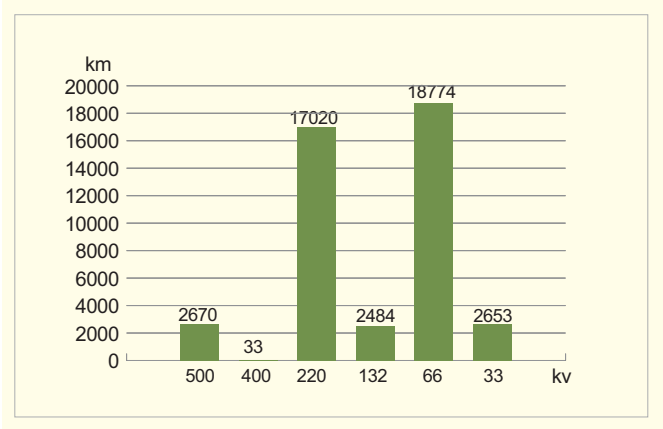
Total Transformers Capacities (MVA)

Zone	500 k.v	220 k.v	132 k.v	66 k.v	33 k.v
Cairo	1500	10690	-	14252.5	-
Canal	1750	8998	-	6826	-
Delta	500	4400	-	5845.5	-
Alexandria & West Delta	-	5675	-	6827	-
Middle Egypt	3285	2875	861	3490	810
Upper Egypt	1980	3790	2596	3976	936
Total	9015	36428	3457	41217	1746



Total length of Transmission Lines and Cables (Km)

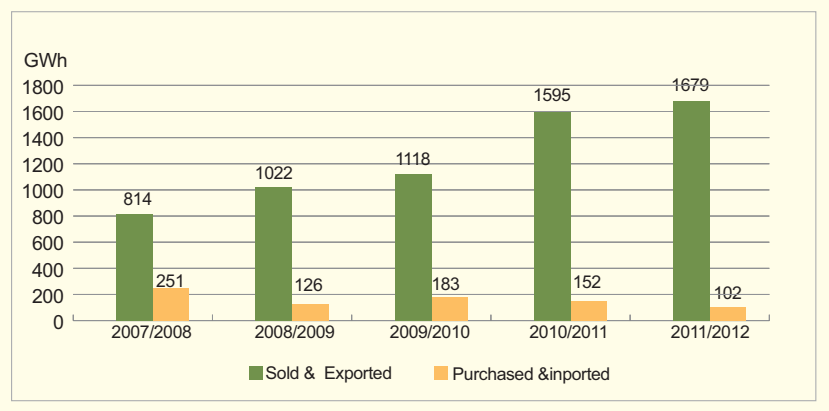
Zone	500 k.v	400 k.v	220 k.v	132 k.v	66 k.v	33 k.v
Cairo	212	-	1342	-	2873	-
Canal	409	33	5334	-	3465	-
Delta	-	-	1575	-	3283	-
Alexandria & West Delta	408	-	3446	-	3980	-
Middle Egypt	885	-	2443	1175	2498	1246
Upper Egypt	756	-	2880	1309	2675	1407
Total	2670	33	17020	2484	18774	2653



International Electrical Interconnection

The Egyptian power sector was keen to improve its performance through diversification of electrical energy resources and adopting new policies for energy trade at regional and international levels through several axes of electrical interconnection with neighboring countries as follows:

Description	Egypt/Libya	Egypt/Jordan		
Interconnection voltage (K.V)	220	400		
Interconnected Countries	Libya	Jordan	Syria	Lebanon
Purchased & Imported Energy (GWh)	100	1277	220	82
Sold & Exported Energy (GWh)	64	36	2	-



1- The Axis of Integrated Arab Electrical Interconnection:

- The following interconnections are in operation:
  Electrical Interconnection Egypt-Libya 5/1998
  Electrical Interconnection Egypt-Jordan 10/1998
  Electrical Interconnection Syria-Jordan 3/2000
  Electrical Interconnection Syria-Lebanon 5/2009
  This has lead to the interconnection between the transmission systems of Lebanon, Syria, Jordan, Egypt and Libya.
- An agreement was reached between the interconnected countries that Egypt will export 450 MW to be equally shared between the three countries(Jordan, Syria and Lebanon).
- As for the interconnection between Mashreq and Arab Maghreb countries(Libya ,Tunisia, Algeria and Morocco), the operational arrangements are under preparation to assure the success of the commissioning of the interconnection line Libya -Tunisia in order to achieve the interconnection between Arab Mashreq and Arab Maghreb countries.
- In the framework of achieving the Integrated Arab Electrical Interconnection, the techno-economic feasibility study for the interconnection between the Kingdom of Saudi Arabia and Egypt has been completed. The study concluded the feasibility of exchange of power up to

3000 MW between the two countries. The interconnection line route survey is completed and the inter-government agreement between the two countries is under review to be signed in order to start project implementation.

- The implementation of this project -which is planned to be completed by 2015 - will lead to an integrated interconnection between Maghreb Arab Countries, Mashreq Arab Countries and the Countries of Gulf Cooperation Council.

2- The Axis of African Electrical Interconnection:

a) Interconnection with Nile-Basin Countries:

- Since the beginning of the nineties, Egypt studied the possibilities of electrical energy trade between Egypt and African countries. Techno-economic feasibility study for the interconnection between Aswan in Egypt and Inga Dam in Democratic Republic of Congo (DRC) passing through Central Africa and Sudan to transmit 40 GW of hydro power generated from Inga to North Africa and Europe was conducted.
- In order to realize the dream of interconnecting the African countries, techno-economic feasibility study for electrical energy trade between the Eastern Nile Basin Initiative (Egypt, Ethiopia, and Sudan) was completed in December 2008. The study concluded the feasibility of exporting 3200 MW from Ethiopia to Sudan (1200MW) and to Egypt (2000MW).

b) Interconnection with Sudan:

The feasibility study for the interconnection between Egypt and Sudan by constructing 180KM , 220 KV overhead transmission line between the two countries is under preparation .

3- The Axis of Electrical Interconnection with Europe:

- Through Egypt`s membership in the Observatoire Mediterraneen de l'Energie (OME) and the Study Committee for the electrical interconnection of the Southern and Eastern Mediterranean Countries as an introduction to the interconnection with the European network and exporting renewable energy (Solar and Wind) from Egypt to Europe.
- Discussions are under way between Egypt and Greece for the interconnection between the transmission networks of the two countries. The interconnection with Greece will be established by constructing 2000 KM, + 500 KV DC link from which about 800 KM is a submarine cable .

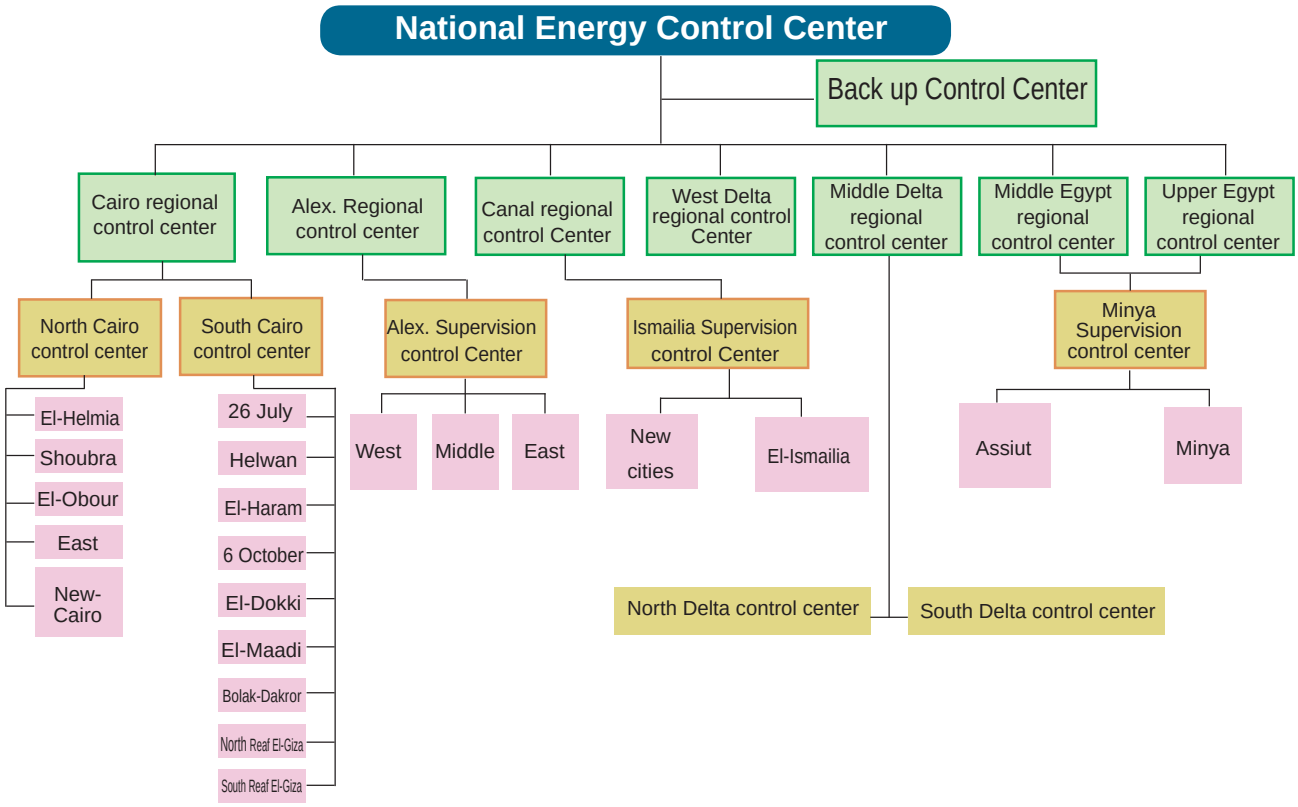
Accordingly, Egypt will become the focal and central point for electrical energy trade between Countries of Gulf Cooperation Council, Arab Mashreq, Arab Maghreb and Nile Basin countries.

Future Vision for Regional Electrical Interconnection

The study for upgrading the interconnection with Arab Maghreb Countries through Libya to 400/500 kV has been finalized in April, 2004. The study final report was presented to the concerned countries (ELTAM) , and it was agreed to implement the recommended projects for starting the National Networks (500/400KV) of Egypt and Arab Maghreb Countries. It is expected that Egypt will finalize the construction of the 500 KV Sidi Krir / El Saloom line and El Saloom 500 KV substation by year 2015.

Control Centers
For Extra High, High and Medium Voltage Networks

In order to ensure stability and quality of electricity supply to all consumers; industrial, commercial, irrigation and residential, EEHC introduced the most up-to-date automatic control systems applied in developed countries to control the operation of its National Power Grid by designing a hierarchy control systems headed by National Energy Control Center (NECC) responsible of generating units dispatch and operational control of the Extra High Voltage(EHV) 500KV & 220 KV Transmission Networks, followed by Regional Control Centers (RCCs) responsible of operational control of High Voltage (HV) 132&66 KV Transmission Networks and then the Distribution Control Centers (DCCs) responsible of the operation control of (22KV&11KV)Medium Voltage Distribution Networks.



Remarks:

- Regional control center of Middle Delta is under renovation.
- Regional control center of West Delta controls the 66 KV in West Delta in addition to control and operate the main feeders of 22 and 11 KV from the 66/11 KV substations.
- On 7/9/2010, a contract was signed with Alstom Grid Company for upgrade and modernization of the National Energy Control Center (NECC). The new system is operating at (NECC) since May 2012.
- On 28/4/2010, consultancy Services Contract was signed with TEPSCO/TEPCO/EPS consulting group to upgrade and modernization of the Naga Hamadi Upper Egypt and construct a New Control center in Middle Egypt (Samalot).

Electrical Power Distribution

Distribution Companies:

- North Cairo Electricity Distribution Company
- South Cairo Electricity Distribution Company
- Alexandria Electricity Distribution Company
- Canal Electricity Distribution Company
- North Delta Electricity Distribution Company
- South Delta Electricity Distribution Company
- El-Behera Electricity Distribution Company
- Middle Egypt Electricity Distribution Company
- Upper Egypt Electricity Distribution Company

Objectives:

1. Distribution and selling to customers on medium and low voltage, electric power purchased from the Egyptian electricity transmission company and from the Egyptian electricity production companies on medium voltage , and also electric power purchased from industrial and other IPP`s exceeding their needs, provided that the approval of EEHC Board is obtained.
2. Managing, operating and maintaining medium and low voltage grids in the company, in compliance with the dispatch centers instructions as to fit for economic operation requisites.
3. Preparing forecast studies on loads and energy for customers of the company and on economic and financial forecast for the company.
4. Conducting studies, research, design and implementing electric projects for different purposes on the medium and low voltages and carrying out all associated works.
5. Managing, operating and maintaining isolated units.
6. Carrying out any other work or activities related to or fulfilling the company's objectives, in addition to any other work that may be entrusted to the company by EEHC, within its scope of work.
7. Carrying out other works entrusted to the company by other party, within its scope of work, so as to realize an economic benefit for the company.

Information about Distribution Companies

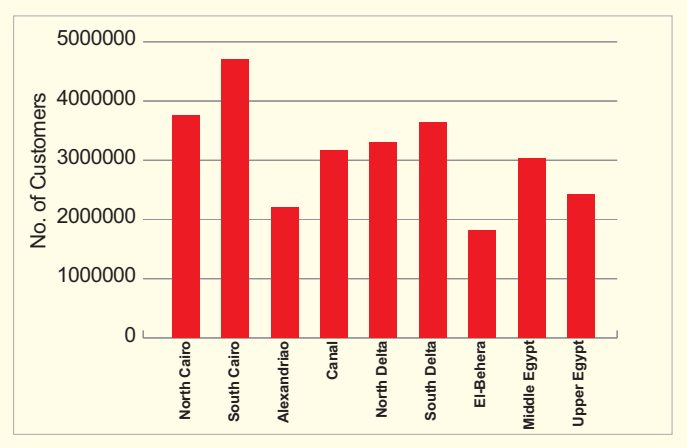
Company	Geographical zone	Headquarter	No. of Shares	Equity Captial million EGP	Address	Tel.
North Cairo	North and East Cairo Sectors, New Cairo, El-Obour city in Cairo Governorate, Khanka, Shoubra Elkhima and Elkanater in Kalupya Governorate	Cairo	17368500	173.685	4 Nasr Road Cairo	02/22725095
South Cairo	South and West Cairo Sectors in Cairo Governorate & Giza Governorate	Cairo	25348800	253.488	53,26th July St., Cairo	02/25766612 02/25759121
Alexandria	Alexandria Governorate, to Kilo 66 Alex- Matrouh Road	Alexandria	19544350	195.444	9 Sedi El-Metwalli St., Attarien	03/ 3911967 03/3933223
Canal	Ismailia , PortSaid , Suez, Sharkia, North Sinai, South Sinai & Red Sea Governorates	Ismailia	25223487	252.235	Osman Ahmed Osman Square, El-Sheikh Zayed, Ismailia	3209600/064
North Delta	Dekahlia, Damietta & Kafr El-Sheikh Governorates	Dakahlya	21359723	213.597	Abd El Salam Aref St., adjacent to Stadium, Mansoura	050/2304186 2304178/050
South Delta	Kalubya (Exept Great Cairo), Menoufia (Exept El Sadat city, Elkhatatba) & Gharbia Governorates	Gharbia	22274638	222.746	Tanta- Kafr El Sheikh Road	040/3455516 040/3455519
El Behera	El Behera, Matrouh, (Beyond K66 Alex/Matroh Road) , Governorates, Sadat City & Khatatba Distriet in Menoufia Governorates	El Behera	13200313	132.003	1 Gomhorya St., Thanawi Zone, Behera	045/3318030 045/3324399
Middle Egypt	Beni Suif, Fayoum, Minia, Assiut & New Vally Governorates	Minia	17688702	176.887	78 Horrya St., Minia	086/2347296 086/2346733
Upper Egypt	Sohag, Qena, Aswan and Luxor Governorates	Aswan	12993900	129.939	High Dam – West Aswan	097/3480416 097/3480317

Medium and Low Voltage Network in 30/06/2012

Item / Comp.		North Cairo	South Cairo	Alex.	Canal	North Delta	South Delta	El Behera	Middle Egypt	Upper Egypt	Total
No. of Switchboards		366	336	207	1121	176	106	255	115	101	2783
Percentage (%)		**13.2**	**12.1**	**7.4**			**3.8**	**9.2**	**4.1**	**3.6**	**100**
Length of MV Network (km)	Lines	515	2950	577	14225	9811	7556	12700	16147	10449	74930
	Cables	14616	17966	10406	16674	5482	3285	4030	5221	5751	83432
	Total	15131	20917	10983	30899	15293	10842	16730	21368	16200	158362
Length of LV Network (km)	Lines	2944	4497	2979	29716	22070	17678	15000	33344	29340	157568
	Cables	29617	30564	5766	13785	2745	796	2540	1929	1528	89269
	Total	32561	35061	8745	43501	24815	18474	17540	35273	30868	246837
Total Length of MV&LV Lines & Cables (Km)		47692	55977	19728	74400	40108	29315	34270	56641	47068	405199
Percentage (%)		**12**	**14**	**5**	**18**	**10**	**7**	**8**	**14**	**12**	**100**
Distribution Transformers		15484	18487	7293	27833	15513	14659	18400	20848	19010	157527
Distribution Transformers (MVA)		11963	11550	4395	10835	4443	3913	3954	4615	4290	59958
Percentage (%)		**10**	**12**	**5**	**18**	**10**	**9**	**12**	**13**	**12**	**100**
Number of LV Pillars and Panels		37406	53385	7293	38587	17274	14746	21550	12806	20273	223320
Percentage (%)		**17**	**24**	**3**	**17**	**8**	**7**	**10**	**6**	**9**	**100**

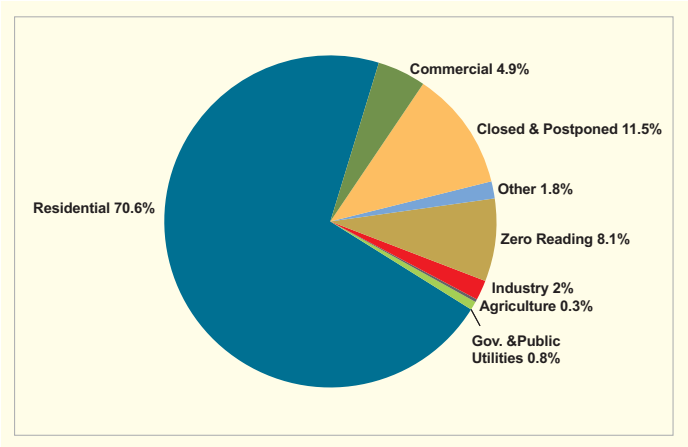
Number of Customers in Distribution Companies

Company	No. of Customers
North Cairo	3761517
South Cairo	4704639
Alexandria	2211766
Canal	3172847
North Delta	3301659
South Delta	3638077
El-Behera	1807231
Middle Egypt	3037717
Upper Egypt	2429477
Total	**28064930**



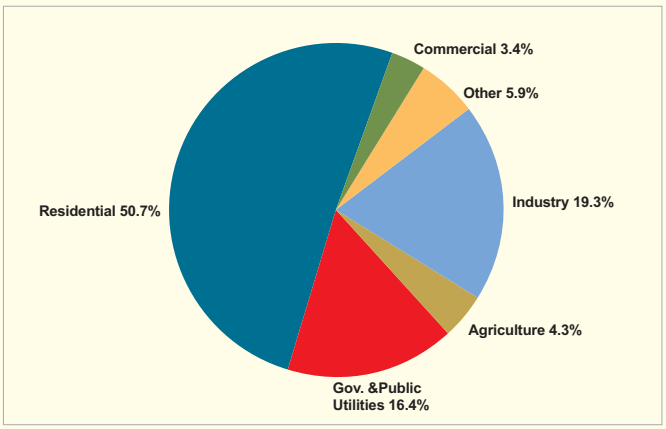
Number of Customers According to Purpose of Usage

Purpose of Usage	No. of Customers
Industry	572839
Agriculture	73260
Gov.& Public Utilities	200615
Residential	19823502
Commercial	1369251
Closed and postponed	3235494
Other	512845
Zero reading	2277124
Total	**28064930**



Energy Sold from Distribution Companies According to Purpose of Usage (Medium and low Voltage)

Purpose of Usage	Quantity GWh
Industry	21622
Agriculture	4787
Gov. Sector & Public Utilities	18292
Residential	56664
Commercial Shops	3800
Other	6648
Total	**111813**



Development of Customers Services

I - Development of customer service centers:

Distribution companies frequently develop and renovate customers` technical and commercial service centers in order to facilitate, improve and modernize the services provided to their customers

The development includes the following:

a) Renovation of customers service centers buildings:

- Renovation of customer service centers buildings (painting, lighting, furniture and customers reception halls).
- Explanatory instructions are placed everywhere on the walls of customers reception halls in commercial centers indicating the procedures and documents needed for each type of services.

b) Technical and Commercial development of Customers Service Centers:

- Automation of the services by computerizing all the processes of providing the services.
- Provide commercial services (new supply contracts, reinforcement and modification of existing contract, temporary connections, changing place of boxes and meters….etc)
- Automation of customer meter readings by using electronic meters .
- Customer deals with one window.

The total number of customer service centers reached about 400 in the cities and 879 branches in the villages in 2011/2012 compared to 396 centers and 879 branches in 2010/2011 to facilitate reporting for any faults or interruptions and to insure quick actions .

Management reform of the centers:

In order to facilitate providing services and procedures for supplying electricity customers, the Ministry of Electricity And Energy prepared the following:

1. five forms for public services;

- Request for supplying electricity to buildings (all types of usages).
- Request for meter testing and calibration.
- Request for disconnecting the meter.
- Request for obtaining information about customer consumption.
- Request for the installation of power factor correction devices.

These Forms are on the internet site (www.edara.gov.eg).

2. The Directory for supplying electricity to investment projects was issued; it includes all steps, procedures, documents, connection charges and approvals needed and the ways for payments of the charges, also an official representative of the Ministry of Electricity and liaison officers for the transmission and distribution companies were assigned to the Complex of Investment Services in Cairo , in order to finalize all required procedures for investors.

The Directory is on the Web Site (www.egyptera.org).

3. The Directory for supplying electricity to housing buildings in urban and rural areas including rules for defining the total area of the house and the design capacity according to the living standard in urban, rural and districts was issued .It also includes all procedures ,documents, and approvals needed for supplying electricity to any house , the bases for calculating the connection charges ,the time schedule for connection and the conditions for the availability and specifications of the room for the installation of a distribution transformer.

The Directory is on the Web Site (www.egyptera.org).

II- The use of insulated conductors instead of un-insulated conductors:

Great care has been given to change non-insulated low voltage conductors by insulated conductors, without any additional cost on customers, in order to protect the customers from fire dangers due to the falling down of non-insulated conductors. The total length of the insulated conductors installed in the distribution network reached about 458 thousand Km in 30/6/2012 representing 75% of the total low voltage network in distribution companies.

III- Guarantee high level of quality of supply in electricity companies through the improvement of the continuity of supply indicators.

The following procedures have been taken:

- Analysis of the causes of increased un-planned interruptions and relate it to network renovation and rehabilitation plans.
- Follow-up the implementation of maintenance programs to ensure optimizations of interruption of supply time and at the same time implementation of the maintenance procedures with high quality.
- Insure high quality of the services provided by the call centers in case of interruptions.
- Intensive field inspections and data collection for interruptions, these data are compared with the recorded data to check for accuracy.
- The use of automatic restoration devices for overhead lines with high interruption rates, this system enables quick restoration for minor faults and help in locating the place of major faults, resulting in reducing restoration time and number of interruptions.
- Setting annual plan for the rehabilitation and extension of system components in order to meet the growth of demand and reduce interruption rates. In addition to the implementation of the most up-to-date maintenance and rehabilitation procedures for power plants and transmission and distribution networks.

IV -Coded Meters:

In order to decrease commercial losses and increase companies revenues, the Cabinet allowed the distribution companies to install coded revenue meters at illegally constructed buildings and customers with illegal connections. The customer will bear the cost of the meter to allow the distribution company recording their consumptions without signing a contract.

The program will be executed in two stages:

- First Stage: For non licensed floors of the buildings already connected to the Network and have a source of power supply .
- Second Stage: For buildings which are not connected to the Network by installing distribution pillars outside the building.
- Till 15/10/2012 the total number of settled requests have reached nearly Million requests out of which 0.88 Thousands have been implemented.

Taking into consideration the restrictions imposed by laws like the restricted heights imposed by civil aviation, building on agriculture lands and under high voltage transmission lines.

Improving Electrical Energy

- Electrical Energy consumption has tremendously increased during the past years making the issue of energy efficiency and conservation a must to face this growing demand and improve the environmental conditions through reducing greenhouse gas emissions as a result of reducing the amount of fuel consumption in power stations.
- The power sector, within its achievements towards energy efficiency improvement and conservation, has developed the National Energy Efficiency Action Plan (NEAP) for the period 2012-2015.
- The NEAP has been approved by the Cabinet in 11/7/2012, it includes measures aiming to improve energy efficiency of end users in some sectors of consumption and will be implemented in cooperation between the Ministry of Electricity and Energy and other ministries: Ministry of Industry and Foreign Trade, Ministry of Housing , Ministry of Local Ddevelopment, Ministry of Tourism.
- The NEAP has set a target to achieve a cumulative energy savings of 5% of the average last five year consumption.

NEAP Measures:

First Sector: (Residential Sector) Measures include use of efficient lighting and high efficient household appliances.

In year 2010/2011, the consumption of the residential sector has reached 41% out of the total consumption, out of this consumption 30% is consumed for lighting purposes and 70% for the use of electrical appliances and especially air conditioners in summer.

What has been achieved:

- 12 million compact fluorescent lamps have been sold through the electricity distribution companies for half of their price and a guarantee period of 18 months, 3 million lamps are under selling with the same conditions. The target is to sell more 12 million lamps during the NEAP period.
- Energy efficiency standards and labels have been developed for 5 household electrical appliances (refrigerators, automatic washing machines, air conditioners, electrical water heaters, compact fluorescent lamps and electronic ballasts) Ministerial decrees have been issued for adoption and enforcement, and testing laboratories have been erected at the New and Renewable Energy Authority.
- Through the NEAP standards and labels will be developed for more electrical appliances, the Ministerial decrees will be reviewed and amended to ensure enforcement, more over the testing laboratories will be upgraded and extended to test the new appliances for which standards and labels have been developed.
- A guide book has been prepared to assist consumers in adopting energy efficiency measures and conservation in order to reduce electricity consumption in the residential sector.

Second Sector (Public Utilities and Governmental Buildings)

Improving efficiency of street lighting:

Street lighting consumes 4.9 % of the total energy consumption. Upon recommendation of the Supreme Council of Energy dated 11/3/2009 and resolution of the council of governors regarding improving energy efficiency of street lighting a program has been Implemented for replacing the

400,250 watt sodium lamps, mercury vapor lamps and incandescent lamps by high efficient 250,150 watt sodium lamps or 85,120 watt compact fluorescent lamps without affecting the light intensity and uniformity of the replaced lamps according to international norms.

The Ministry of Electricity and Energy is assisting local authorities in tender procedures and in conducting necessary tests to ensure high quality of the delivered lamps.

- Up till now 340 thousand lamps have been replaced. The target number of lamps expected to be replaced during the NEAP period is 1 million lamps.

Governmental buildings:

Governmental buildings consume about 5%of the total consumption; a study has been conducted to study opportunities of reducing electricity consumption in this sector, based on study recommendations:

1- An energy efficiency code for governmental buildings has been developed and a ministerial decree has been issued for its enforcement.

2- A resolution has been adopted by the Supreme Council of Energy for improving energy efficiency of governmental buildings.

3- Electricity distribution companies implemented energy efficiency projects in buildings belonging to the power sector or within the geographical area of the electricity distribution companies.

4- The Energy Efficiency Improvement GEF/UNDP project executed by the Ministry of Electricity and Energy has implemented energy efficiency pilot projects in some governmental buildings (Ministry of Irrigation and Water Resources) and achieved 17% savings through replacing lighting systems by more efficient ones.

5- Capacity building and training sessions have been provided to employees of governmental buildings in the field of energy efficiency audit and efficient lighting.

During the NEAP period, improving energy efficiency of governmental buildings will be implemented on a larger scale to include at least two buildings belonging to each of the Ministries.

Potable water and sanitary stations:

A program is undergoing to improve the power factor of power stations with low power factor less than 0.9 and providing technical assistance for mounting the capacitors, the program will continue through the NEAP period.

The NEAP will also include actions for the support of a financial mechanism for the diffusion of solar water heaters in the residential sector and hotels in the red sea and South Sinai Governorates.

How to Calculate Consumption of Household Appliances

The first step to save energy in the residential sector is to know how much is the consumption of each household appliance and how much it costs in the electricity bill

The cost of consumption is based on the following factors:

- Appliance wattage(labeled on the appliance).
- Average operating hours.
- Average electricity tariff.

Be aware that the electricity tariff is ascending, the higher you consume the higher is the tariff.

Example: The wattage of a colored TV is 200 Watt ,it operates 6 hours per day.

The monthly electricity bill shows that the consumption is 275 KWh and the cost 23.7L.E

What is the cost of electricity consumption for the TV ?

Average monthly cost for the TV consumption=

Wattage(200Watt)* operating hours(6) *30(month)* cost of electricity bill(23.70L.E)

Total Monthly Consumption(275*1000)watt hour

=3.1 L.E /month

The cost of consumption of the TV in the electricity bill represents 13% of the total electricity bill

Human Resources and Training

- The Egyptian Electricity Holding Company (EEHC) and its affiliated Companies are relying on the human resources as a main pillar to meet rapid developments in the production, transmission, distribution and utilization of electrical power.
- The company aims at developing and improving human resources capacity to deal with technological advancement through specified programs designed to achieve this target.
- Exerted efforts are covering the following:

1. Human resources:

The total number of employees at EEHC and its affiliated companies reached about 183.3 thousand in 30/6/2012 distributed as follows:

EEHC employees :

Item	Number in 30/6/2012
Head Quarter	2189
Electricity Hospital	815
Total	**3004**

Production Companies Employees:

Cairo	5876
East Delta	7377
Middle Delta	6784
West Delta	8596
Upper Egypt	3663
Hydro Plants	3838
Total	**36134**

Egyptian Electricity Transmission Company	**33508**

Distribution Companies Employees:

North Cairo	13634
South Cairo	18198
Alexandria	13546
Canal	17662
North Delta	9258
South Delta	11035
El-Behera	8569
Middle Egypt	10233
Upper Egypt	8528
Total	**110663**

Total No. of employees of EEHC and its affiliated companies	**183309**

2. Health Care:

- EEHC is focusing its efforts on improving the performance of the Electricity Hospital, overcoming work obstacles and achieving its economic operation. Efforts exerted are represented in rationalizing expenses and improving the quality of services.
- These efforts resulted in attracting more outside patients to the Electricity Hospital.
- The Electricity Hospital has been awarded the ISO 900/2008 accreditation for high quality of its provided services.

3. Training

Technical management and leadership training programs have been organized for employees of the Egyptian Electricity Holding Company and its affiliated companies, Ministry of Electricity & Energy and students of universities and schools as follows:

- EEHC is providing local and international training to its employees in the field of generation, transmission and distribution of electrical power.
- EEHC sends experts and qualified trainers to provide technical support and train technical personnel in Arabic and foreign countries.
- Technical, administrative and leadership training programs have been provided to employees of EEHC and its affiliated companies, Ministry of Electricity and Energy, universities and school students as shown in the following table:

No	Item	Total No of Trainees
1	Trainees working at the Holding company, the affiliated companies and the Ministry of Electricity and Energy	42327
2	Trainees from the Arab and African companies	736
3	Summer training for Faculties and High Technical Institutes students	6228
4	Technical Schools in cooperation with the Ministry of Education: A) Industrial Technical Education 3 years System B) Industrial Technical Education 5 years System C) Industrial Technical Education Mubarak- Cole System	 152 30 138
5	Cooperation with Faculty of Engineering, Cairo University: 1- Number of power plants Diploma 2- Number of Protection &Automatic Control Diploma	 19 47
6	Enrolled for Graduate of the holding company and the affiliated companies	269

4. Leadership Development Center:

Acknowledging the role of the human resource in leading the development and innovation process, the decision makers of the power sector decided in 1969 to establish the Leadership Development Center to create new generation leaders capable through their competencies and behavior to achieve the power sector goal, where the following has been achieved up to year 2011/2012:

- More than 17 graduation courses for a total number of 442 trainees.
- Conduct training sessions in the field of development management and leadership skills, specialized courses, computer courses, English and French language courses.
- Continuously update the training courses material to cope with the new advancements.


Electricity Hospital

- The Egyptian Electricity Holding Company is keen to providing health care to all its employees and has therefore constructed the electricity hospital which started operation in 1997and gained a high medical reputation due to its competence and high expertise.
- The hospital is providing consulting, treatment and protective high quality medical services to patients from the power sector as well as outside patients at reasonable prices . This had an impact of reducing the companies medical costs.
- The hospital includes specilized clinics and departments like (X-Rays, Medical laboratories, Physiotherapy,….etc) ,Intensive Care Unit, the Dialysis unit, the Bronchoscope, the dental, Ophthalmology and Cardiac clinics. All clinics are equipped with the most up to date medical equipments and instruments.
- In addition, the hospital is keen to introduce new services such as the Magnetic Resonance (MRI) and Cardiac Angiograph / Angioplasty.
- According to the high quality of services provided by the hospital , the number of patients from the sector and outside increase every year .
- The Electricity Hospital obtained the ISO 9001/2008 quality certificate.

Number of beds	Number of Surgical and Endoscopy operation rooms	Endoscopies	External Clinics
260	9	2	30

Hospital Address: El Thawra Street- Almaza, Km 4.5 Cairo/Suez Road
Tel:02/ 22687843 Emergency:02/24149845

Commercial Activities

Electricity Pricing:

- Electricity tariff in Egypt is designed based on the following:

Supply Voltage levels:

Tariff depends on the supply voltage levels. Costs are calculated at the generation sent out, network investments, cost of network operation and network losses are added for each voltage level up to the supplied voltage level resulting in increased cost with decreased voltage level.

Purpose of Consumption:

- Tariff varies according to the type of consumption (industrial, residential, commercial, agriculture, street lighting…)
- Tariff structure applied to residential and commercial sectors is based on ascending blocks: 6 blocks for the residential sector and 5 for the commercial sector, the higher the consumption the higher the tariff. Monthly electricity bill is calculated by dividing the total consumption over the tariff blocks.
- The social concern has always been taken into consideration when setting the tariff blocks for the residential sector. This structure encouraged consumers with high consumption to conserve energy and at the same time subsidize part of the vulnerable consumers consumption.

The first block of the applied residential tariff has remained unchanged since 1993 with 5 piaster per KWh where all consumers are benefiting for the amount of their consumption lying in this block; the applied tariff to this block represents 14.9% of cost of service to the residential sector. The provided subsidy for the residential sector is up to 1650 KWh per month where more than 99% are benefiting from this subsidy, the subsidy amount is the highest for the lower customers and decreases with the increase of consumption, the total subsidy of the residential sector reached Billion L.E 10,5 in year 2011/2012.

Another subsidy is provided to the agriculture tariff to encourage newly graduates implementing land reclamation projects where the subsidy reached 35% of the cost.

- Since 2007, the government decided to reform energy prices and gradually decrease the subsidy provided to the industrial sector by increasing the selling price of natural gas and electricity to the most heavy industries, these industries have been divided into three groups, in addition, a time of use (TOU) tariff has been applied with a higher rate during peak hours compared to off peak hours.

The new tariff applied to each group starting 1/1/2012 is shown in the following table:

Electricity Prices for Industries
Subjected to Prime Minister Decree No 37/11/11/4 for year 2011
As Applied from 1/1/2012

Item	Energy Price (pt/KWh)	
	Off peak	During peak
First: Energy intensive industries (Iron - Cement - Fertilizers - Aluminum - Copper - Petrochemicals).		
- Extra High Voltage	27.7	41.5
- High Voltage	30	45.0
- Medium Voltage : Demand Charge 12.1 LE/KW-Month	35.8	53.7
Second: industries (Glass – Ceramic & Porcelain)		
- Extra High Voltage	25.2	
- High Voltage	28.6	
- Medium Voltage : Demand Charge 11.1 (LE/KW-Month)	32.7	
Third : Other Industries (not mentioned in First & Second)		
- Extra High Voltage	15.4	
- High Voltage	18.6	
- Medium Voltage : Demand Charge 11.1 LE/KW-Month	25.5	

* The Ministry of Electricity & Energy is responsible for determining the Peak Hours.

Tariff Structure Since 1/10/2008

Item	Energy Price (Pt/KWh)
1) Power Service on Extra High Voltage (Pt/KWh)	
Kima	4.7
Metro- Ramsis	6.8
Somed (Arabian Company for Petrol Pipes)	27.3
Other Consumers	12.9
2) Power Service on High Voltage (Pt/KWh)	
Metro - Toura	11.34
Other Consumers	15.7
3) Power Service on Medium & Low Voltage	
3/1- More than 500 KW	
* Demand Charge (LE/kW-month)	9.5
* Energy Rates (Pt/kWh)	21.4
3/2- Up to 500 KW a-Agriculture (Pt/KWh)	11.2
Annual Charge per fedan for Irrigation by groups (LE)	135.2
b-Other purposes(Pt/KWh)	25.0

4- Residential :

Description			Price (Pt/KWh)
1) First 50	KWh	monthly	5.0
2) 51 - 200	KWh	monthly	11.0
3) 201 - 350	KWh	monthly	16.0
4) 351 - 650	KWh	monthly	24.0
5) 651 - 1000	KWh	monthly	39.0
6) More Than 1000	KWh	monthly	48.0

5- Commercial:

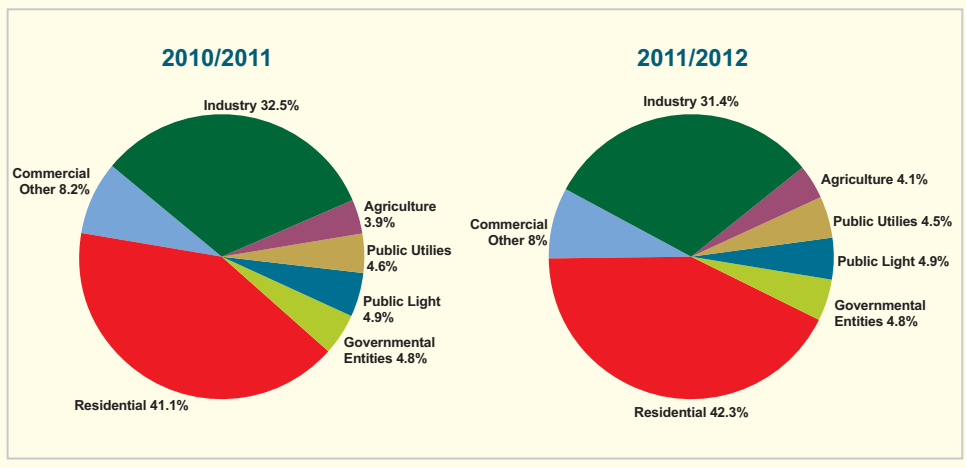
Description			Price (Pt/KWh)
1) First 100	kWh	monthly	24.0
2) 101 - 250	kWh	monthly	36.0
3) 251 - 600	kWh	monthly	46.0
4) 601 - 1000	kWh	monthly	58.0
5) More Than 1000	kWh	monthly	60.0

6 - Public Lighting **41.2**

• Prices are based on power factor 0.9

Energy Sold by Purpose (GWh)

Type of Usage	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
Industries	37045	37273	38916	40702	42098
Agriculture	4209	4617	4834	4927	5560
Utilities	4380	4714	5555	5759	6010
Public lighting	6759	6982	7050	6186	6537
Governmental Entities	5691	5563	5443	5977	6385
Residential	40271	43811	47431	51370	56664
Commerical	8240	8754	9674	10238	10715
Others	106595	111714	118903	125159	133969
Interconnection& BOOTs	631	903	1277	1775	1869
Grand total	107226	112617	120180	126934	135838



The considerable growth in household loads in comparison with industry and other purposes was due to the expansion of residential compounds and new communities in addition to the widespread use of domestic appliances especially air conditioners in household due to hot weather during summer days.