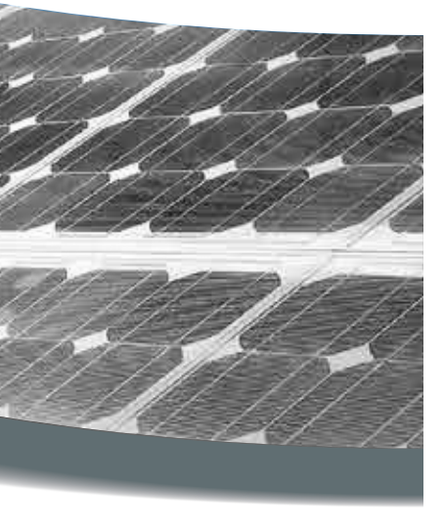
ARAB REPUBLIC OF EGYPT

MINISTRY OF ELECTRICITY & RENEWABLE ENERGY

EGYPTIAN ELECTRICITY HOLDING COMPANY

ANNUAL REPORT

2017/2018



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EGYPTIAN ELECTRICITY HOLDING COMPANY (EEHC)

Egyptian Electricity Holding Company (EEHC)

The Egyptian Electricity Holding Company (EEHC) is an Egyptian Joint-stock company incorporated pursuant to law no. 164 of 2000 and is subject to the provisions of Articles no. 2, 7 &11 (except para. 11) of law no. 12 of 1976 establishing the Egyptian Electricity Authority (EEA) and law no. 159 of 1981.

Vision

World Class Leadership and Excellence of a Sustainable Electrical Energy.

Mission

Provide sustainable electrical energy for all customers through available resources according to international standards at competitive prices by corporate effort adopting quality standards, optimal utilization of resources and environment conservation based on high-efficient human potentials and technologies performing work in an ethically responsible manner for the benefit of our customers, employees and society.

Foreword by the Chairman

The Egyptian Electricity Holding Company (EEHC) pays special attention to provide the various State sectors with their needs of electrical energy and secure an adequate technical reserve by implementing the necessary policies for attaining the desired satisfaction of all citizens, institutions and companies. EEHC is keen on meeting current and future demand on electric energy by way of supporting investors who are desirous to cooperate with the Electricity Sector in the construction of energy infrastructure and providing them with diverse free options while maintaining an appropriate mix of the various energy systems and continuous coordination with the Petroleum Sector. A special consideration is given to the use of state-of-the-art technology at power stations and advanced schemes of electric networks.

EEHC strives hard to achieve justice in access to electricity and affordability to all members of society by adopting appropriate policies that do not affect the lower-income citizens, while accelerating procedures of obtaining the service by keeping pace with the technological advancement in providing it and continuously monitoring its quality.

At the same time, EEHC keeps in mind environmental sustainability by raising efficiency in production, transmission and distribution operations, pushing ahead energy efficiency improvement and conservation programs, and developing utilization of renewables in coordination with the New and Renewable Energy Authority (NREA).

These policies have resulted in outstanding achievements, foremost among which are the hike in total installed capacity connected to the national grid up to 55'213 MW and meeting the peak load that reached 30'800 MW, while maintaining stability in electricity supply to all segments of consumers whose numbers amounted to 35.1 million subscribers. This was accompanied by a notable improvement in the average rate of fuel consumption at thermal power plants that reached 206.3 g/KWh (generated), which resulted in decreasing CO2 emissions by about 2.2 million tons per year, increasing power plants availability to 88.7% equivalent to world rates, in addition to network developments on the various voltages, leading to a wide praise of the Electricity Sector in all forums for its contribution to the nation's welfare and continuing progress year after year.

Out of its firm belief of the importance of documenting information, EEHC is privileged to issue this statistical Report on its activities and achievements in 2017 / 2018 which is hoped to provide a rich and reliable reference for those who are specialized in energy affairs.

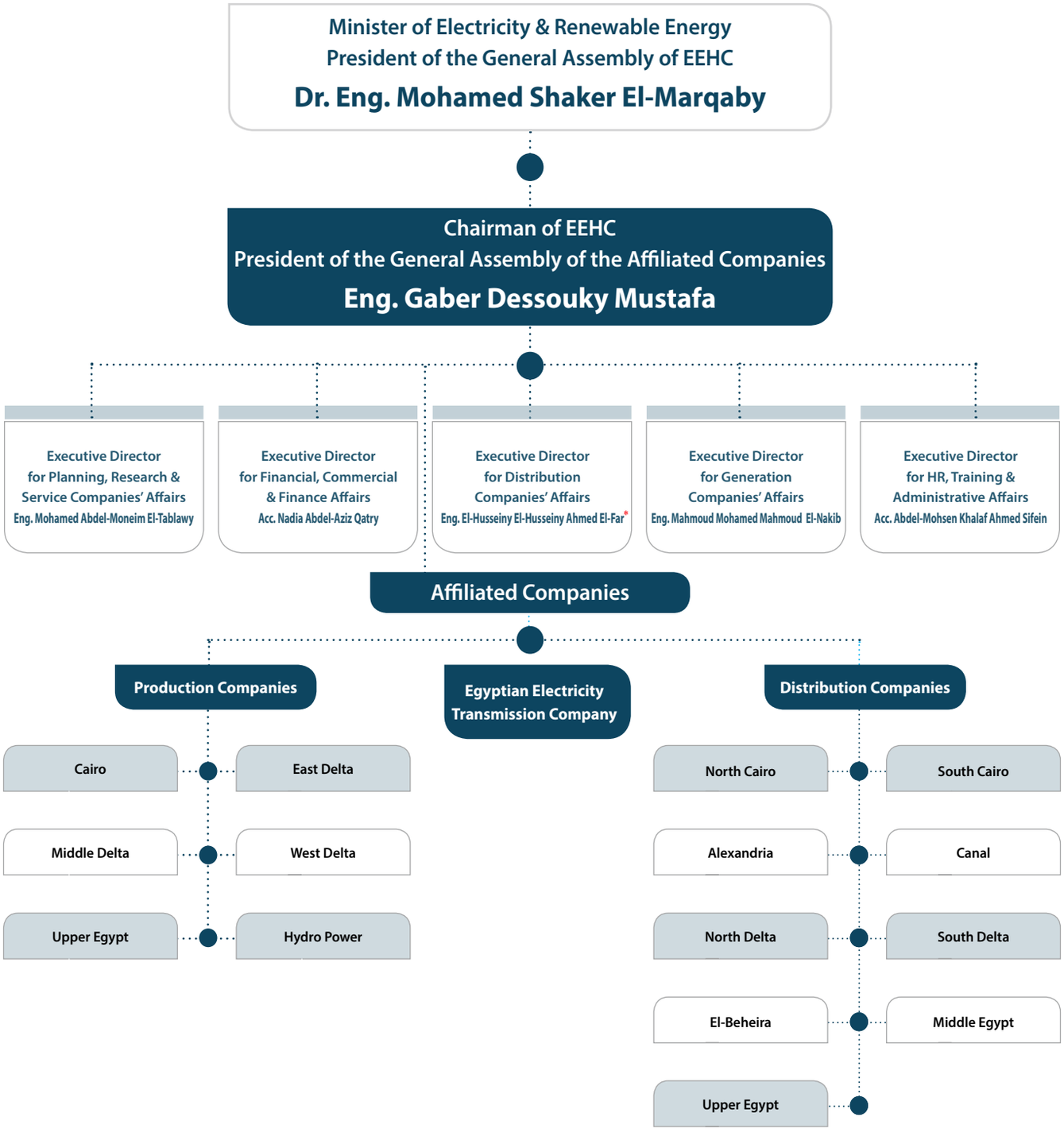
In the meantime, it gives me great pleasure to express my deep thanks and gratitude to all staff of EEHC and its affiliated companies who made valuable contributions to all achievements referred to in this Report.

Chairman

Eng. Gaber Dessouky Mustafa

Organizational Structure of EEHC

(30 / 6 / 2018)



*On January 15, 2019, the Ministerial Decree No. 11 of 2019 was issued appointing Dr. Khaled El-Destawy as Executive Director for Distribution Companies' Affairs

Board of Directors
(30 / 6 / 2018)

Eng. Gaber Dessouki Mustafa Ibrahim
Chairman

Eng. Mohamed Abdel-Moneim El-Tablawy
Executive Director for Planning, Researches & Service Companies' Affairs

Acc. Nadia Abdel-Aziz Qatry
Executive Director for Financial, Commercial & Finance Affairs

Eng. El-Husseiny El-Husseiny El-Far*
Executive Director for Distribution Companies' Affairs

Eng. Mahmoud Mohamed El-Nakib
Executive Director for Production Companies' Affairs

Acc. Abdel-Mohsen Khalaf Ahmed
Executive Director for Human Resources, Training & Administrative Affairs

Eng. Moustafa Abdel-Khaleq Abu-Zeid*
CEO of Mechanical & Electrical Directorate

Dr. Eng. Mohamed Moussa Omran
1st Under-Secretary of State for Researches & Planning, Representing the Ministry of Electricity & Renewable Energy

Mr. Hamed Abul-Magd Mahran
Sub-Governor for Foreign Relations, Representing the Central Bank of Egypt

Mr. Abdel-Nabi Abdel-Aziz Mansour
Chief of Final Accounts' Sector, - Representing the Ministry of Finance

Mr. Mohamed Farid Abdel-Fattah
Head of Infrastructure, Activities & Production Services, Representing the Ministry of Planning

Mr. Waleed Eid Mahmoud El-Haddad
Head of Central Dept. for Cooperation with East-Asia Countries, Representing the Ministry of Investment & International Cooperation

Eng. Ossama Ahmed Wafeeq El-Baqly
Chairman of the Holding Company for Natural Gases (EGAS), Representing the Ministry of Petroleum

Mr. Adel Nazmy Ali Hassan
Board Member, Representing the Employees

* On January 15, 2019, the Ministerial Decree No. 11 of 2019 was issued appointing:

- Dr. Eng. Khaled El-Destawy as successor to Eng. El-Husseiny El-Husseiny El-Far.
- Eng. Mohamed Mohamed Abdel-Aty as successor to Eng. Moustafa Abdel-Khaleq Abu-Zeid.

Egyptian Electricity Holding Company

Company	Headquarter	Issued Capital (Billion EGP)	Authorized Capital (Billion EGP)	Address	Phone Numbers
EEHC	Cairo	26.302	50.000	Ramses St. Extension, Abbasseya, Cairo	02/ 22616487 02/ 22616306 Fax: 02/ 22612239 Fax: 02/ 22616512

Objectives

- Producing, transmitting and distributing electrical energy for all uses on the various voltages with high efficiency at affordable prices.
- Carrying out planning, studies and designs in the field of competence of the Company, its subsidiaries and other companies working in the field of electrical energy.
- Implementing thermal power plant projects for electrical energy production.
- Producing electrical energy from all resources exclude nuclear energy.
- Producing and selling desalinated water.
- Managing the National Control Center for optimum operation of electric energy production, transmission and distribution.
- Purchasing the electrical energy produced at power plants constructed by authorized local and foreign investors and selling it on the various voltage networks.
- Managing, operating and maintaining electricity transmission and distribution networks at the various voltage levels, selling electrical energy on the various voltages throughout the country and making the optimal utilization of these networks.
- Implementing electrical energy transmission and distribution projects.
- Implementing electricity interconnection projects, exchanging electrical energy with other countries, and selling and buying it according to the needs of electrical grids interconnected with the Unified National Grid in Egypt.
- Conducting researches and tests of electric equipment at the various voltage levels.
- Carrying out consultancy and service works in the field of electrical energy production, transmission and distribution locally and internationally.

Electricity in 2017 / 2018

Description		2016 /2017	2017/ 2018	Variation %
Total Installed Capacity (1)	**MW**	**45111**	**55213**	**22.4**
Hydro	MW	2800	2832	1.1
Thermal (Affiliated Companies & Siemens) (2)	MW	39376	49176	24.9
New and Renewable Energy (Wind & Solar) (3)	MW	887	1157	30.4
Private Sector BOOT (Thermal)	MW	2048	2048	-
Peak Load	MW	29400	30800	4.8
Total Energy Generated	GWh	189550	196760	3.8
Hydro	GWh	12850	12726	3.8
Thermal (4)	GWh	161617	169380	(1)
New and Renewable Energy (5)	GWh	2780	2871	4.8
Energy Purchased from (IPPs)	GWh	35	42	3.3
Private Sector (BOOT)	GWh	12145	11626	(4.3)
Generated Energy from Isolated Plants	GWh	123	115	(6.5)
Energy dispatched from production companies (without Boot, Purchased and Isolated plants)	GWh	169359	176803	4.4%
Total Fuel Consumption (6)	Ktoe	36487	37335	2.3
Production Companies (including Siemens)	Ktoe	33978	34935	2.8
Private Sector (BOOT)	Ktoe	2509	2400	(4.3)
Fuel Consumption Rate at Production Companies	Gm/KWh	210.2	206.3	(1.9)
Fuel Consumption Rate, including BOOT	Gm/KWh	210.0	206.3	(1.8)
Thermal Efficiency (including Private Sector BOOT)	%	41.8	42.5	1.7
N.G Ratio to Total Fuel including BOOT	%	78.8	84.4	7.1
N. G ratio for power plants connected to gas grid Including BOOT	%	80.2	85.5	6.6
T. Length of Transmission Lines & Cables on HV & Extra HV	Km	46317	46890	1.2
T. Substation Capacities on HV and Extra HV	MVA	120160	130868	8.9
T. Length of Distribution MV&LV Lines and Cables	Km	476885	486608	2.0
T. Capacity for distribution transformers MV&LV	MVA	76600	79620	3.9
No. of Subscribers at Distribution Companies	Million	33.7	35.1	4.2
No. of Subscribers at EETC	No.	119	134	12.6
No. of Employees at EEHC and Subsidiaries (7)	Thousand	165.5	161.6	(2.4)

1. There are isolated plants with a total installed capacity of 226 MW.
2. Minsters Council had agreed in its session no. 90 by date 27/9/2017 to transfer fast track stations to the affiliated companies related to its geographical range.
3. Including PV units and the solar component of kuriemat Solar/Thermal Plant is 20 MW.
4. Include operation test and Siemens projects.
5. Connected to the national unified grid (wind & solar).
6. In addition to the total consumed fuel at the isolated plants amounting to 27.4 K toe.
7. In addition to 559 workers at Siemens projects.

ELECTRIC ENERGY PRODUCTION

Production Companies :

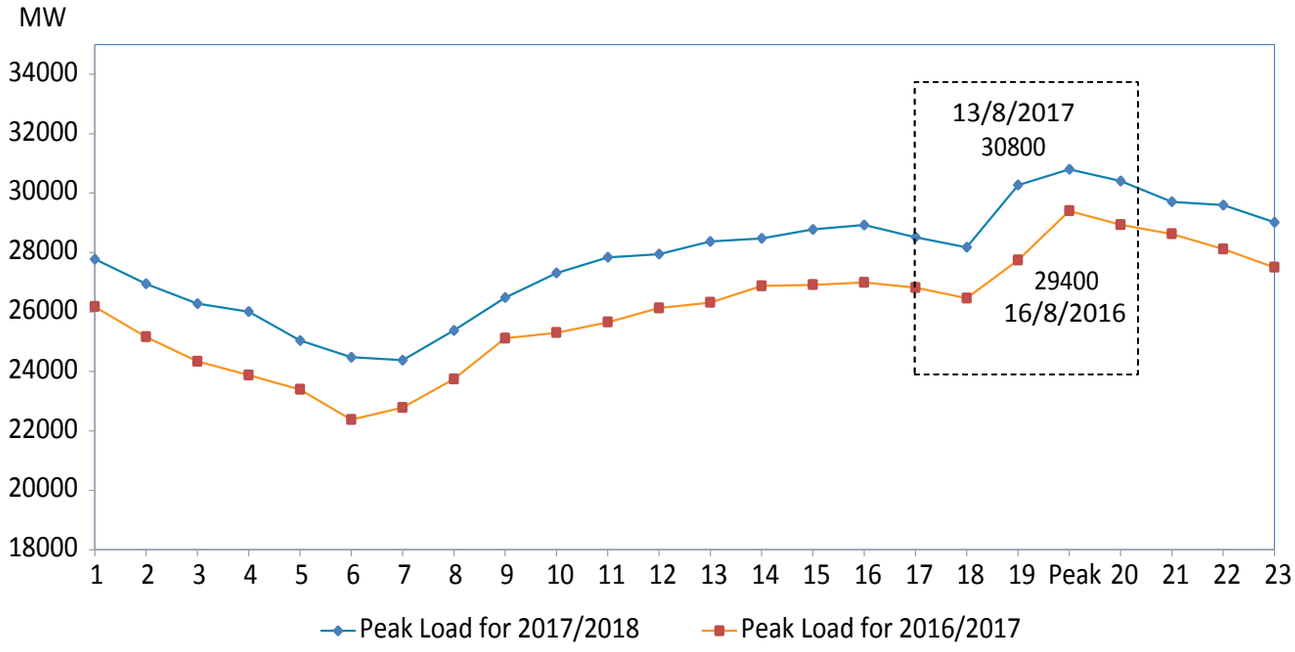
- Cairo Electricity Production Company
- East Delta Electricity Production Company
- Middle Delta Electricity Production Company
- West Delta Electricity Production Company
- Upper Egypt Electricity Production Company
- Hydro-Power Plants Electricity Production Company

Objectives of the Production Companies:

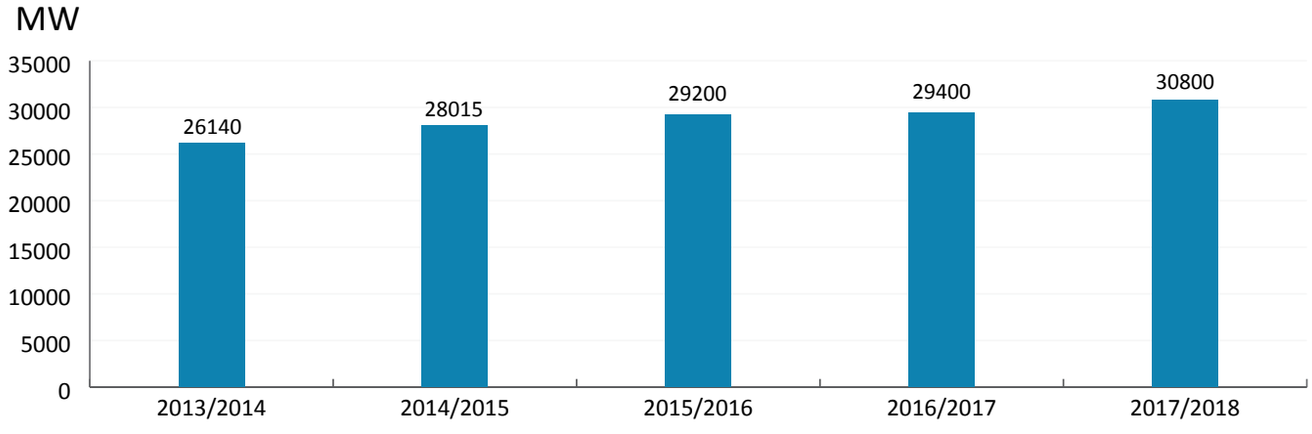
- Production of electric energy at the affiliated power plants.
- Sale electrical energy produced at the affiliated power plants to the Egyptian Electricity Transmission Company (EETC), and to Distribution Companies where energy is sent on medium voltages.
- Management, operation and maintenance of the affiliated power plants, and execution of rehabilitation and replacement operations as necessary, all in full compliance with the directions of the National Dispatch Center of the unified grid, particularly in relation to loads and maintenance of the generation units and in accordance with the economical operation requirements to ensure optimum operation of the system technically and economically.
- Implementation of power plant projects upon the approval of EEHC's Board of Directors and according to their planned time schedules.
- Conducting researches and studies within the scope of the Company's activities.
- Carrying out any activities or works related to, or complementing, the Company's objectives

Peak Load

Description	2016 / 2017	2017 / 2018	Variation %
Peak Load (MW)	29400	30800	4.8



Development of Peak Load



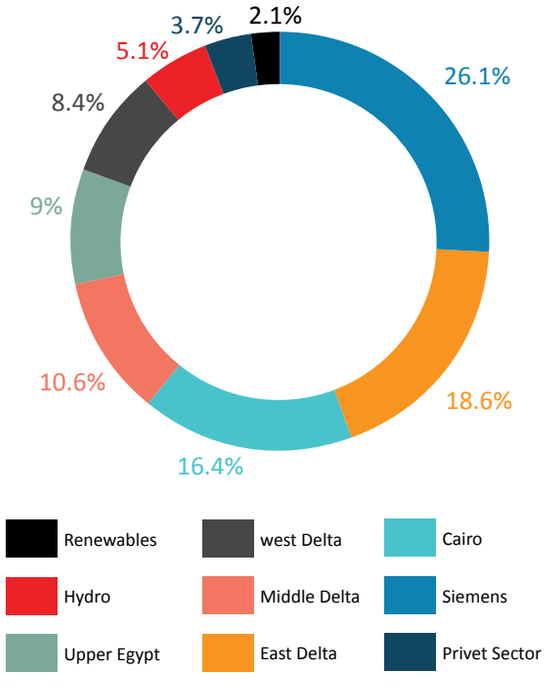
- The average growth rate of the peak load is 4.2% per year during the period from 2013/ 2014 till 2017/ 2018.

Installed Generation Capacities (30 / 6 / 2018)

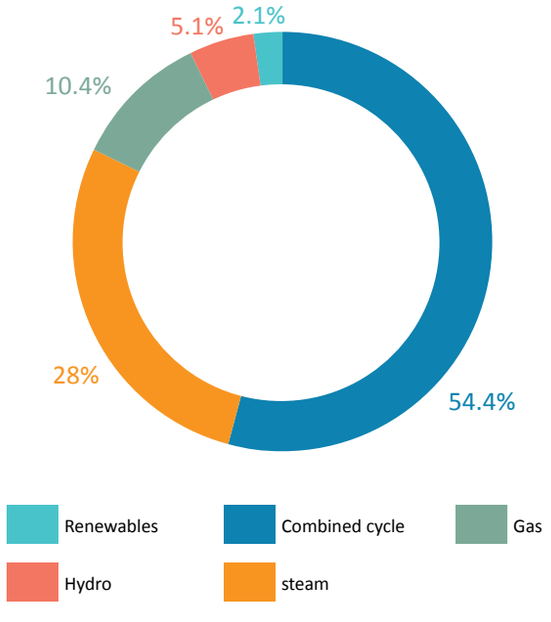
Description	2016 / 2017	2017 / 2018	Variation %
Installed Generation Capacity (MW)	45111	55213	22.4

List	Company	Cairo	East Delta	Middle Delta	West Delta	Upper Egypt	Hydro	Siemens	Private Sector	Renewables	Total
Gas		1815	2664	336	80	850	-	-	-	-	5745
Steam		3320	4156	420	3651	1854	-	-	2048	-	15449
Combined Cycle		3915	3450	5107	908	2250	-	14400	-	-	30030
Hydro		-	-	-	-	-	2832	-	-	-	2832
Renewables		-	-	-	-	-	-	-	-	1157	1157
Total		9050	10270	5863	4639	4954	2832	14400	2048	1157	55213

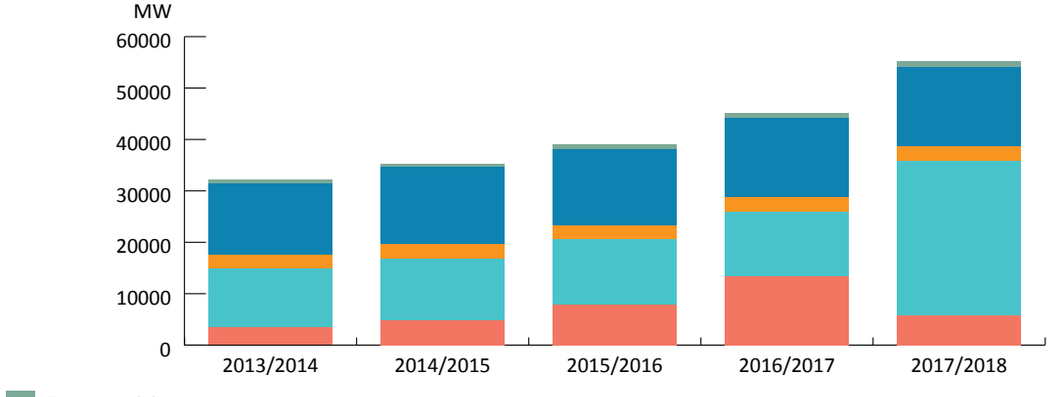
Installed Capacity by Companies



Installed Capacity by Type



Development of Installed Capacities by Generation Type (MW)



	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Renewable	687	687	887	887	1157
Steam	13783	15082	14798	15449	15449
Hydro	2800	2800	2800	2800	2832
C.Cycle	11433	11880	12630	12630	30030
Gas	3415	4874	7845	13345	5745
Total	32118	35323	38960	45111	55213

- The average growth rate of the installed capacities is 14.5% per year during the period 2013 /2014 till 2017 / 2018.
- Renewables include wind farms capacity of 967 MW, Solar/Thermal Kuriemat P.P. capacity of 140 MW of which the solar component amounts to 20 MW, and 50 MW solar PV in Benban region.
- In addition to isolated and reserve units with a total installed capacity of 226 MW.

Installed Capacities of Power Plants (30 / 6 / 2018) [1]

	Station	Type	No. of Unit	Installed Capacity (MW)	Actual Capacity	Fuel	Connect to network	Commissioning Date
Cairo	Shoubra El-Kheima	(St)	4×315	1260	1260	N.G-H.F.O	83-84-85-1998	84 - 85 -1988
	Shoubra El-Kheima	(G)	1×35	35	35	N.G-L.F.O	1985	1986
	Cairo West Ext	(St)	2× 330 + 2×350	1360	1360	N.G-H.F.O	1994-1995-2010-2011	1994- 2011
	Cairo South [1]	(G)	3×110	330	300	N.G-L.F.O	1989	1989
	Cairo South II	(CC)	1X110+ 1X55	165	150	N.G-L.F.O	1994	1994
	Cairo North	(CC)	4x 250 + 2x250	1500	1500	N.G-L.F.O	2004-2005-2006-2007	2004- 2006- 2008
	Wadi Hof	(G)	3×33.3	100	75	N.G-L.F.O	1985	1985
	Tibeen	(St)	2×350	700	700	N.G-H.F.O	2010	2010
	6 October	(G)	8×150	1200	1200	N.G-L.F.O	2012-2014-2015	2012- 2014-2015
	North Giza	(CC)	6× 250 + 3×250	2250	2250	N.G-L.F.O	2014-2015	2014- 2015
	Heliopolis	(G)	2×25	50	50	L.F.O	2015	2015
	East Cairo	(G)	2×25	50	50	L.F.O	2015	2015
	El-Basateen	(G)	2×25	50	50	L.F.O	2015	2015
	Total			9050	8980			
East Delta	Ataqa	(St)	2x150+ 2x300	900	900	N.G-H.F.O	1976-1983-1986	85-88-1989
	Abu Sultan	(St)	4×150	600	600	N.G-H.F.O	1979-1981-1984	83-84-1986
	Shabab	(G)	3×33.5	100.5	91.5	N.G-L.F.O	1981	1982
	New Shabab[2]	(CC)	8×125 +2×250	1500	1500	N.G-L.F.O	2011-2017-2018	2011
	Arish	(St)	2×33	66	66	N.G	1993	1995-1996
	Oyoun Mousa	(St)	2×320	640	640	N.G-H.F.O	1997	2001
	New Gas Damietta	(G)	4×125	500	500	N.G-L.F.O	2011	2011
	West Damietta[3]	(cc)	4x125+ 1x250	750	750	N.G-L.F.O	2012 - 2013	2012-2013
	Damietta	(CC)	6×132 +3×136	1200	1164	N.G-L.F.O	1989-1992	1989 – 1993
	West Damietta Ext	(CC)	4×125	500	500	N.G-L.F.O	2015-2018	2016
	Sharm El-Sheikh	(G)	1×23.7 + 4×24.2	120.5	109	L.F.O	75-76-1978	75-79-1997
	Hurghada	(G)	3x23.45+ 3x24.27	143	131	N.G-L.F.O	1976	77-1979
	Ain Sokhna	(St)	2×650	1300	1300	N.G-H.F.O	2014	2015
	Suez	(St)	1×650	650	650	H.F.O-N.G	2016	2017
	Ataqa Ext.	(G)	2x164+ 2x156	640	640	N.G-L.F.O	2015	2015
	Port Said Ext.	(G)	2×43	84	84	N.G-L.F.O	2015	2017
	Hurghada Ext.	(G)	6×48	288	288	N.G	2015	2017
	Sharm El-Sheikh Ext	(G)	6×48	288	288	N.G-L.F.O	2015	2017
	Total			10270	10202			
Middle Delta	Talkha	(CC)	8x24.7 +2x45.9	290	236	N.G	1978 - 1979 - 1988	79-80-1989
	Talkha 210	(St)	2×210	420	420	N.G-H.F.O	1992 - 1994	1993-1995
	Talkha 750	(CC)	2×250 + 1×250	750	750	N.G	2006 - 2010	2006-2010
	Nubareya	(CC)	6×250 + 3×250	2250	2250	N.G-L.F.O	2005-2006 2009-2010	2005-2006
	Mahmoudeya	(CC)	8x25+ 2x58.5	317	268	N.G-L.F.O	1982-1994	1983-1995
	New Mahmoudeya	(G)	2×168	336	336	N.G-L.F.O	2015	2016
	El-Atf	(CC)	2×250+ 1×250	750	750	N.G-L.F.O	2009-2010	2009-2010
	Banha	(CC)	2×250 + 1×250	750	750	N.G-L.F.O	2013-2014	2014-2015
	Total			5863	5760			

◉ (St): steam ◉ (G): gas ◉ (CC): combined cycle

	Station	Type	No. of Unit	Installed Capacity (MW)	Actual Capacity	Fuel	Connect to network	Commissioning Date
West Delta	Kafr El-Dawar[4]	(St)	4×110	440	320	N.G-H.F.O	79-84-1985	80-84-1986
	Damanhour Ext 300	(St)	1×300	300	300	N.G-H.F.O	1990	1992
	Damanhour	(CC)	4×25+ 1×58	158	154	N.G-L.F.O	1984-1994	1985- 1995
	Abu Qir New	(St)	2×650	1300	1300	N.G-H.F.O	2012	2012- 2013
	Abu Qir[5]	(St)	4×150+ 1×311	911	780	N.G-H.F.O	82-83-1990	83- 84- 1991
	Abu Qir	(G)	1×24	24	23	L.F.O	1982	1983
	El-Seiuf	(G)	1×33.3	33	22	N.G-L.F.O	1983	1984
	Karmouz	(G)	1×11.37 + 1×11.68	23	18	L.F.O	1979	1980
	Sidi Krir 1,2	(St)	2 ×320	640	640	N.G-H.F.O	1998-1999	1999 - 2000
	Sidi Krir	(CC)	2×250+ 1×250	750	750	N.G-L.F.O	2009-2010	2009 - 2010
	Matrouh	(St)	2×30	60	60	N.G-H.F.O	1989	1990
Total				4639	4367			
Upper Egypt	Walideya	(St)	2×300	600	600	H.F.O-L.F.O	1992 - 1997	1997
	Kuriemat	(St)	2×627	1254	1254	N.G-H.F.O	1997 - 1998	1997 -1998
	Kuriemat 1	(CC)	2×250 + 1×250	750	750	N.G	2006- 2007 - 2008	2007- 2009
	Kuriemat 2	(CC)	2×250+ 1×250	750	750	N.G	2008- 2010	2009- 2011
	West Assiut[6]	(CC)	8×125+ 1×250	1250	1250	L.F.O- N.G	2015- 2018	2015
	New Assiut	(G)	2×25	50	50	H.F.O-L.F.O	2015	2015
	Red Assiut	(G)	4×25	100	100	L.F.O	2015	2015
	Samaloot	(G)	2×25	50	50	L.F.O	2015	2015
	West Mallawy	(G)	2×25	50	50	L.F.O	2015	2015
	Gerga	(G)	2×25	50	50	L.F.O	2015	2015
	Bany Ghaleb	(G)	2×25	50	50	L.F.O	2015	2015
Total				4954	4954			
Siemens	Burulls[7]	(CC)	8×400+ 4×400	4800	4800	N.G	2016- 2017- 2018	2017 - 2018
	Beni Suef[8]	(CC)	8×400+ 4×400	4800	4800	N.G	2016- 2017- 2018	2017 - 2018
	New Capital[9]	(CC)	8×400+ 4×400	4800	4800	N.G	2016- 2017- 2018	2017 - 2018
Total				14400	14400			
New & Renewable	Zafarana		105×0.6+ 117×0.66+ 478×0.85	547	120	Wind	From 2001/ 2008	From 2007/ 2010
	Gabal El-Zeit		2×100	200	120	Wind	2015 - 2016	2016
	Gabal El-Zeit 2[10]		2×110	220	120	Wind	2018	2018
	Kuriemat Solar /ST		1×70 + 1×50+ 1×20	140	140	Solar/ N.G	2010	2011
	Benban (PV)[11]		1×50	50	50	Solar	2017	2018
Total				1157	550			

- (St): steam
- (G): gas
- (CC): combined cycle

	Station	Type	No. of Unit	Installed Capacity (MW)	Actual Capacity	Fuel	Connect to network	Commissioning Date
Hydro Plants	Suez Gulf	(St)	2×341.25	682.5	682.5	N.G-H.F.O	2001	2002-2003
	Port Said East	(St)	2×341.25	682.5	682.5	N.G-H.F.O	2001	2002-2003
	Sidi Krir 3.4	(St)	2×341.25	682.5	682.5	N.G-H.F.O	2000	2001-2002
	Total			2048	2048			
	High Dam		12×175	2100	2100	Hydro	1967	1967
	Aswan Dam I		7x40	280	280	Hydro	1960	1960
	Aswan Dam II		4×67.5	270	270	Hydro	1985	85-86
	Essna		6 x 14.28	86	86	Hydro	1993	1993
	Naga Hamadi		4x16	64	64	Hydro	2008	2008
	Assuit [12]		4×8	32	32	Hydro	2018	2018
Total				2832	2832			
Total				55213	54093			

1. In addition to 226 MW isolated and reserve units, and EL Salam P.P. (Diesel) of 22.4 MW installed capacity has been retired.
2. The two steam units (2x250 MW) of New El-Shabab P.P. were put into commercial operation in April 2018.
3. The steam unit (1x250 MW) of West Damietta Combined Cycle P.P. was connected to the grid in January 2018.
4. The actual capacity of Kafr El-Dawwar Steam P.P. was reduced by 120 MW.
5. The actual capacity of Abu-Qir Steam P.P. was reduced by 120 MW.
6. The steam unit 250 MW of West Damietta Combined Cycle P.P. was connected to the grid in June 2018.
7. Modules 1, 2 and 3 of Burullus Combined Cycle P.P. were put into commercial operation in June, July and September 2018 respectively.
8. Modules 1,2,3 and 4 of Beni Suef 4800 MW Combined Cycle P.P. were put into commercial operation in April, June, July and September 2018.
9. Modules 1,2,3 and 4 of New Capital 4800 MW Combined Cycle P.P. were put into commercial operation in May 2017, August 2018 and November 2018.
10. Gabal El-Zeit 220 MW Wind Farm (2) was put into commercial operation in July 2018.
11. Benban Solar PV 50 MW P.P. (Private Sector) was put into commercial operation in February 2018.
12. Assiut 32 MW Hydro P.P. was put into commercial operation in June 2018.

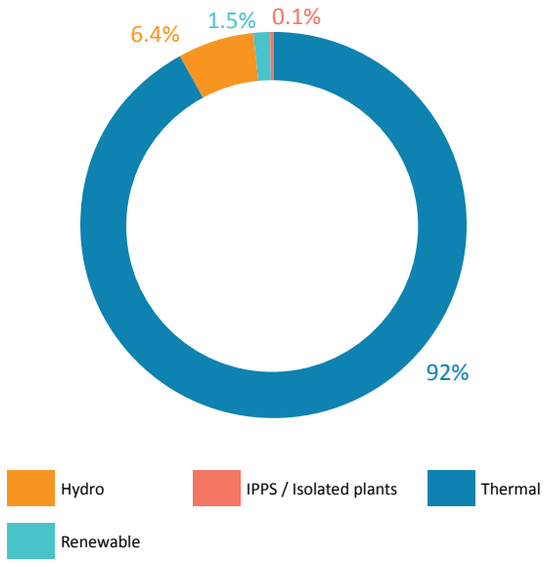
Generated and Purchased Energy*

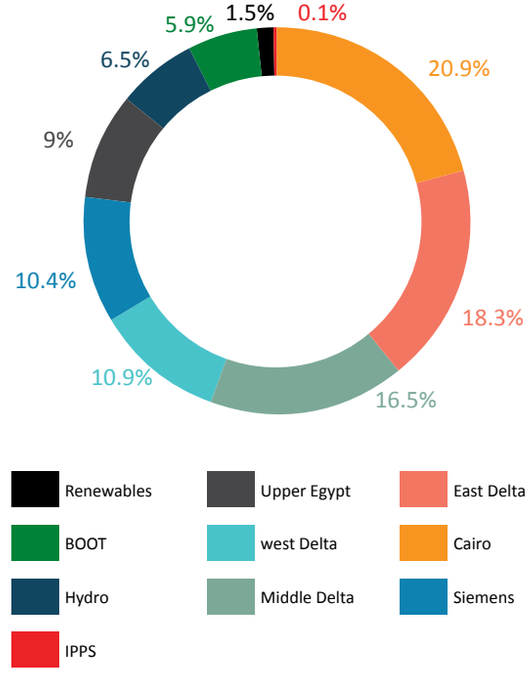
By Generation Type (GWh)

Type		2016 /2017	2017 /2018	Variation%
Steam	Subsidiaries	64933	60765	(6.4)
	Private Sec.	12145	11626	(4.3)
Gas	Subsidiaries	16928	11913	29.6
	Siemens	16928	20499	271.6
Combined Cycle		74240	76203	2.6
Total Thermal*		173762	181006	4.2
Hydro		12850	12726	(1)
New & Renewable	Wind	2200	2334	6.1
	Solar	580	537	(7.4)
Total Grid		189392	196603	3.8
Isolated Units		123	115	6.5
Purchased from (IPP's)		35	42	20
Grand Total		189550	196760	3.8

By Production Company (GWh)

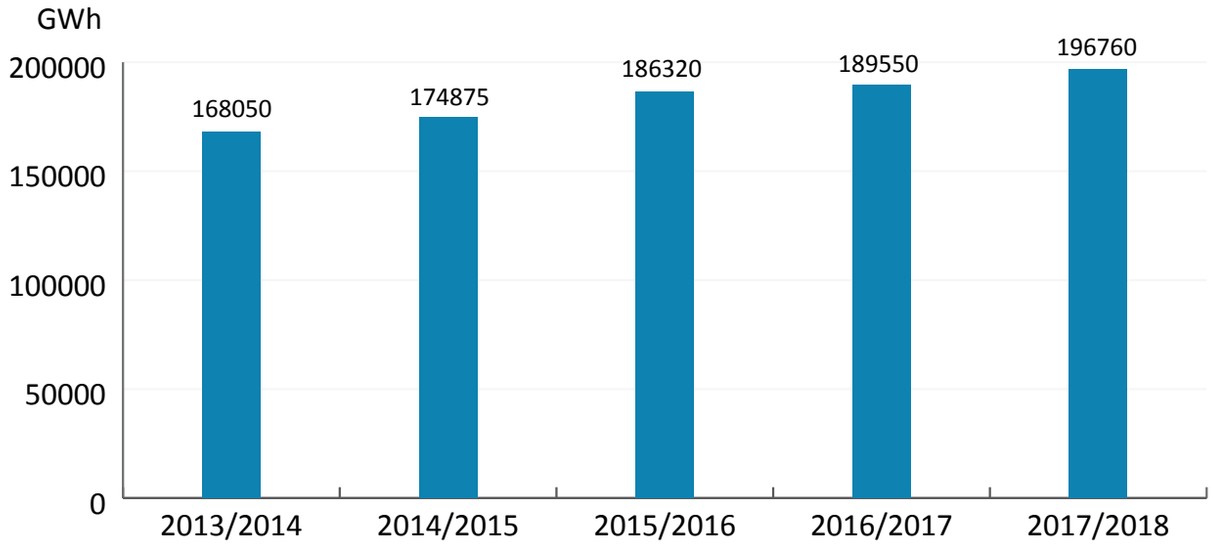
Company	2016 /2017	2017 /2018	Variation%
Cairo	44908	41115	(8.4)
East Delta	35404	36000	1.6
Middle Delta	33675	32569	(3.2)
West Delta	22803	21400	(6.2)
Upper Egypt	19311	17797	(7.8)
Siemens	5516	20499	271.6
Hydro plants	12850	12726	(1)
New & Renewable	2780	2871	(3.3)
Private Sector	12145	11626	(4.3)
Purchased & Isolated Units	158	157	--
Grand Total	189550	196760	3.8





*Including Commissioning tests.

Development of Gross Energy Generated (GWh)



- The average growth rate of the generated energy is 4% per year during the period from 2013/2014 till 2017 / 2018.

Electric Generated Energy in Power Plants (GWh)

	Station		2013 / 2014	2014 / 2015	2015 / 2016	2016 / 2017	2017 / 2018
Cairo	Shoubra El-Kheima	(St)	5841	6973	7306	6909	7205.8
	Cairo West Ext.	(St)	7957	7494	6793	6390	5568.5
	Cairo South 1	(G)	1658	1472	2141	2217	1510.1
	Cairo South II	(CC)	538	222	1087	959	943
	Cairo North	(CC)	7567	6861	7765	7466	7794.7
	Wadi Hof	(G)	126	181	105	74	106.4
	Tibeen	(St)	2947	2734	5195	5230	4195.3
	6 October	(G)	1534	2969	2617	2611	2374.3
	Giza North	(CC)	133	1728	7714	13009	11391
	Heliopolis	(G)	-	-	47.8	12.6	5.2
	Cairo East	(G)	-	-	55.6	14.7	12.1
	Al-Basateen	(G)	-	-	52.6	15.4	8.2
Total			28301	30634	40879	44907.7	41114.6
East Delta	Ataqa	(St)	1852	1093	1148	1842	1657.9
	Abu Sultan	(St)	3090	3367	3197	3639	3429.7
	Shabab	(G)	251	346	314	290	135.4
	Shabab	(CC)	1932	4306	3273	3819	6732.8
	Arish	(St)	545	524	548	538	534.7
	Oyoun Mousa	(St)	4943	3886	4110	3363	3297.7
	New Damietta	(G)	3159	3149	1916	1764	1290.5
	West Damietta	(G)	3042	3275	1755	1629	1504.9
	Damietta	(CC)	8238	7334	6591	7369	7114.7
	Sharm El-Sheikh	(G)	48	59	16	12	0.9
	Hurghada	(G)	129	386	224	307	171.4
	Port Said	(G)	111	84	-	-	-
	Ein-Sokhna	(St)	-	3962	6516	6137	5305.5
	Suez	(St)	-	-	-	1887	2824.4
	Ataqa	(G)	-	146	1954	1326.5	337.4
	Port Said Ext.	(G)	-	-	18	6.3	90.3
	Hurghada Ext.	(G)	-	-	455	437	700.7
	Sharm El-Sheikh Ext	(G)	-	-	112	5.5	87.3
	West Damietta Ext.	(G)	-	-	1142	1033	782.8
Total			27340	31917	33289	35404.3	35999

(St): steam (G): gas (CC): combined cycle

Station			2013 / 2014	2014 / 2015	2015 / 2016	2016 / 2017	2017 / 2018
Middle Delta	Talkha	(CC)	2034	1748	1611	1765	1253.8
	Talkha steam 210	(St)	2339	2004	2134	2162	1576.1
	Talkha 750	(CC)	5012	5688	5185	4558	5432.2
	Nubareya	(CC)	15127	14695	13285	13226	12990
	Mahmoudeya	(CC)	2190	2276	1950	1905	1305.5
	New Mahmoudeya	(CC)	-	-	475	39	23.2
	El-Atf	(CC)	5938	4740	5224	5171	5217.6
	Banha	(CC)	485	4513	5108	4849	4770.8
Total			33125	35664	34972	33675	32569.5
West Delta	Kafr El-Dawar	(St)	3061	2755	2568	1978	1769.1
	Damanhour Ext.300	(St)	686	1765	1078	1614	1855.5
	Damanhour	(St)	995	751	154	-	-
	Damanhour	(CC)	1089	1082	928	907.7	801.6
	New Abu Qir	(St)	7423	7064	8168	6006	4925.9
	Abu Qir	(St)	4852	5481	4131	4625	4352.3
	El-Seiuf	(G)	302	409	93	6	0.335
	Karmouz	(G)	7	8	1	0.35	0.222
	Sidi Krir (1,2)	(St)	3713	3386	3366	3471	3488.1
	Sidi Krir	(CC)	5296	4612	4760	3826	3842.9
	Matrouh	(St)	349	344	415	369	171.4
Total			27774	27657	27657	22803	21400.46
Upper Egypt	Walideya	(St)	3510	2226	4011	2480	1912.3
	Kuriemat	(St)	8542	7921	6954	6293	6501.6
	Kuriemat 1	(CC)	4727	5082	5274	4183	5528.1
	Kuriemat 2	(CC)	5112	3574	3771	5047	1084.6
	Assiut	(St)	364	198	12	-	-
	West Assiut	(CC)	-	101	1928	1103.7	2606.3
	New Assiut	(G)	-	2.6	44.88	34.5	22.9
	Red Assiut	(G)	-	4.78	94.706	60.5	21.2
	Samaloot	(G)	-	3.275	47.53	26.737	12.29
	West Mallawy	(G)	-	4.103	42.763	25.143	25.96
	Gerga	(G)	-	2.92	37.338	25.543	38.19
	Bani Ghaleb	(G)	-	3.086	36.87	31.846	44.16
Total			27774	27657	25662	22803	21400.46

(St): steam (G): gas (CC): combined cycle

Station			2013 / 2014	2014 / 2015	2015 / 2016	2016 / 2017	2017 / 2018
Siemens	Burullus	(CC)	-	-	-	1423	5456.1
	Beni Suef	(CC)	-	-	-	3346	11663.3
	New Capital	(CC)	-	-	-	747	3380
Total			0	0	0	5516	20499.4
Hydro Plants	High Dam	(St)	9304	9805	9484	8859	8747.1
	Aswan Dam I	(St)	1559	1543	1578	1489	1403.4
	Aswan Dam II	(St)	1503	1567	1523	1547	1607.6
	Essna	(CC)	535	459	507	501	481.8
	Naga Hamadi	(St)	451	448	453	454	453.2
	Assiut	(St)	-	-	-	-	32.9
Total			13352	13822	13545	12850	12726
Total	Total-Thermal		138795	144995	157056	161617	169380
	Total-Hydro		13352	13822	13545	12850	12726
Renewable Energy	Wind		1332	1444	2058	2200	2334
	Kuriemat Solar/ST		114	0	168	580	484
	Benban PV		-	-	-	-	53
Total Renewable			14154	14338	2226	2780	2871
Private Sector (BOOT)	Sidi Krir 3&4		4387	4318	4556	4311	4275
	Suez Gulf		4678	4311	4461	3797	4011
	Port Said East		5089	5708	4290	4037	3340
Total BOOT			14154	14338	13307	12145	11626
Purchased from IPP›s			62	32	42	35	42
Isolated plant units			241	244	144	123	115
Grand Total			168050	174875	186320	189550	196760

- (St): steam
- (G): gas
- (CC): combined cycle

* Generated energy including Commissioning tests.

Variant Statistics of Power Plants 2017/2018

	Station	Gross Gen. GWh	Net Gen. GWh	Net/ Gross %	TOTAL fuel ktoe	Fuel consump. gm/kw	Thermal EFF. %	Peak load MW	load Factor %	Cap. factor%	AV. Factor%
Middle Delta	Shoubra El-Kheima	7205.8	6852.7	95.1	1745.9	242.3	36.2	1260.0	65.3	65.3	89.0
	Cairo West Ext.	5568.5	5240.5	94.1	1308.3	234.9	37.3	1116.9	56.9	56.9	89.7
	Cairo South 1	1510.1	1497.4	99.2	444.9	294.6	29.8	278.0	62.0	62.0	87.4
	Cairo South II	943.0	922.9	97.9	198.4	210.4	41.7	150.0	71.8	71.8	84.2
	Cairo North	7794.7	7593.1	97.4	1298.7	166.6	52.7	1284.0	69.3	69.3	96.9
	Wadi Hof	106.4	105.5	99.2	45.3	425.8	20.6	70.0	17.3	17.3	97.0
	Tibeen	4195.3	3934.8	93.8	867.8	206.9	42.4	700.0	68.4	68.4	77.7
	6 October	2374.3	2342.8	98.7	662.2	278.9	31.5	1011.0	26.8	26.8	96.8
	Giza North	11391.0	11224.4	98.5	1867.0	163.9	53.5	2233.0	58.2	58.2	86.4
	Heliopolis	5.2	5.2	100.0	1.5	288.5	30.8	46.0	1.3	1.3	89.9
	Cairo East	12.1	12.1	100.0	3.4	281.0	31.1	50.0	2.8	2.8	99.4
	Al-Basateen	8.2	8.1	98.8	2.5	304.9	29.0	41.0	2.3	2.3	99.7
	Total	41114.6	39739.2	96.7	8445.9	205.4	42.7	7090.8	66.2	52.3	90.0
West Delta	Ataqa	1657.9	1496.2	90.2	447.6	270.0	32.5	515	36.7	34.4	80.7
	Abu Sultan	3429.7	3175.6	92.6	864.7	252.1	34.8	560	69.9	69.9	83.7
	Shabab	135.4	134.3	99.2	53.9	398.1	22.0	48	32.2	21.4	96.3
	Shabab (CC)	6732.8	6630.7	98.5	1461.2	217.0	40.4	1523	50.5	51.2	93.1
	Arish	534.7	501.6	93.8	136.3	254.9	34.4	66	92.5	92.5	96.7
	Oyoun Mousa	3297.7	3157.0	95.7	716.5	217.3	40.4	620	60.7	60.7	86.9
	New Gas Damietta	1290.5	1271.0	98.5	348.5	270.1	32.5	498	29.6	29.5	96.7
	West Damietta	1504.9	1483.2	98.6	383.7	255.0	34.4	785	21.9	34.4	98.3
	Damietta	7114.7	6952.1	97.7	1338.0	188.1	46.7	1067	76.1	77.4	90.0
	Sharm El-Sheikh	0.9	0.7	77.8	0.4	444.4	21.4	62	0.2	0.15	100.0
	Hurghada	171.4	170.6	99.5	66.6	388.6	22.6	71	27.6	21.7	99.5
	Ein-Sokhna	5305.5	5151.1	97.1	1114.6	210.1	41.8	1134	53.4	46.6	86.0
	Suez Thermal	2824.4	2722.3	96.4	613.4	217.2	40.4	653	49.4	49.6	84.1
	Ataqa G	337.4	328.0	97.2	88.6	262.6	33.4	444	8.7	6.4	99.3
	Port Said Ext.	90.3	88.7	98.2	21.6	239.2	36.6	71.8	14.3	14.7	75.9
	Hurghada Ext.	700.7	697.4	99.5	173.5	247.6	35.4	240	33.3	36.1	86.9
	Sharm El-Sheikh Ext.	87.3	85.8	98.3	22.0	252.0	34.8	235	4.2	4.5	70.1
	West Damietta Ext	782.8	772.0	98.6	219.9	280.9	31.2	456	19.2	17.9	87.9
	Total	35999	34818	96.7	8070.9	224.2	39.1	6656.0	61.7	44.95	89.2

	Station	Gross Gen. GWh	Net Gen. GWh	Net/ Gross %	TOTAL fuel ktoe	Fuel consump. gm/kw	Thermal EFF. %	Peak load MW	load Factor %	Cap. factor%	AV. Factor%
Middle Delta	Talkha	1253.8	1228.0	97.9	322.7	257.4	34.1	58.9	65.3	60.7	89.0
	Talkha (210)	1576.2	1454.3	92.3	417.8	265.1	33.1	49.3	56.9	42.8	63.1
	Talkha (750)	5432.3	5331.4	98.1	833.2	153.4	57.2	78.6	62.0	82.7	93.8
	Nubareya (CC)	12990.1	12775.9	98.4	2136.2	164.4	53.4	64.4	71.8	65.9	90.4
	Mahmoudeya	1305.5	1288.8	98.7	299.1	229.1	38.3	53.6	69.3	55.6	92.9
	New Mahmoudeya	23.2	23.0	99.1	6.8	293.1	30.1	1.6	17.3	0.8	95.6
	El-Atf	5217.6	5113.7	98.0	850.8	163.1	53.8	74.4	68.4	79.4	97.1
	Banha	4770.8	4705.3	98.6	796.8	167.0	52.5	68.1	26.8	72.6	91.0
	Total	32569.5	31920.4	98	5663.4	173.9	50.5	71.7	66.2	63.1	90.2
West Delta	Kafr El-Dawar	1769.1	1617.1	91.4	508.0	-	30.6	320.0	63.1	63.1	85.6
	Damanhour Ext 300.	1855.5	1786.1	96.3	419.7	226.2	38.8	300.0	70.6	70.6	91.0
	Damanhour (CC)	801.6	789.4	98.5	173.9	216.9	40.5	142.5	64.2	59.4	96.8
	Abu Qir	4352.3	4135.7	95.0	1082.3	248.7	35.3	730.0	68.1	61.9	79.1
	New Abu Qir	4925.9	4710.4	95.6	1071.4	217.5	40.3	1200.0	46.9	43.3	97.1
	El-Seiuf G	0.335	0.3	89.6	0.2	597.0	18.8	22.0	0.2	0.2	98.8
	Karmouz	0.222	0.2	90.1	0.1	450.5	17.7	18.0	0.1	0.1	99.8
	Sidi Krir 1,2	3488.1	3343.9	95.9	723.6	207.4	42.3	640.0	62.2	62.2	85.8
	Sidi Krir (CC)	3842.9	3737.6	97.3	724.5	188.5	46.5	750.0	58.5	58.5	81.7
	Matrouh	364.5	337.6	92.6	102.2	280.4	31.3	55.0	75.7	69.4	93.0
	Total	21400.46	20458.2	95.6	4805.8	224.6	39.1	3655.0	66.8	55.9	87.9
Upper Egypt	Walideya	1912.3	1806.8	94.5	462.2	241.7	36.3	487.0	44.8	36.4	48.5
	Kuriemat (St)	6501.6	6308.4	97.0	1388.3	213.5	41.1	1254.0	59.2	59.2	92.8
	Kuriemat 1	5528.1	5431.1	98.2	837.2	151.4	57.9	755.0	83.6	84.1	97.6
	Kuriemat 2	1084.6	1055.8	97.3	167.8	154.7	56.7	403.0	30.7	16.5	25.1
	West Assiut	2606.3	2572.1	98.7	725.3	278.3	31.5	920.0	32.3	29.8	91.4
	New Assiut	22.9	22.6	98.7	6.3	275.1	31.9	40.0	6.5	5.2	68.2
	Red Assiut	21.2	17.6	83.0	5.8	273.6	32.1	100.0	2.4	4.9	100.0
	Bani Ghaleb	44.16	43.7	99.0	12.0	271.7	32.3	49.0	10.3	10.1	100.0
	Gerga	38.19	37.9	99.2	10.7	280.2	31.4	51.0	8.6	8.7	99.0
	West Mallawy	25.96	25.6	98.6	7.3	281.2	31.2	49.0	6.1	5.9	100.0
	Samaloot	12.29	11.9	96.8	3.3	268.5	32.6	52.0	2.7	2.8	96.4
	Total	17797	17333.5	97.4	3626.3	203.8	43.1	3443.0	59.0	43.2	77.0
Siemens	Burullus	5456.1	5278.2	96.7	1175.6	215.5	40.7	1346.0	24.0	24.1	86.9
	Beni Suef	11663.3	11399.9	97.7	2370.9	203.3	43.2	2959.0	45.0	27.7	42.5
	New Capital	3380	3244.6	96.0	776.3	229.7	38.2	1497	26	12	
	Total	20499.4	19922.7	97.2	4322.8	210.9	41.6	-	-	16.3	86,1

	Station	Gross Gen. GWh	Net Gen. GWh	Net/ Gross %	TOTAL fuel ktoe	Fuel con-sump. gm/kw	Thermal EFF. %	Peak load MW	load Factor %	Cap. factor%	AV. Factor%
Hydro Power	High Dam	8747.1	8687.2	99.3	0.0	0.0	84.7	2280.0	43.8	47.6	88.4
	Aswan Dam I	1403.4	1373.8	97.9	0.0	0.0	85.5	270.0	59.3	57.2	93.7
	Aswan Dam II	1607.6	1597.1	99.3	0.0	0.0	89.7	270.0	68.0	68.0	94.7
	Essna	481.8	473.8	98.3	0.0	0.0	85.0	78.5	70.1	64.2	89.8
	Naga Hamadi	453.2	446.9	98.6	0.0	0.0	85.0	68.0	76.1	80.9	95.1
	Assiut	32.9	32	97.3	0.0	0.0	81.7	30.7	12.3	11.8	25.0
Total-Hydro		12726	12610.8	99.1	0.0	0.0		2880.0	50.4	51.3	89.0
Total-Thermal*		169380	164193	96.9	34935.1	206.3	42.5				
Total-Wind		2334	2315	99.2							
Kuriemat Solar / Thermal		484	465	96.1							
Benban (P.V.)		53	53	100							
Private Sector BOOT		11626	10892	93.7	2400.0	206.4	42.5				
Total Therm al		196603	190528	96.9	37335	206.3	42.5				
Purchased from IPPs		42	42	100							
Isolated Plants		115	112	97.4							
Grand Total *		196760	190682	96.9	37335		30800				

* Includes commissioning tests.

- Fuel Consumption rate gm/ kWh(gen). = Equ. fuel quantity (Ktoe) × 1000 / energy generation (MWh).
- Thermal Eff. % = {860 × 1000 / (9800 × Av. Fuel Consumption)} × 100.
- Average load MW = Total energy generation / total period hours.
- Load Factor % = average load / maximum load during the period × 100.
- Capacity Factor% = average load / actual capacity × 100.
- Av. Factor % = (operation hours' + reserve hours' / period hours' ×100.

Hydro Power

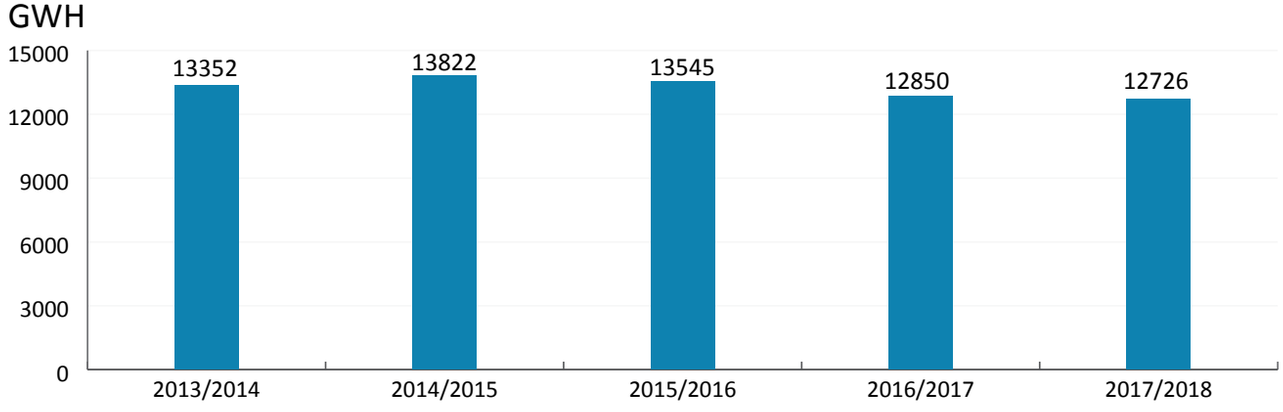
Generated Energy (GWh)

Plant	2016 /2017	2017 /2018	Variation%
High Dam	8859	8747	(1.3)
Aswan Dam 1	1489	1403	(5.8)
Aswan Dam 2	1547	1608	3.9
Essna	501	482	(3.8)
Naga Hamady	454	453	(0.2)
Assiut	—	33	–
Total	12850	12726	(1)

Technical Indicators of Hydro Power

Plant		High Dam	Aswan1	Aswan2	Essna	Naga Hammady	Assiut
Peak Load	(MW)	2280	270	270	78.5	68	30.7
Max. daily generated energy	(GWh)	41.5	6.3	6.5	1.8	1.6	0.7
Min. daily generated energy	(GWh)	8.7	1.3	2.4	0.4	0.7	0.14
Efficiency	(%)	84.7	85.5	89.7	85	85	81.7

Development of Hydro Power Generated Energy



- The average rate of decline in generated energy from hydropower plants is 1.2 % per year during the period 2013/2014 till 2017/2018.
- Assiut Hydro Power Plant (4x8 MW) was connected to the grid in March 2018 and put into commercial operation in June 2018.

Fuel

- The operation policy of the existing thermal power plants is based on considering natural gas as the primary fuel due to its evident economic and environmental advantages.
- The use of natural gas at power plants (including private sector power plants connected to the gas grid) reached 85.5% in 2017/2018, representing 84.4% of the total fuel consumption.

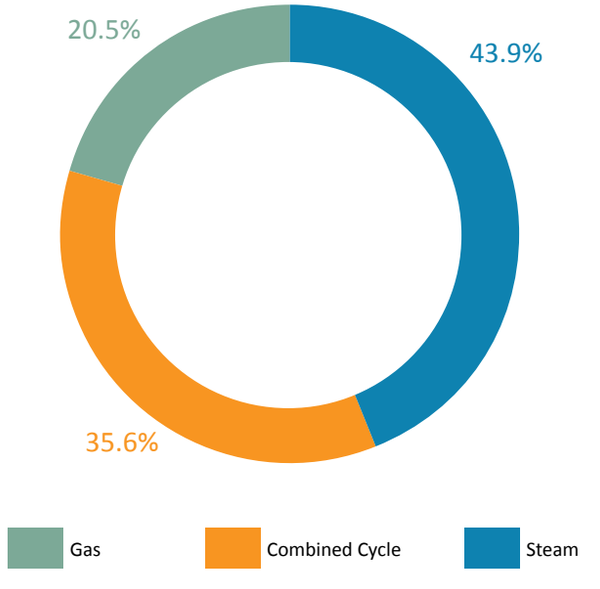
Fuel Consumption by Type

Item		2016 / 2017	2017 / 2018	Variation %
H.F.O.	Ktons	7281	5644	(22.5)
N. G.	Million m^3	33640	37008	10
L.F.O. (Ordinary & Special)	Ktons	558.7	224	(59.9)
Total	Ktoe	36487	37335	2.3

Ktoe = Kilo tonne of oil equivalent

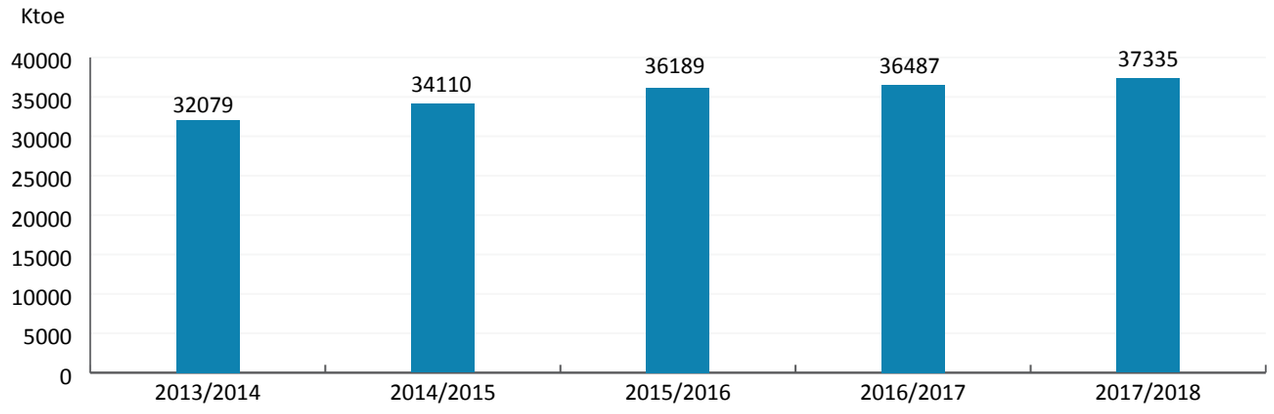
Fuel Consumption by Type of Generation (ktoe)*

Type		2016 / 2017	2017 / 2018	Variation %
Steam	Subsidiaries	14981	13990	(6.6)
	Private Sector	2509	2400	(4.3)
Gas	Subsidiaries	4771	3316	(30.5)
	Siemens	1301	4323	232.2
Combined Cycle		12925	13306	2.9
Total Thermal		36487	37335	2.3



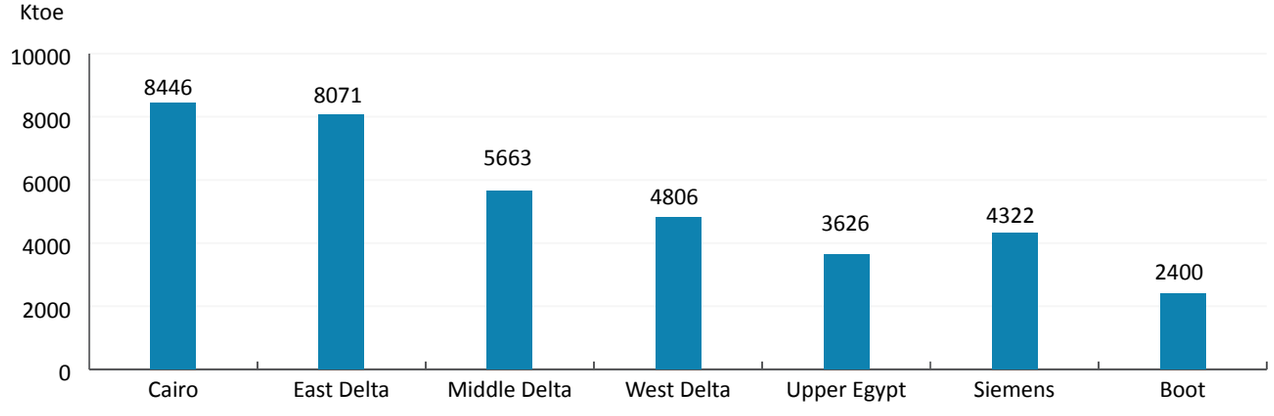
* Consumed fuel includes fuel for commissioning tests, BOOT power plants and Siemens projects.
* Excluding consumed fuel in isolated plants amounting to 27.4 K toe.
* Consumed fuel in BOOT power plants amounts to 2813 million m3 of natural gas (with a total equivalent to 2400 K toe).
* Consumed Fuel in Siemens plants amounted to 5117 million m3 of natural gas (with a total equivalent to 4323 K toe).

Development of Total Fuel Consumption*

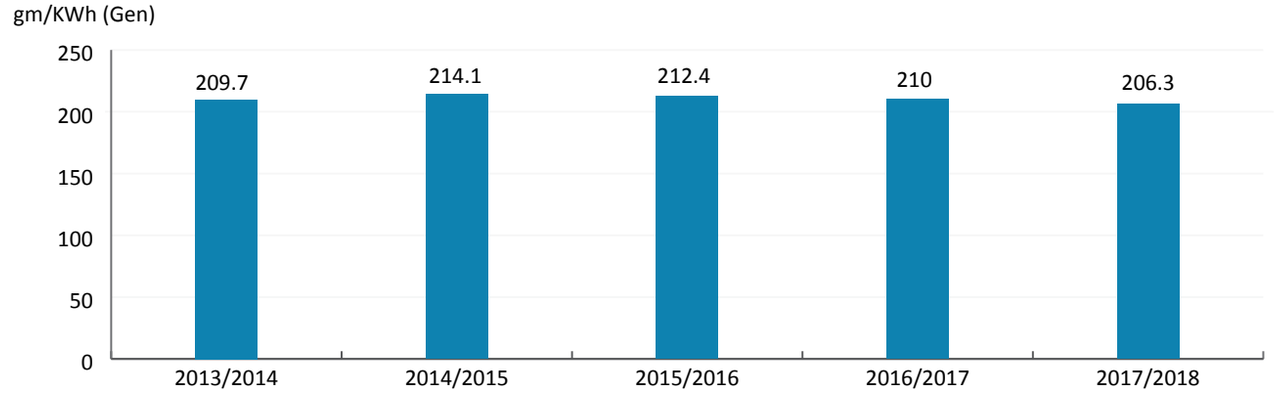


* The average variation rate of Fuel Consumption is about 3.8% per year during the period 2013/2014 till 2017/2018

Fuel Consumption by Companies 2017/2018



Fuel Consumption Development Rate (Gen)*



* The average variation rate of fuel consumption (generated) is (0.41%) per year during the period 2013/2014 till 2017/2018.

* Includes Private Sector P.Ps, Siemens projects and comissioning tests.

Development of Fuel Consumption by Power Plants (ktoe)

	Station		2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Cairo	Shoubra El-Kheima	(St)	1405	1689	1761.9	1667.6	1745.9
	Cairo West	(St)	1776	1697	1533	1462	1308.3
	Cairo South 1	(G)	402	364	613.3	649.6	444.9
	Cairo South II	(CC)	108	60	214.74	214.1	198.4
	Cairo North	(CC)	1257	1231	1368.5	1293.5	1298.7
	Wadi Hof	(G)	49	72	43.42	30.6	45.3
	Tibeen	(St)	603	576	1058	1063	867.8
	6 October	(G)	423	804	749.66	738.6	662.3
	Giza North	(CC)	37	510	1583.79	2192.9	1867
	Heliopolis	(G)	-	-	12.1	3.4	1.5
	Cairo East	(G)	-	-	15	3.9	3.4
	Al-Basateen	(G)	-	-	14.1	4.2	2.5
Total			6060	7003	8967.5	9323.4	8446.0
East Delta	Ataqa	(St)	478	282	331.5	508.7	447.6
	Abu Sultan	(St)	806	879	831.9	942.4	864.7
	Shabab	(G)	85	117	117.1	120.9	53.9
	Shabab	(CC)	540	1185	891.7	1031.7	1461.2
	Arish	(St)	134	130	137.1	136.1	136.3
	Oyoun Mousa	(St)	1072	849	890.2	746.4	716.5
	New Damietta	(G)	860	857	516.2	484	348.5
	West Damietta	(G)	813	872	464.7	439.4	383.7
	Damietta	(CC)	1594	1449	1292.2	1418	1338
	Sharm El-Sheikh	(G)	19	22	6.4	4.9	0.4
	Port Said	(G)	42	31	-	-	-
	Hurghada	(G)	52	155	89.4	124.5	66.6
	Suez	(St)	-	-	-	415.9	613.4
	Ein-Sokhna	(St)	-	851	1389.6	1304.1	1114.6
	Ataqa	(G)	-	40	491.9	351	88.6
	Port Said Ext.	(G)	-	-	4.3	1.6	21.6
	Hurghada Ext.	(G)	-	-	110.7	108	173.5
	West Damietta Ext	(G)	-	-	303.5	284	219.9
	Sharm El-Sheikh	(G)	-	-	28	1.5	22
Total			6495	7719	7896.4	8423.1	8071.0

(St): steam (G): gas (CC): combined cycle

Station			2013 / 2014	2014 / 2015	2015 / 2016	2016 / 2017	2017 / 2018
Middle Delta	Talkha	(CC)	476	478	448.78	439.1	322.72
	Talkha steam 210	(St)	581	522	557.8	558.9	417.76
	Talkha 750	(CC)	842	870	808.57	708	833.168
	Nubareya	(CC)	2522	2393	2220.6	2236	2136.239
	Mahmoudeya	(CC)	484	506	468.44	437.3	299.12
	El-Atf	(CC)	955	797	845.99	835.3	850.82
	Banha	(CC)	130	769	811.1	802.4	797
	New Mahmoudeya	(CC)	-	-	143.46	11.4	6.76
Total			5990	6335	6304.74	6028.4	5663.6
West Delta	Kafr El-Dawar	(St)	861	792	723.6	562	508.014
	Damanhour Ext. 300	(St)	169	425	257.34	380	419.663
	Damanhour	(St)	300	238	52.2	-	-
	Damanhour	(CC)	231	235	202.9	198.2	173.884
	New Abu Qir	(St)	1586	1534	1762.36	1288.4	1071.436
	Abu Qir	(St)	1245	1416	1084.5	1146	1082.256
	El-Seiuf	(G)	115	159	36.6	3	0.156
	Karmouz	(G)	3	3	0.37	0.1	0.11
	Sidi Krir	(St)	828	728	715.8	732.3	723.599
	Sidi Krir	(CC)	845	758	793.58	682	724.502
	Matrouh	(St)	100	99	113.97	102	102.198
Total			6283	6387	5743.22	5094	4805.82
Upper Egypt	Walideya	(St)	850	569	956.2	609.5	462.2
	Kuriemat	(St)	1830	1678	1500.2	1358	1388.3
	Kuriemat 1	(CC)	726	776	829.39	685.5	837.2
	Kuriemat 2	(CC)	811	578	607.26	783	167.8
	Assiut	(St)	113	63	4.1	-	-
	West Assiut	(CC)	-	30	543.7	317	725.3
	New Assiut	(G)	-	0.7	12.1	9.8	6.3
	Red Assiut	(G)	-	1.3	26.1	16.4	5.7
	Samaloot	(G)	-	0.9	12.6	7.16	3.3
	West Mallawy	(G)	-	1.1	11.5	6.7	7.3
	Gerga	(G)	-	0.8	10.1	6.6	10.7
	Bani Ghaleb	(G)	-	0.8	10.2	8.5	12.2
Total Renewable			4330	3699.6	4523.45	3808.16	3626.3
Siemens	Burullus	(CC)	-	-	-	338	1176
	Beni Suef	(CC)	-	-	-	796	2371
	New Capital	(CC)	-	-	-	167	776
Total			0	0	0	1301	4323
Private Sector (BOOT)	Sidi krir 3, 4	(St)	908	870	914.19	868	863
	Suez Gulf	(St)	1001	920	941.9	810	855
	Port Said East	(St)	1012	1178	896.46	831	682
Total BOOT			2921	2968	2752.55	2509	2400
Grand Total*			32079	34110	36189	36487	37335

◉ (St): steam ◉ (G): gas ◉ (CC): combined cycle

* Including commissioning tests.

* In addition to fuel of isolated power plants about in about 27.4 Ktoe.

Isolated Power Plants and Reserve Units (2017 /2018)

There are isolated power plants in some affiliated companies which are not connected to the Unified National Grid. These are mainly constructed to meet the requirements of remote areas of electricity needed for touristic projects and other purposes, and the total installed capacity of these plants amounts to 226 MW in addition to 5 MW wind farm in Hurghada.

Installed Capacity and Energy Generated from Isolated Power Plants and Reserve Units

Company	Type	Installed Capacity (MW)		Energy Generated (GWh)		Energy Sent (GWh)	
		2017/2018	2016/2017	2017/2018	2016/2017	2017/2018	2016/2017
Canal D.C.	Diesel	108	108	31	43.20	30.56	42.40
	Solar	28	14.0	9.09	7.10	8.90	7.10
Beheira D.C.	Diesel	30.20	30.20	32.50	32.20	31.01	30.70
	Solar	10.20	10.0	10.20	8.50	10.05	8.50
Middle Egypt D.C.	Diesel	30.40	33.80	26.48	25.60	25.34	24.61
	Solar	6.0	6.0	5.67	6.35	5.63	6.10
Upper Egypt D.C.	Diesel	2.94	2.95	0.027	0	0.024	0
EETC	Diesel	10.20	10.20	0	0	0	0
Total	Diesel	181.74	185.15	90.01	101	86.93	97.71
	Solar	44.20	30.0	24.96	21.95	24.58	21.70
	Diesel & Solar	226	215.15	114.96	122.95	111.51	119.41

- The total consumed fuel amounted to 27.4 K toe.

Power Plant Projects (Thermal)

Seventh five-year plan (2012- 2017):

- The amended 7th five-year plan (2012 -2017) included the addition of 27'400 MW from thermal power plants to the unified grid, including the fast-track plan & Siemens projects at an estimated investment cost of USD 17 billion.
- These projects are implemented by the Electricity Sector and funded with soft loans from Arab and international financing institutions, in addition to implementing part of the Plan through "EPC + Finance" system
- Part of the Plan projects with a total capacity of 23'311 MW were put to operation by the end of FY (2017/ 2018).
- It is scheduled to put in operation another 2790 MW during FY 2018 /2019.
- Another 1300 MW is targeted to be in operation and the whole plan projects to be completed in 2019/2020.

Eighth Five-Year Plan (2017- 2022):

- EEHC has conducted a study to identify the generation capacities required to be added in the 8th five-year plan (2017/ 2022) to accommodate the expected loads in order to cover the needs of the various State sectors and provide adequate reserve for programmed maintenance works and forced outage of any generation units, and also to address any unit problems due to obsolescence.
- The study revealed that no additional thermal capacities are needed under the (2017- 2022) plan.

Future Projects (2022-2027):

- Combined Cycle power plant projects:

Luxor 2250 MW C.C. Power Plant under BOO System:

- On November 1, 2018, a Power Purchase Agreement was signed between EETC on one part and the foreign investor "Aqua Power" with its Egyptian partner "Hassan Allam Co." on the other part.

Clean Coal Technology Projects:

Oyoun Moussa 2640 MW Power Plant under BOO System

- On June 1, 2015 an international consultant was hired to provide consultancy services for the Project.
- An approval has been given by the Council of Ministers to allow the Ministry of Finance to issue a sovereign guarantee that guarantees the financial obligations contemplated by the Egyptian Electricity Transmission Company (EETC) under the Project.
- Negotiations are underway between EETC and the Project Developer to proceed with completing the necessary procedures for finalizing the relevant agreements and starting execution of the Project.

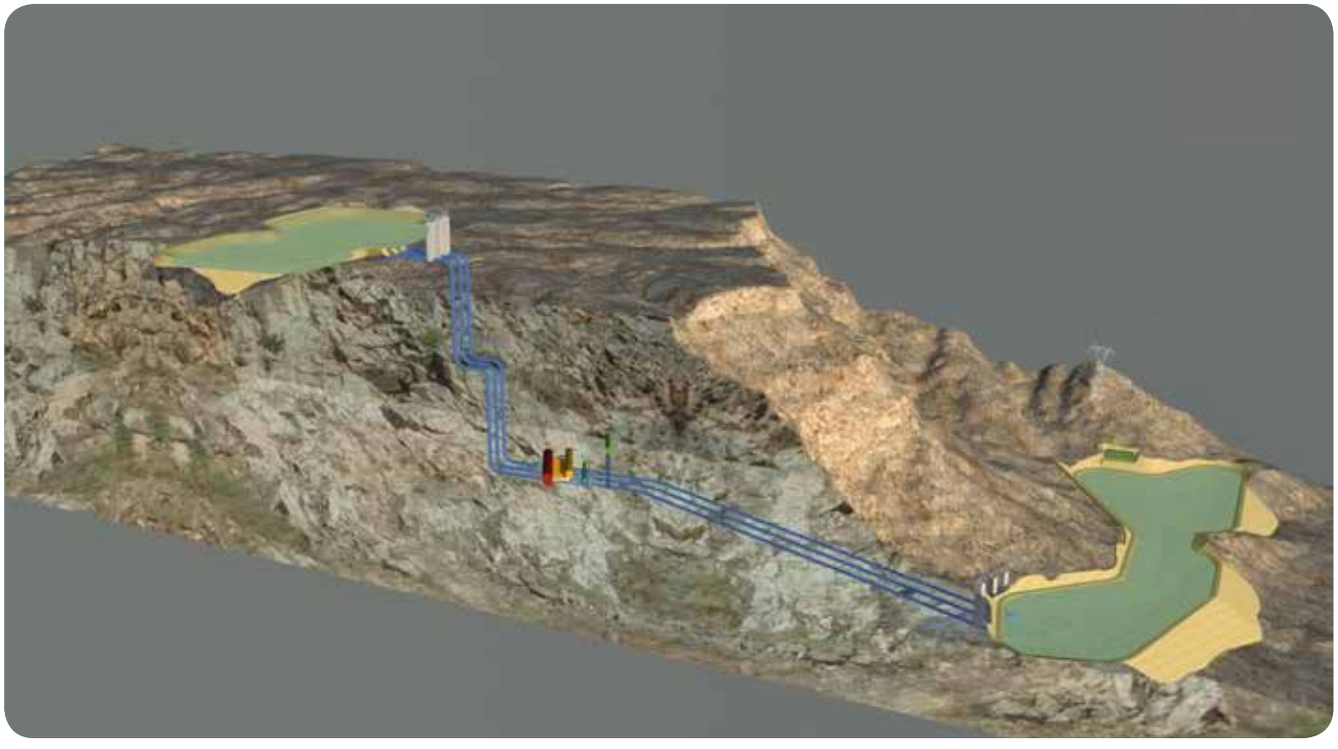
Hamrawein 6600 MW power plant:

- The project consists of six steam units (Ultra Super Critical).
- The Project consultant (Tractebel) had declared awarding of the Project to the Chinese Consortium at a cost of about USD 4.4 billion.
- In September 2018, the first part of the contract was signed with the Chinese Consortium winning the tender during the China Economic Forum in the presence of H.E. the President of the Republic.

Pump & Storage Power Projects:

Ataqa Mount Pump & Storage 2400 MW Power Plant:

- On June 15, 2017, in collaboration with the Hydro Power Plant Executive Authority (HPPEA) a contract was signed with the international consultant (Artelia) for evaluating the technical and financial proposal of Sino Hydro Co. of China to construct the largest pump and storage project in Africa and the Middle East with a capacity of 2400 MW at an initial cost USD 2.7 billion.
- On September 3, 2018 during the Economic Forum in China and in the presence of H.E. the President of the Republic, a conditional agreement was signed with Sino Hydro Co. pending finalization of the final contract for the project.



Information about Production Companies

Geographical zone		Headquarter	Equity Capital (Million EGP)	Investments percentage	Address	Tel.
Cairo	Greater Cairo	Cairo	826,112	4.06%	22 Shanan St. Sabteeya	02 /25793054 02 /25740550
East Delta	Damietta, Ismailia, Port Said, Suez, South Sinai, North Sinai & Red Sea Governorates	Ismailia Governorate	2689.123	13.2%	Shibeen Elkoum St.	064 / 3201492 064 / 3204590
Middle Delta	Qalyoubeya Governorate (Except for Greater Cairo Extension), Mhmodeya City, Kom Hamada of Beheira Governorate & Daqahleya Governorate	Daqahleya Governorate	1148.990	5.64%	Compost Road, Talkha	050 / 2524149 050 / 2524369
West Delta	Alexandria, Matrouh & Beheira Governorates (Except for Mahmoudeya City & kom Hamada)	Alexandria Governorate	742.945	3.65%	7 Riyadh Gleem	03 / 5761375 03 / 5756722
Upper Egypt	Giza (Except for extension of Greater Cairo), Fayoum, Beni-Suef, El-Menia, Assiut, New Valley, Sohag, Qena, Aswan, & Luxor Governorates	Giza Governorate	2279.289	11.19%	Mohamed Dorra St,	082 / 9210733 088 / 2321915 02 / 37610578
Hydro Power Plants	Affiliated hydropower plants across the Country (Aswan, Luxor, Qena and Assiut)	Aswan Governorate	391.660	1.92%	High Dam – West Aswan	097 / 3480412 097 / 3481974

EGYPTIAN ELECTRICITY TRANSMISSION COMPANY (EETC)

Egyptian Electricity Transmission Company (EETC)

Company Name	Geographical zone	Head Office	Equity Capital (m. EGP)	Ratio of Company's Capital to EEHC's Investments (%)	Address	Phone No.
EETC	Electricity transmission networks on ultra-high and high voltages all over the country	Cairo	8612.083	42.28 %	Ramses St. Ext. Opposite Police Academy, Abbasseya, Cairo	02/22618579 02/26843824

Objectives:

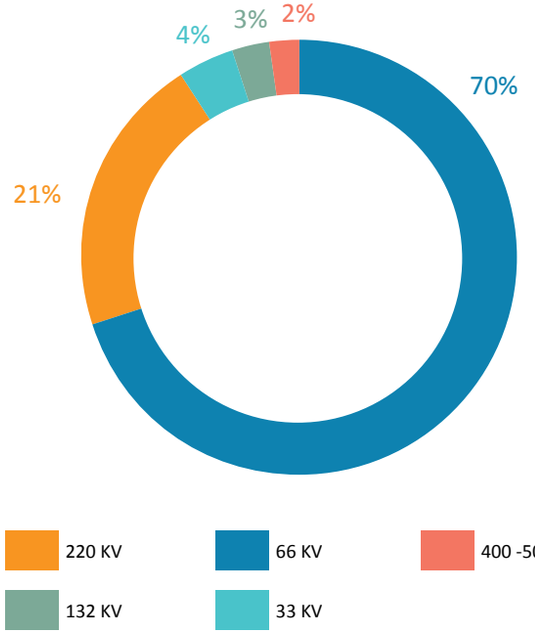
- Management, operation and maintenance of electrical power transmission grids on ultra-high & high voltages all over the country, with optimum economical utilization of those grids.
- Co-ordination with the production and distribution companies for providing the electrical energy on the various voltages for all uses with high efficiency.
- Participation with EEHC in conducting technical and economic studies for future transmission plans and projects to meet the demand on electricity and its stability.
- Implementation of the electrical power transmission projects on ultra-high & high voltages as approved by EEHC's Board of Directors according to the scheduled programs.
- Implementation of the electrical interconnection projects approved by EEHC's Board of Directors and exchanging electrical power with other countries and selling or purchasing it according to needs from the electrical networks interconnected to the Egyptian grid.
- Conducting studies on load and demand forecast plans for its customers as well as financial and economic forecasts for the Company.
- Organizing load movement on ultra-high & high voltage grids all over the country through the National Dispatch Center and regional dispatch centers.
- Carrying out any other works or activities related to, or complementing, the Company›s objectives, as well as any tasks entrusted to it by EEHC within the Company's scope of work.
- Purchasing the electrical power produced at the power plants according to needs and selling it to customers on ultra-high & high voltages and to the electricity distribution companies.
- Carrying out any tasks entrusted to the Company by others where such tasks fall within its scope of work and generate economic return to the Company.

Transmission Network Statistics (30/6/2018)

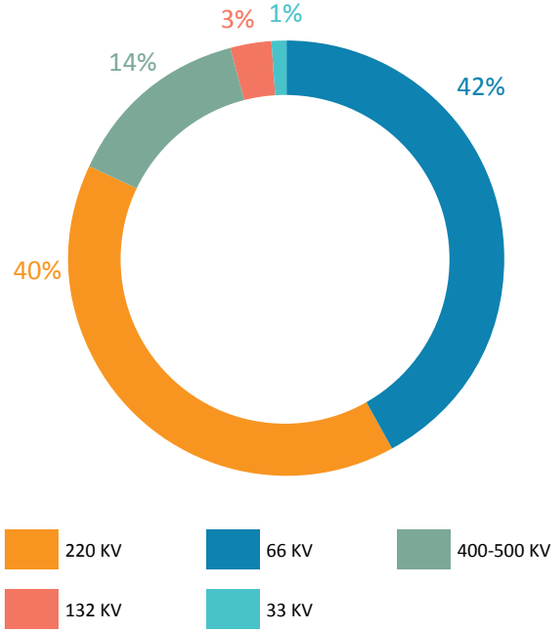
Description		2016/2017	2017/2018	Variation %
On ultra-high and high voltages	Total Transformers Capacities (MVA)	120160	130868	8.9
	No. of Substations	652	670	2.9
	No. of Transformers	2534	2612	3.1

2016/2017				2017/2018		
Voltage (KV)	Capacity MVA	Substations No.	Transformers	Capacity MVA	Substations No.	Transformers No.
33 (KV)	1606	31	126	1571	30	123
66 (KV)	51315	461	1871	54670	468	1916
132 (KV)	3491	18	80	3454	18	80
220 (KV)	48823	130	424	52248	139	452
400-500 (KV)	14925	12	33	18925	15	41
TOTAL	120160	652	2534	130868	670	2612

Number of Substations (2017 / 2018)



Transformers Capacities (2017 / 2018)

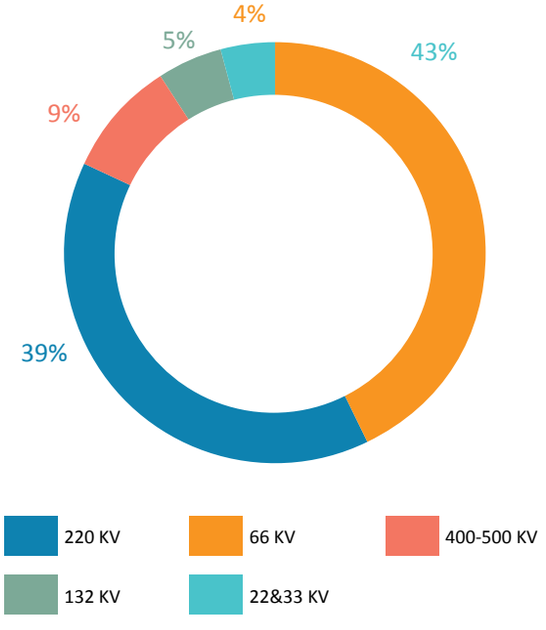


Total Lengths of Circuits (Overhead Lines & Cables)

Description	2016/2017	2017/2018	Variation%
Total lengths of circuits On ultra-high & high voltages (Km)	46317.1	46890	1.2

Voltage		2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
22	(KV)	-	-	-	-	21
33	(KV)	1990.4	1990.4	1870.7	1790.5	1790.5
66	(KV)	19299.8	19109.6	19594.3	19879.1	20018.5
132	(KV)	2485	2485.1	2485.1	2485.1	2485.1
220	(KV)	17360.5	17568.4	17812.4	18180.4	18465.1
400-500	(KV)	3078	3055	3141	3982	4110.3
Total (km)		44213.7	44208.5	44903.5	46317.1	46890

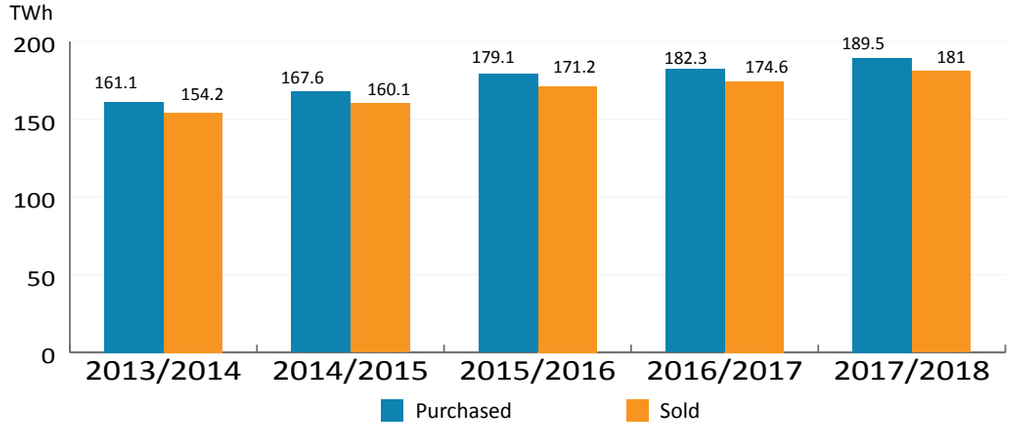
Total Lengths of Circuits (on different voltages) 2017/2018



Total Purchased and Sold Energy

Description		2016/2017	2017/2018	Variation %
Purchased Energy	TWh	182.3	189.5	3.9
Sold Energy	TWh	174.6	181	3.7

- Energy sold by EETC including energy sold to the distribution companies

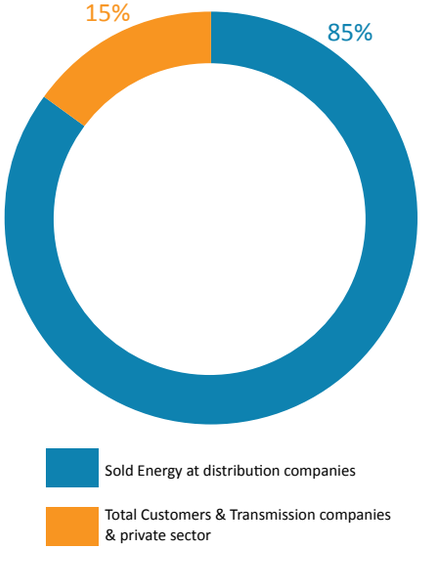


- The average growth rate of purchased energy is 4.14% per year, while the average growth rate of sold energy is 4.12% per year during the period from 2013/2014 till 2017/2018.

Sold Energy

According to various purposes on Ultra-high, High and Meduim voltage:

Description	TWH
Industry	23.10
Agriculture	0.91
Utilities	0.63
Government	0.05
Others	1.05
Energy Sold to the Interconnection countries	0.22
Energy Sold to the Boot companies	0.01
Tangible Energy & Colonies	0.49
Total Energy Sold to Customers, Interconnection Countries& Private Sector	26.46
Sold Energy to Distribution Companies	154.56
Total	181.03



Electrical Interconnection

- Egypt has formulated its orientations and objectives through the Strategy of Sustainable Development 2030 for the Egyptian electricity sector to make Egypt a central hub for energy. The Egyptian Electricity Sector seeks to develop its performance in diversifying energy sources and achieving its economic objectives.
- EEHC has embarked on new policies based on energy trade at regional and international levels through electrical interconnection with neighboring countries, as well as its membership in various energy pools at continental level, up to the international level through its relentless pursuit of membership in international electrical interconnection organizations.

First: Regional Interconnection with Neighboring Countries to Activate Electricity Markets at Regional Level

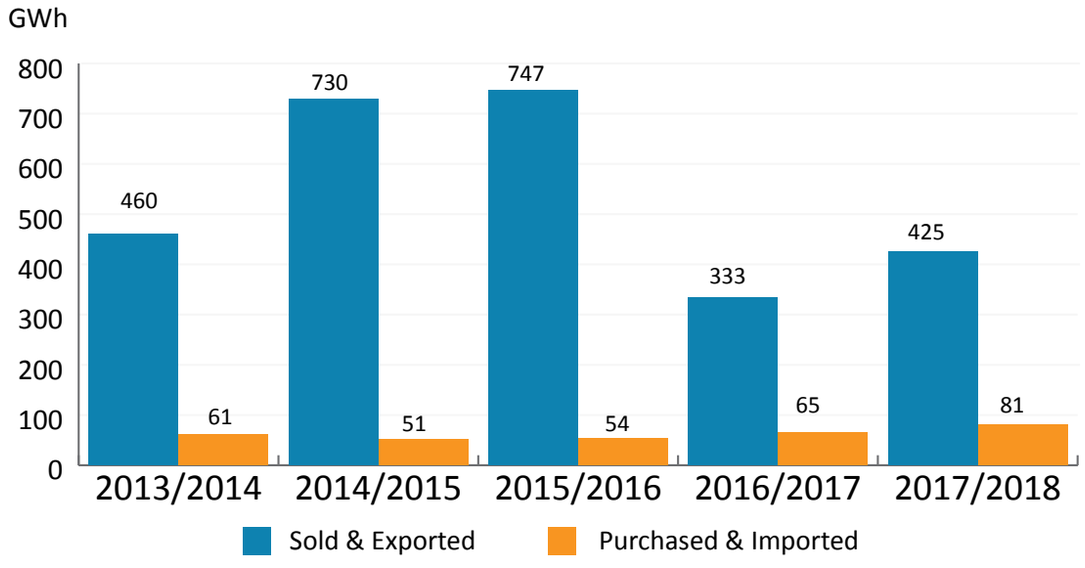
Bilateral Interconnection:

Egyptian/Jordanian & Egyptian/Libyan Interconnection:

Description	Egyptian/Libyan Interconnection Line	Egyptian/Jordanian Interconnection Line		
Interconnection date	May 1998	Oct 1998		
Interconnection voltage (KV)	220	400		
Interconnected Countries	Libya	Jordan	Syria	Lebanon
Sold & Exported Energy * (GWh)	255	170	-	-
Purchased & Imported Energy * (GWh)	-	81	-	-

* Including in-kind exchange

Traded Energy with the Neighboring Countries



The Egyptian/Saudi Interconnection:

- The Egyptian/Saudi electrical interconnection project aims to exchange a capacity of 3000 MW between the two countries using HVDC bipolar transmission technology on 500 KV through one substation in Egypt and two substations in Medina & Tabuk in KSA with overhead lines on both and a submarine cable crossing the Gulf of Aqaba.
- A Memorandum of Understanding in the field of electrical interconnection has been signed between the two countries; and the Electrical Interconnection Agreement, the Commercial Agreement and the Interconnection Operation Agreement have also been signed for the project implementation through EEHC and the Saudi Electricity Company (SEC).

The Egyptian/Sudanese Interconnection:

- A study on the Egyptian/Sudanese 220 KV electrical interconnection had been conducted for the transmission of up to 300 MW capacity (in phases) to Sudan, the project construction works were carried out both inside the Egyptian and Sudanese territories and the experimental operation procedures for pilot Phase I of up to 50 MW are underway.

Pan-Arab Interconnection and Establishment of an Arab Common Market:

- The Arab electricity common market aims at achieving the best results of power supplies on national and Arab basis to satisfy the desire of the Arab countries in realizing more progress in electricity trade within the regional interconnection pools among the Arab Maghreb countries, the eight regional interconnection and the GCC grid.
- Compatibility of legislative and regulatory frameworks has been initiated to expand trade exchanges and enable electricity trading and exchange at the level of member-country markets by securing supplies and ensuring operation and trade sustainability in a stable and reliable manner.
- A study on the broad Arab interconnection has been prepared and a steering committee, chaired by Egypt, has already been formed by the Arab Ministerial Council of Electricity in collaboration with the World Bank and the Arab Fund for Economic and Social Development (AFESD)
- A Memorandum of Understanding was signed and entered into force in April 2017 by 16 Arab countries with the participation of the World Bank in formulating the General Agreement and the Market Agreement.
- The Market Agreements have already been reviewed and are being circulated to the member countries for approval and execution.
- The rules for operation of Arab networks for electrical interconnection among Arab countries are being prepared, and the necessary procedures are underway for selecting the consultant who will formulate these rules.
- The founding of an Arab common market also required the establishment of a group of regional institutions such as the Arab Commission for Electricity Transmission System Operators and the Arab Advisory and Regulatory Committee

African Interconnection Axis and Electricity Market:

- In line with the State strategy to make Egypt a central hub for energy and electricity trade, Egypt is currently working on the establishment of an electricity trade market among the Eastern Africa Power Pool (EAPP) countries.
- Additionally, improvement of the use of available resources for power supply is sought through investment in the production, transmission and distribution sectors, with the aim to facilitate the development of a free, integrated and competitive market of electricity trade between the Pool countries.

Second: International Interconnection towards Involvement in Electricity Markets at International Level

Interconnection Axis and Electricity Market with Europe:

- In view of reinforcing Egypt's role as an energy hub in the Mediterranean region, Egypt joined membership of various regional and international organizations and aggregations such as the Association of Mediterranean Transmission System Operators (MED-TSO), the Union for the Mediterranean (UFM) and some other international organizations.
- A Memorandum of Understanding has been signed between EEHC and Euro-Africa Interconnector Company, of Cyprus, to prepare a techno-economic feasibility study on the electrical interconnection project between Egypt, Cyprus and Greece, and a non-disclosure agreement has been concluded between the relevant parties.

Interconnection Axis and Electricity Market with China and the East:

- The Ministry of Electricity and Renewable Energy signed a cooperation protocol with the Global Energy Interconnection Development and Cooperation Organization (GEIDCO) in the fields of training, smart grids and technical support.
- EEHC has active participation in the meetings, conferences and workshops organized by GEIDCO at African and global levels in the fields of international interconnection, electricity markets, renewable energy and energy efficiency.
- Egypt has lately been approved as member of the Global Energy Interconnection Development and Cooperation Organization (GEIDCO).

Third: The Egyptian Electricity Market

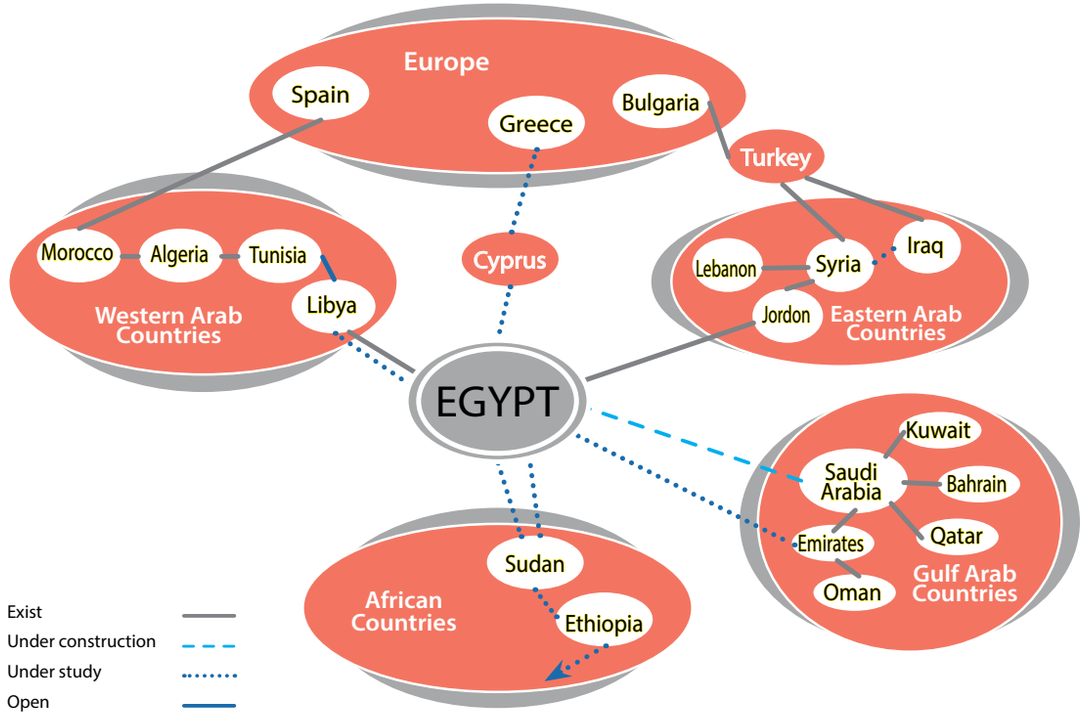
Legislative Environment of the Egyptian Electricity Sector:

- Pursuant to the Presidential Decree no. 87 of 2015, the new "Electricity Law" was promulgated and the Executive Regulation of the law was issued by the Decree of the Minister of Electricity and Renewable Energy no. 230 of 2016 for enhancing the structural transformation system in the Egyptian electricity market through the operation of the electricity system according to economic and environmental criteria that ensure equal opportunities to safeguard the interests of electricity producers and consumers.

EEHC Internal Work Environment:

- EEHC took active steps in this regard by participating in the study of restructuring the Egyptian Electricity Transmission Company (EETC) so that there would be a gradual transformation of the electricity market in Egypt to a competitive market for eligible customers and another regulated one for ineligible customers.
- In cooperation with Japanese international consultancy services, EEHC also launched an action plan aimed at reconciling the Company's conditions in accordance with the requirements of gradual opening of the Egyptian electricity market.

Fourth: Egypt as an Energy Hub



New & Renewable Energy

The Electricity Sector's strategy is based on diversifying energy sources, expanding the use of renewable energies, rationalizing the use of conventional energy sources, encouraging local and international investors to invest in the development of renewable energy projects, as well as motivating the industrial sector to enter into the field of manufacturing and localization of the renewable energy technology.

The new & renewable energy strategy aims to increase the share of energy generated from renewable sources to 20% of the total generated energy in Egypt by 2022, out of which 6% from hydro power and 14 % from wind and solar energy (photovoltaic cell systems).

EEHC is in continuous cooperation with the Egyptian Electricity Transmission Company (EETC) and the New and Renewable Energy Authority (NREA) in the following areas:

- Planning for the electrical networks to ensure the evacuation of energy generated from renewables.
- Planning for power generation considering the participation of renewable energies in government executed projects throurg NREA and private sector projects through EETC..
- Planning for the electrical networks to ensure the evacuation of energy generated from renewables.
- Publishing through EETC of competitive tenders for the construcion of renewable energy projects to supply energy to pre-defined locations under the BOO scheme.

Coordination is ongoing between EETC and NREA under supervision of EEHC for signing the Power Purchase Agreements (PPAs) of renewable energy generated by the private sector under BOO scheme with a total capacity of 1850 MW, as follows:

- A 250 MW Wind farm at the Gulf of Suez (through Angy – Toyota – Orascom consortium).
- A 200 MW Solar Power Plant Project at Kom Ombo.
- A 250 MW wind farm project at Suez Gulf (through Acties – Liqule consortium).
- Renewable Energy Projects with a total capacity of 1150 MW at the west of Nile River region under BOO scheme, as follows:
  - A 250 MW wind farm.
  - A 200 MW photo voltaic (PV) solar plant and another one with capacity of 600 MW.
  - A 100 MW from solar power plants (CSP).

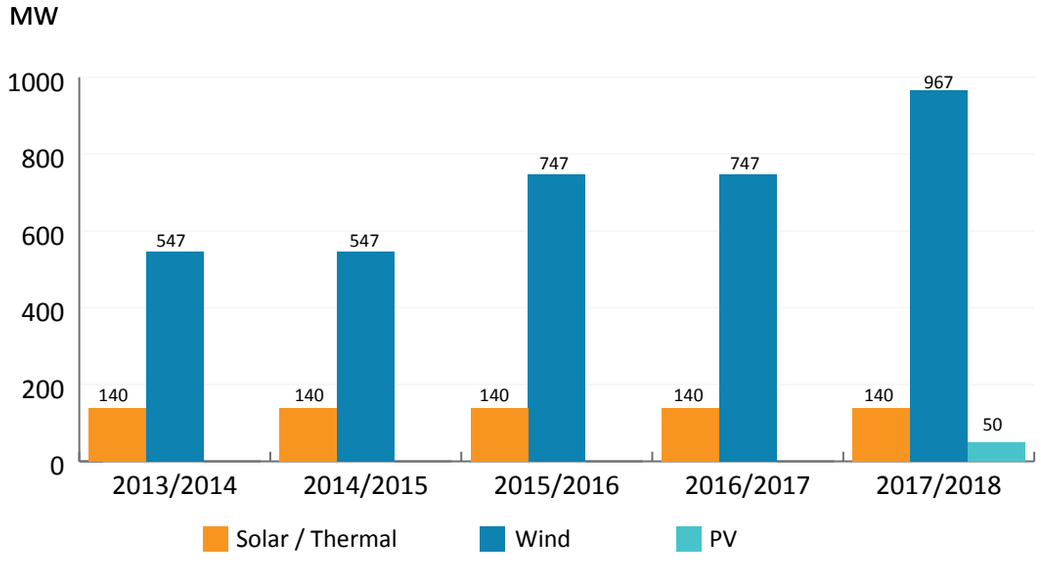
EEHC and affiliated companies have adopted a project to install solar photo voltaic (PV) systems on the roof of buildings and connect them to the national grid, where the total connected capacities reached 23.5 MW to date as shown below:

Description	Egypt / Libya	Egypt / Jordan
On top of EEHC and Subsidiaries' buildings	116 plants totaling 2.5 MW	23 Plants totaling 1.1 MW
By Subscribers: Feed-in-Tariff Scheme	73 plants totaling 13.2 MW	38 plants totaling 2.9 MW
Net-Metering Scheme	143 Plants totaling 7.7 MW	-

During FY 2017/2018, the total generated energy amounted to 47.2 GWh. The special feed-in-tariff scheme for capacities up to 20 MW was completed on 28 October 2017 through the affiliated distribution companies in accordance with the Cabinet Decree issued in 2016.

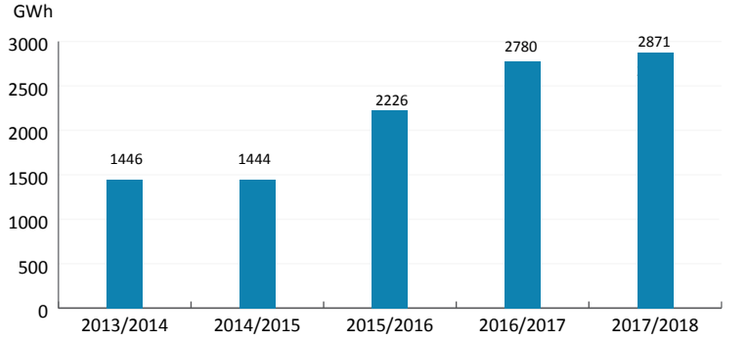
Installed Capacity and Generated Energy From Renewable Sources (wind, solar / thermal) 30/6/2018

Installed Capacity (Wind,Solar/ Thermal)*



* Excluding a 5 MW wind plant at Hurghada.

Generated Energy from Renewables (Wind,Solar/ Thermal)



- The first solar/thermal plant for power generation in Kuriemat has been put to commercial operation with a capacity of 140 MW of which 20 MW is the solar component.
- The first PV solar plant in Benban, Aswan, was connected to the national grid in January 2018 within the first phase of FIT scheme with a capacity of 50 MW, and commercially operated in February 2018.

- The average growth rate of energy generated from renewables is 16.7% per year during the period from 2013/2014 till 2017/2018.
- Generation of renewable energies mainly depends on wind speed & solar irradiance.

Feed-in Tariff for Renewable Energy Project (Wind - Solar)

On September 2014, the Egyptian Council of Ministers approved the distinctive feed-in-tariff (FIT), being a mechanism to encourage the production of electricity from renewable sources, under which the electricity companies (EETC or the distribution companies) buy the energy produced at a pre-announced price that generates an attractive return on investment through long-term Power Purchase Agreements up to the end of lifespan of the project (20 years for wind projects and 25 years for solar projects).

FIT projects developed by independent power producers (IPPs) are implemented through:

Legal framework:

The law no. 203 of 2014 has been issued to encourage investments in renewable energies through allocation of State-owned lands for the renewable energy projects and oblige the electricity companies, as buyer and transformer of this energy, to develop mechanisms to encourage demand for electricity produced from these sources.

Contractual frame:

This includes long-term network connection contracts and power purchase agreements (20 -25 years) between the electricity companies (transmission or distribution as the case may be) and the investors.

- The total installed capacities from projects to be contracted under 1st and 2nd phases of FIT are planned to reach 4300 MW (2300 MW solar and 2000 MW wind energies).
- Considering the foregoing, the FIT projects (wind and solar) were tendered in two phases:

First Phase:

- On October 2016, Power Purchase Agreements for solar PV cells' projects with a total capacity of 12 MW were signed with (6) qualified investors for capacities of more than 500 KW, of which 8 MW were connected to the distribution networks up to 30.6.2018.
- On March 2017, the financial closure documents were accepted for 3 investors in the field of solar energy (Elf, Infinity, Fas) with a total capacity of 150 MW, and then Elf withdrew from the project whereby the total capacity decreased to 100 MW.
- On February 2018, the Infinity project had access to the unified grid with a capacity 50 MW, while the project of FAS is being completed and is expected to be in commercial operation by November 2018.

Second Phase:

- On 6/9/2016, the 2nd phase of FIT Program was announced.
- Cost Sharing Agreements for the 2nd Phase of FIT Program have been concluded with (30) investors for solar energy projects, as well as the execution of the full agreements for the projects.
- On 29/10/2017, the international financing institutions provided letters confirming the achievement of financial closure for (30) power production projects from solar energy in Benban region with total capacities of 1365 MW to bring the total capacity in the two phases up to 1465 MW.
- The power plants are connected to the national grid successively, and the commercial operation takes place from January 2019 to the end of 2019.

For more detailed information please visit the following web sites:

www.nrea.gov.eg - www.egyptera.org

ELECTRICAL ENERGY 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
- Beheira Electricity Distribution Company
- Middle Egypt Electricity Distribution Company
- Upper Egypt Electricity Distribution Company

Objectives

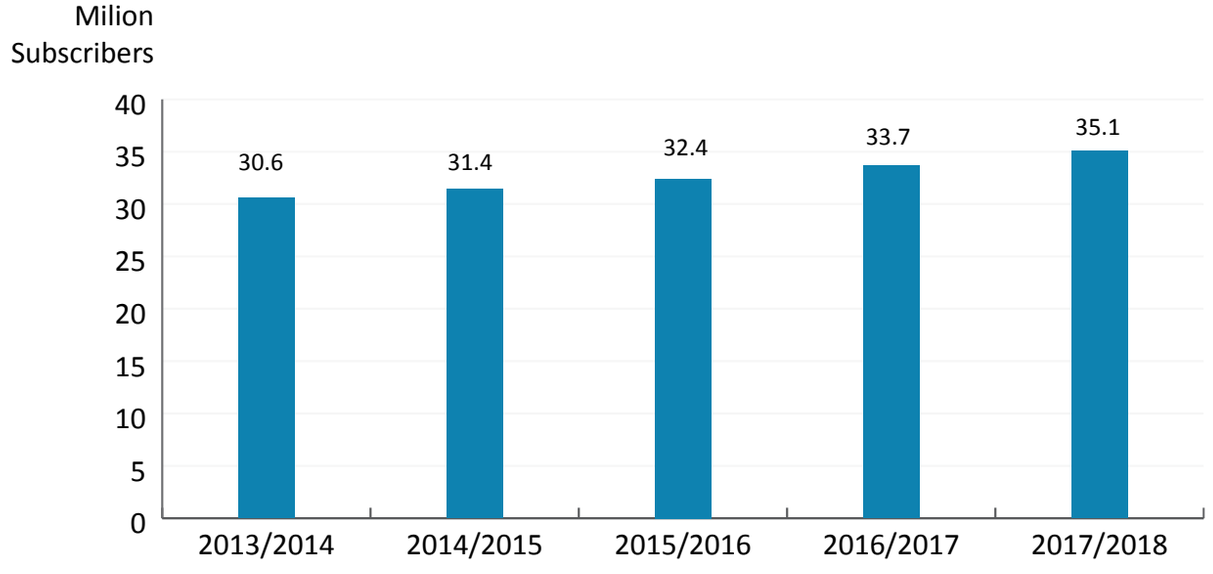
- Preparing forecast studies on loads and energy for the Company's customers and also economic and financial forecast for the Company itself.
- Managing, operating and maintaining isolated generation units which are not connected to the unified grid.
- Carrying out other works entrusted to the Company by other parties within its scope of activity which achieve an economic benefit for the Company.
- Distributing and selling the electric power to customers on medium and low voltages which is purchased from the Egyptian Electricity Transmission Company and from the Egyptian electricity production companies on medium voltage, and also the electric power purchased from the Industrial Sector and other IPPs in case of exceeding their needs, provided the approval of EEHC Board of Directors.
- Managing, operating and maintaining the medium and low voltage grids according to the instructions of the dispatch centers and in consistency with the economical operation requirements.
- Conducting studies, researches and designs, and implementing power projects for the supply of electric power for different purposes on the medium and low voltages and carrying out all associated works.
- Carrying out any other works or activities related to or complementing the Company's objective in addition to any other work that may be entrusted to the Company by EEHC within its competence.

Electricity Distribution Network Statistics (30 /6/ 2018)

Item	comp.	North Cairo	South Cairo	Alex.	Canal	North Delta	South Delta	El Behera	Middle Egypt	Upper Egypt	Total
No. of Customers (Thousand)		4480	5708	2717	4081	4267	4611	2348	3735	3124	35070
Sold Energy (GWh)		17122	23369	8704	22479	12284	11207	10364	14811	10811	131150
Purchased Energy (GWh)		20901	28465	10382	25433	14618	13253	12059	17470	13387	155968
No. of Switchboards		416	379	242	1277	225	220	287	157	107	3310
Percentage	(%)	12.57	11.45	7.31	38.58	6.80	6.65	8.67	4.74	3.23	100
Length of MV Network (km)	Lines	191	3361	562	15419	9941	7767	15063	18465	11058	81827
	Cables	23434	24331	11929	21579	6995	5780	6360	7789	7717	115914
	Total	23625	27692	12491	36998	16936	13547	21423	26254	18775	197741
Length of LV Network (km)	Lines	3461	4858	4041	32475	23048	18599	20686	35889	32365	175422
	Cables	37456	41123	6380	16271	3118	986	2810	3019	2282	113445
	Total	40917	45981	10421	48746	26166	19585	23496	38908	34647	288867
Total Length of MV&LV Lines & Cables (Km)		64542	73673	22912	85744	43102	33132	44919	65162	53421	486608
Percentage (%)		13.26	15.14	4.71	17.62	8.86	6.81	9.23	13.39	10.98	100
No. of Customers (Th)/ Total Length (Km)		0.07	0.08	0.12	0.05	0.10	0.14	0.05	0.06	0.06	0.072
Sold Energy (GWh) / Total Length (Km)		0.27	0.32	0.38	0.26	0.28	0.34	0.23	0.23	0.20	0.27
No. of Distribution Transformers		17419	22091	8575	34180	17695	17471	22767	25003	22174	187375
Sold Energy (GWh)/ No. of Transformers		0.98	1.06	1.01	0.66	0.69	0.64	0.46	0.59	0.49	0.70
Capacity of Distribution Transformers MVA		15031	16337	5803	13887	5466	5646	5288	6449	5713	79620
Percentage (%)		9.3	11.8	4.6	18.2	9.4	9.3	12.2	13.3	11.8	100
Number of LV Pillars and Panels		59034	60263	8575	48854	19895	17574	28184	13902	23438	279719
Percentage (%)		21.1	21.5	3.1	17.5	7.1	6.3	10.1	5	8.4	100

Number of Subscribers

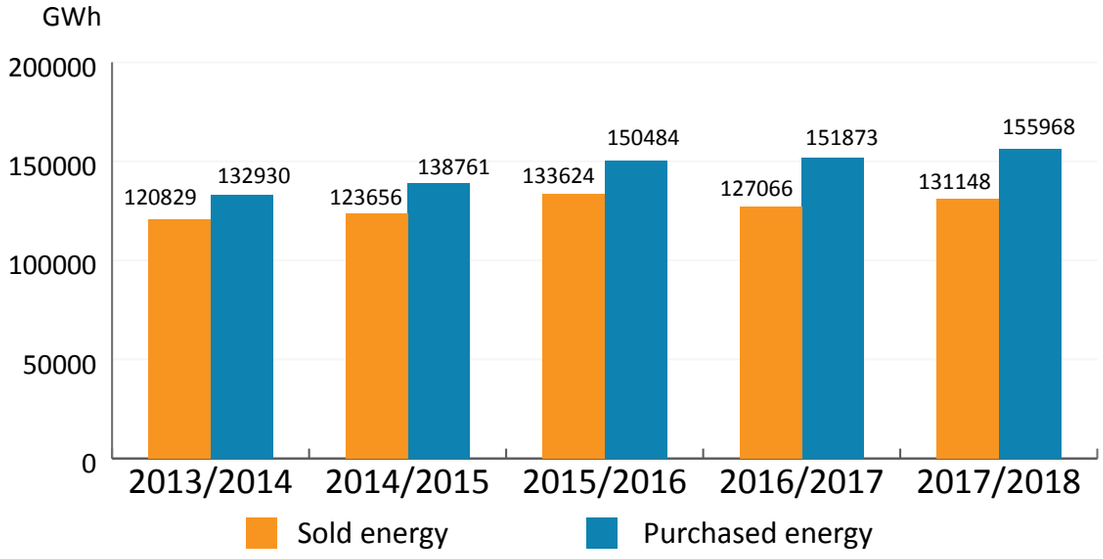
Description	2016/2017	2017/2018	Variation%
Total number of subscribers on medium and low voltages (millions)	33.7	35.1	4.2



- The average growth rate of subscribers is 3.5% per year during the period from 2013/ 2014 till 2017 /2018

Purchased & Sold Energy at Distribtion Companies

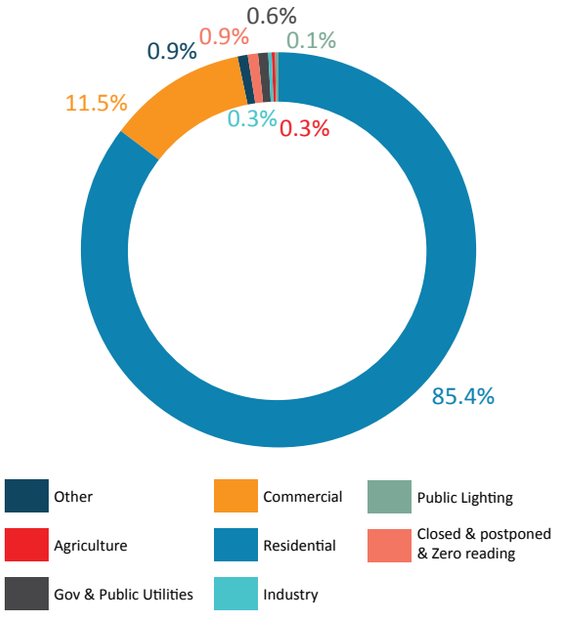
Description	2016/2017	2017/2018	Variation%
Total Purchased Energy (GWh)	151873	155968	2.7
Total Sold Energy (GWh)	127066	131148	3.2



- The average growth rate of sold energy is 2% per year while the average growth rate of purchased energy amounted to 3.9% per year during the period 2013/ 2014 till 2017/ 2018

Number of Subscribers (on medium & low voltages) According to Purpose on (30/ 6/ 2018)

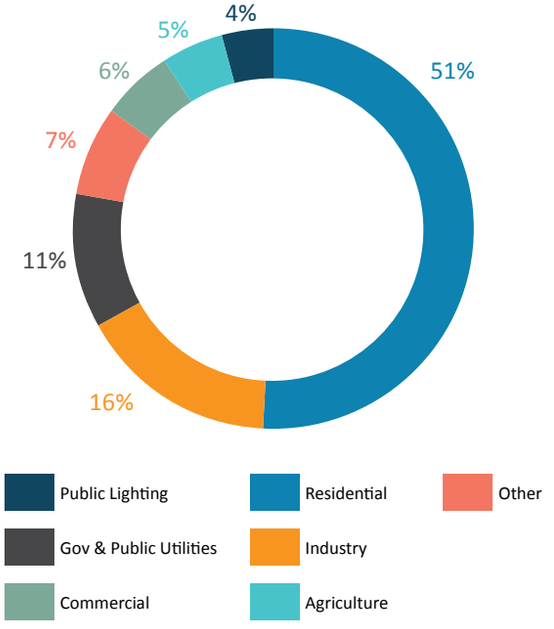
Purpose of Usage	No. of Subscribers (thousand subscriber)
Industry	126
Agriculture	92
Government & Public Utilities	196
Residential	29934
Commercial	4024
Closed, postponed zero reading & not charged	327
Public lighting	37
Others*	334
Total	35070



Energy Sold by Distribution CO's (on medium & low voltages) According to Purpose

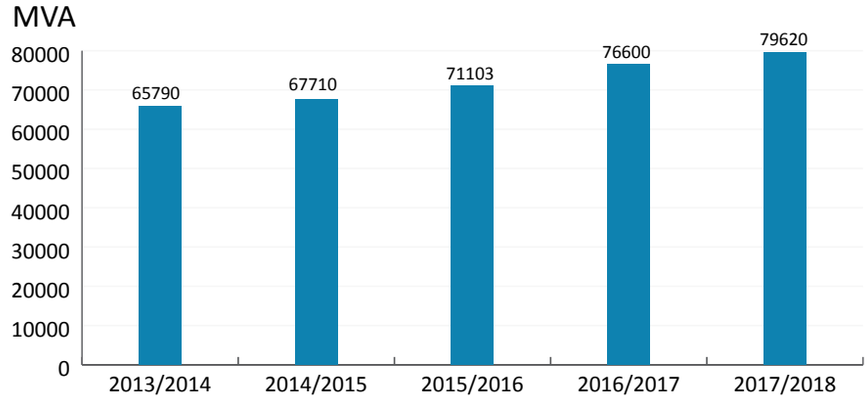
Purpose of Usage	Sold Energy (GWH)
Industry	20521
Agriculture	6144
Government & Public Utilities	14619
Residential	66809
Commercial	8372
Public lighting & traffic lights	4927
Others*	9756
Total	131148

*Others: power theft, youth centers, East Al Owaynat project …



Total Distribution Transformers' Capacities

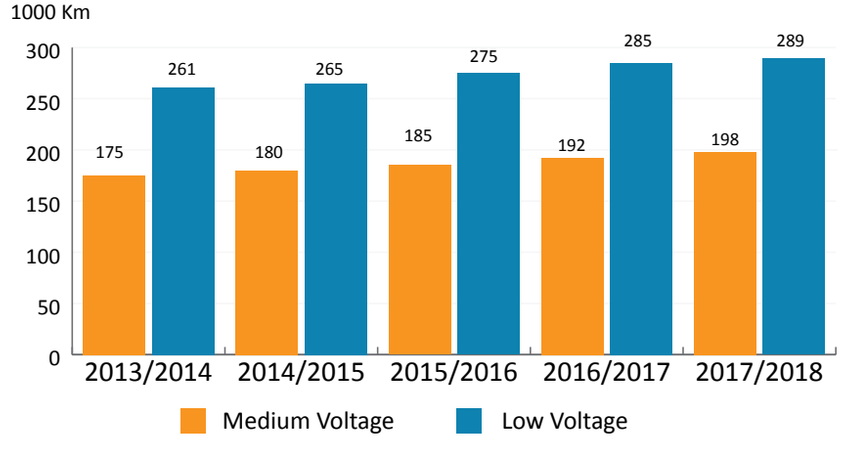
Description	2016/2017	2017/2018	Variation%
Total distribution transformers' capacities on medium & low voltages (MVA)	76600	79620	4



- The average growth rate of distribution transformers capacities is 4.9% per year during the period from 2013/ 2014 till 2017 /2018.

Total Lengths of Medium & low voltage lines and cables

Description	2016/2017	2017/2018	Variation%
Total lengths of medium voltage overhead lines & cables (1000 km)	192	198	3.2
Total lengths of low voltage lines & cables (1000 km)	285	289	1.3



- The average growth rate of total lengths of medium voltage overhead lines and cables is 3.1% per year, while the average growth rate of total lengths of low voltage overhead lines and cables amounted to 2.6% per year during the period from 2013/2014 till 2017/2018.

Improvement of Customer Services

Development of Customer Service Centers:

- Electricity distribution companies are continuously working on customer service centers development to improve the quality of services provided to customers and increase their efficiency.
- A number of 31 service centers have been developed during the year 2017/2018 to bring the total number of developed centers up to 424 service centers as at 30/6/2018 out of the targeted total of 447 centers.
- There are also subsidiary service centers in villages amounting to 725 centers responsible for faults and their quick repairs to facilitate matters for village customers.

Commercial Improvement:

- Automating all works performed at the service center using computers.
- Providing commercial services including contracting procedures with customers (such as new contracting - amending contracts - ground, subsidiary and temporary connections - moving a meter or box).

One-Stop System:

- This is an integrated electronic system for automating services provided in service centers of the electricity distribution companies so that a customer can benefit from (26) services through dealing with only one window at the branch providing the service, and that system aims to:
  - Improve and automate the services provided to citizens and standardize the necessary procedures for performing each service as well as the time needed for its completion.
  - Upgrade the efficiency of the role of customer service offices, reduce the use of paper transactions, pay due attention to investigate customer complaints and speed up the necessary procedures to solve them.
  - Ease of making reports and statistics of number of citizens benefiting from the services provided by the distribution companies.
- Automating the one-stop system services has been activated in 465 centers out of a total 472 centers at the level of the distribution companies, services activation at the rest of service centers is now about to be accomplished.

Linking the one-stop services to the complaints & faults receiving system on the unified number (121):

- The main customer service center on the unified number (121) has been supported by the one-Stop service to respond to citizens' queries and inquiring about the required papers for each service (power supply, installing or unplugging an electricity meter, etc..) and the cost of each service and the duration taken to perform each one.

Use of Insulated Conductors Instead of Non-insulated:

- Insulated wires are used instead of non-insulated ones on low voltage network for all new connections as well as replacement and renovation operations without any additional cost to customers to protect them from fire dangers due to the falling of non-insulated wires. The total lengths of the insulated wires reached about 621'000 km. till September 2018, representing 91.4% of the total low voltage network of the distribution companies.

Development of Slums:

- In accordance with the directives of the President of the Republic to eliminate slums, a cooperation protocol has been signed between the Informal Settlements Development Fund (ISDF) and the Ministry of Electricity & Renewable Energy on the development of unsafe areas located within the precinct of electricity lines.
- In June 2017 the first phase of the Project was enlisted in the Ministry of Electricity and Renewable Energy's plan for FY 2017/2018, funded by the public treasury and available investments of EGP 500 million.
- Until 30/6/2018, about 672 km has been executed, representing 63% of target, at a cost of EGP 668 million, representing 133% of the available funding.
- vIt is targeted to implement 100% of the project by the end of 2018/2019, at a cost of about EGP 1 billion.

Establishment and Development of Distribution Companies' Dispatches:

- EEHC is developing networks of the distribution companies to improve performance and upgrade the quality of electric supply through the establishment and development of 14 dispatch centres at the distribution companies using the latest technology in control, monitoring and communication systems for monitoring and controlling distributors, transformers and the medium voltage side of distribution stations in a safe and reliable manner.

The project is divided into two phases:

First Phase:

- Establishment of five dispatch centers to be implemented in 18-month period at three distribution companies (North and South Cairo and Alexandria).

Second Phase:

- Establishment of another nine dispatch centers to be implemented in 18-month period at the rest of distribution companies following completion of the First Phase.
- In May 2018, the consulting firms and companies qualified to implement the project were selected.
- In October 2018, EEHC signed contracts with the winning consulting firms.

Rationalization and Improvement of Energy Efficiency:

Street lighting:

- In April 2015, a contract was signed between the Ministry of Local Development, the Arab Organization for Industrialization, the Ministry of Finance and the Ministry of Electricity & Renewable Energy for the supply of 2.6 million high-pressure sodium streetlights and LED luminaires of 100-150 watts to be installed all over the country at a total cost of about EGP 2.1 billion to be paid by the Ministry of Finance.
- Up to October 2018, about 2.2 million luminaires were supplied and about 2.1 million were installed.

Residential lighting:

- A contract has been signed for the supply of 13 million LED lamps of different wattage to be distributed across the country. From March 2015 till October 2018, about 13 million lamps of different wattage were supplied and about 11.9 million were distributed to the distribution companies after conducting the necessary technical tests on the supplied quantities, and it is expected to complete the installation during the FY 2018/ 2019.

Governmental, Industrial and Commercial Sectors:

- About 1600 studies have been implemented for rationalizing energy consumption in government buildings and public utilities, and 146 studies have been carried out in the industrial and commercial sectors, with disseminating awareness in all governorates of the Republic.

Improvement of Energy Efficiency within Distribution Networks:

- In February 2016, a loan agreement was signed with Japan International Cooperation Agency (JICA) in the amount of J¥ 24.762 billion for financing the project of establishing an integrated smart network at three distribution companies to decrease loss in electric energy, reduce thermal emissions and the rate of carbon dioxide in air, and improve electric network performance efficiency, with a project implementation period of about 60 months.
- In June 2016, the consultancy contract was signed with TEPSCO, and the loan agreement came into force as of 10/ 1 /2017.
- In October 2018, the tender for (LOT-2) was announced in favour of North Cairo Electricity Distribution Company.
- The tenders for (LOT-1) for Alexandria Distribution Company and (Lot-3) for North Delta Distribution Company have already been finalized and will be announced after review and approval by JICA.

Smart Meters:

- In March 2016, a protocol of cooperation was signed between EEHC and the National Defense Council for supporting the security and development of information systems and the establishment of databases in the fields of smart meters and their applications in the interest of confidentiality of information and data at the distribution companies.
- In May 2017, a contract was signed for the supply, installation and maintenance of the advanced infrastructure measuring systems on turn-key basis for supplying and operating 250’000 smart meters as a pilot project in the geographical range of six distribution companies (namely North Cairo, South Cairo, Alexandria, Canal, South Delta and Middle Egypt).
- The POC stage has been completed where the total meters installed within range of the distribution companies mentioned above reached 2’000 smart meters, while the preparation for the PILOT stage has already initiated and the manufacturers started manufacturing the meters.
- Supply of the required equipment is ongoing to commence preparing data centers.

Pre-Paid Meters:

- The use of this type of meters has been expanded since 2011 and was generalized in 2014, with about 6.3 million meters installed up to 30/9/2018. Pre-paid meters aim at:
- Achieving financial liquidity for electricity companies resulting from prepayment of charging value.
- Avoiding problems with some consumers such as estimating the amount of consumption and the high value of some bills, as well as providing security to subscribers where no need for any person to enter their homes.

Pre-Paid Coded Meters:

In May 2016, the Ministerial Decree no. 254 of 2016 was issued in determination of the controls of implementing the Cabinet Resolution no. 886 of 2016 regarding the installation of temporary pre-paid coded meters at the premises and buildings which are illegally fed from the unified grid, to minimize power loss and limit the phenomenon of electrical current theft, with the following exceptions:

- Infringed units constructed on archaeological sites and units violating Law of the Protection of Electrical Installations no. 63 of 1974, as amended by Law no. 204 of 1991, or Law no. 87 of 2015 promulgating the Electricity Law.
- Units in violation of the height limits determined under the Civil Aviation Law.
- Till June 2018, the total number of applications reached about 2.5 million and the total number of paid estimates amounted to 2 million; while the total number of implemented orders is about 1.8 million, representing 89% of the total paid estimates.

A Unified Program for Management of Pre-Paid Meters:

On 19/6/2016, a contract was signed with the National Service Projects Organization (NSPO) of the Ministry of Defense for the implementation of a project for preparing a unified program for pre-paid meters' management. The objectives of the project are:

- Establishing a unified central system for charging the pre-paid meters,
- Handling all types of meters through a unified program.
- Obtaining standard reports at the level of all companies, or at the level of EEHC to help make decisions.
- Facilitating the card-charging service to citizens through electronic collection channels, or charge at any charging center within the range of a distribution company with the possibility of operating new branches and the addition of different charging channels.
- Actual operation of the program has already been launched at North Cairo and Upper Egypt Distribution Companies, while operation process is ongoing at the rest of distribution companies on a successive basis.

For more information please visit the website: http://www.eehc.gov.eg

Information about Distribution Companies

Distribution Company		Headquarter	Equity Capital (million EGP)	Investments percentage with EEHC	Address	Tel.
North Cairo	North & East Cairo Sectors, New Cairo, and El-Salam City in Cairo Governorate; El-Obour City, Khanka, Shoubra El-kheima. El-Qanater & Bahteem in Qalyoubeya Governorate; Heliopolis, Helmeya, Matareya, El-Marg & Shoubra	Cairo Governorate	306.685	1.51%	2 El-Nasr Road, Next to Nasr City I Police Station, Cairo	02 / 22725095 02 / 22724409
South Cairo	West, Middle & South Cairo Sectors in Cairo Governorate; and all districts of Giza Governorate	Cairo Governorate	437.444	2.15%	53, 26th July St., Cairo	02 / 25766612 02 / 25766400 02 / 25760382
Alexandria	From Abu-Qir westwards to K. 64 west of Alex/Matrouh Road	Alexandria Governorate	377.008	1.85%	9, Sedi El- Metwally St., Attareen, Alex.	03 / 3933223 03 / 4948107
Canal	Ismaileya, Port Said, Suez, Sharqeya, North Sinai, South Sinai & Red Sea Governorates & new cities within the Company's geo. zone	Daqahleya Governorate	497.338	2.45%	Osman Ahmed Osman Square, El-Sheikh Zayed, Ismaileya	064 / 3209600 064 / 32082240
North Delta	Daqahleya, Damietta Kafr El-Sheikh Governorates	Daqahleya Governorate	357.439	1.75%	Tanta- Kafr El Sheikh Road	050 / 2304186 050 / 2304187
South Delta	Qalyoubeya (Except Greater Cairo extension); Menoufeya (Except Sadat City and its affiliated villages & El- Khatatba Center) & Gharbeya Governorates	Gharbeya Governorate	357.439	1.75%	Tanta- Kafr El Sheikh Road	040 / 3455516 040 / 3455519
Beheira	Beheira & Matrouh Governorates and beyond K. 66 Alex/Matrouh Road; Sadat City and its affiliated villages & Khatatba Center in Menoufeya Governorate	Beheira Governorate	342.537	1.68%	Gomhoreya St. Damnhour, Beheira	045 / 3318030 045 / 3221426
Middle Egypt	Beni Suif, Fayoum, Menia, Assiut & New Valley Governorates	Menia Governorate	474.843	2.33%	78, Horreya St. Minia	086 / 2346733 086 / 2353527
Upper Egypt	Sohag, Qena, Aswan and Luxor Governorates	Aswan Governorate	435.766	2.14%	High Dam, West Aswan	097 / 3480416 097 / 3480317

HUMAN RESOURCES AND TRAINING

As part of its continuous pursuit to keep up with the latest changes and global trends aiming to achieve the utmost care of the human resources as a real pillar and foundation to realize its strategic objectives, EEHC exerted more effort to develop the potentials and skills of its human resources. The following are the most important indicators of human resources at EEHC and it's subsidiaries.

Man Power

The total number of employees in EEHC and its subsidiaries reached about 161'606 employee in 30/6/ 2018 compared to about 165'523 employee in 30/6/2017, with a decrease of 3'917 employee at a rate of (2.4%), In addition to 559 employee at Siemens power plants.

EEHC Total = 2657
Head Office = 1950
Electricity Hospital = 707

Production Companies Total = 32723	
Cairo = 5298	East Delta = 6811
Middle Delta = 6378	West Delta = 7698
Upper Egypt = 342	Hydro power plants = 3110

Egyptian Electricity Transmission Company
Total = 29183

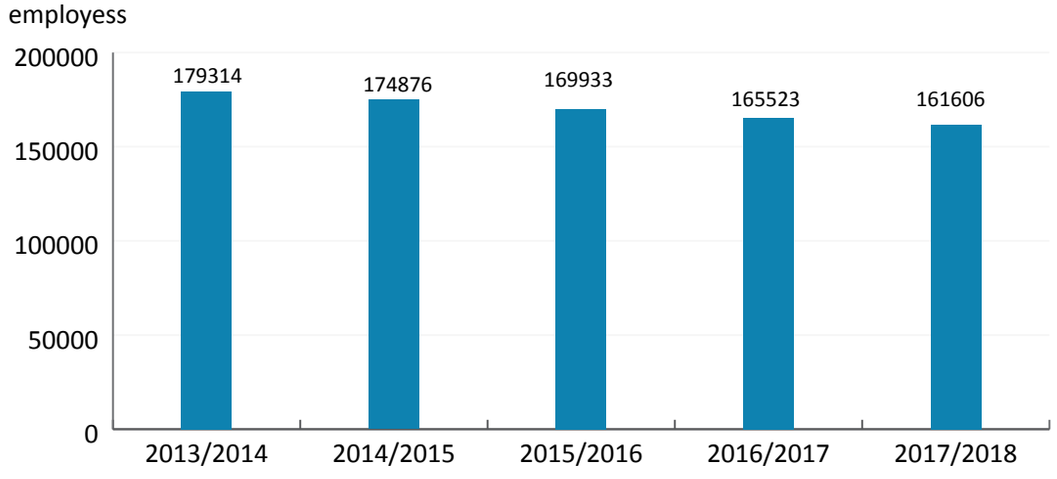
Distribution Companies Total = 97043		
North Cairo = 12157	South Cairo = 16723	Alexandria = 11644
Canal = 15013	North Delta = 8101	South Delta = 9201
El-Beheira = 7908	Middle Egypt = 8956	Upper Egypt = 7340

Total No. of employees at
EEHC and its Affiliated Companies

161606
Employee

In addition to 559 employee at Siemens power plants.

Total Number of emplyees



The average rate of decline in the total number of employees in EEHC and subsidiaries amounted to 2.6% per year during the period from 2013/2014 to 2017/2018

Development of Human Resources

Out of its belief of the significant change that can be made by the human resource being the most important element of the production process, the Company's management constantly strives to develop the capabilities of human resources and raise their capacity in dealing with the technological development and its innovations, especially with the issuance of the unified Electricity Law and encouraging the private sector to invest in energy projects to create a competitive environment. In consequence, it was a must to change our policy and strategy to be able to meet the challenges and hardships, and to that end the following have been made:

- Completing the implementation of the main axes of the human resources development strategy that focuses on building a culture based on performance quality, accountability and the creation of a more diverse work force.
- Finalizing an analytical study of the organizational structures of the distribution companies aiming to prevent duplication of job functions and achieve integration of sub-activities.
- Managing the file of African relations in the field of human resources through EEHC's membership in the Association of Power Utilities of Africa (APUA).
- Working constantly to study the complaints of the employees, the optimal utilization of human resources and capabilities available for the benefit of the Company and workers.

Health Care

Since the Board of Directors of EEHC firmly believes in the importance of human resources as one of the basic pillars and for the sake of achieving the Sector's mission, the performance of the medical service provided for workers in the Electricity Sector has been developed and improved through the renovation of Electricity Hospital where the following has been implemented:

- Developing the work system at outpatient clinics, inpatient sections, supporting sections and the intensive care.
- Providing the Hospital with state-of-the-art medical devices and introducing some types of surgery such as obesity surgery.
- A biosafety cabinet is being installed to prepare chemotherapy.
- Acquainting doctors and medical staff of the Medical Sector and Electricity Hospital with modern medical fields through training courses in Egyptian universities and attending medical conferences and seminars.

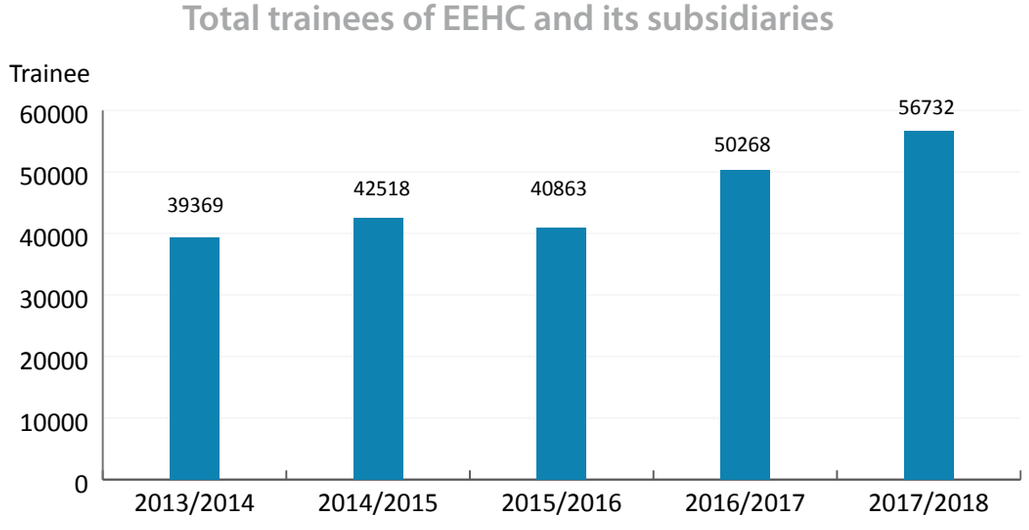
These efforts have had a tangible impact on improving business results and achieving a surplus amounting to EGP 44.6 million in FY 2017/2018 compared to about EGP 31.7 million in the previous year at a growth rate of about 41%.

Training & Capacity Building

- The strategic objective of training is to contribute to the success and sustainability of the Company through the development of a strategic plan to develop the training system, improve the skills and competitiveness of employees and enable them to improve the performance of their roles that contribute to the achievement of the objectives of the Company efficiently and effectively. Considering this, the Company has prepared training programs aimed at developing competencies through the following:

I- Training of employees:

- Technical, managerial and leadership training programs were implemented, in addition to adopting post-graduate programs in specialized fields for the employees of EEHC, its subsidiaries and the head office of the Ministry of Electricity and Renewable Energy at a growth rate of 12.9% compared to the previous year. This has been realized through the Leadership Development Center of EEHC, the training centers of affiliated companies and other outside centers, as shown below:



- The average growth rate of the total number of trainees at EEHC and its subsidiaries amounted to 9.6% per year during the period from 2013/2014 to 2017/ 2018.

II- Training of Others:

- In support of its social responsibility, EEHC conducted summer training for 4844 students of the Faculty of Engineering, Faculty of Commerce, higher institutes and higher industrial education at the affiliated companies.
- In consequence of accrediting Moqattam and Aswan training centers as "Centers of Excellence" by APUA, a cooperation protocol has been signed between EEHC and APUA for conducting manifold courses for trainees from the various African countries.
- In addition, expatriates in Egypt (from outside the Electricity Sector) also joined training courses where 276 persons were trained at EEHC and 2161 were trained at affiliated companies.

III- Training employees from Arab African Countries:

- In the framework of cooperation with the Arab and African countries in the field of training, a number of 221 trainees from different countries received training, as 167 Nile Basin Counitries, 3 Kingdom of Saudi Arabia and 51 Palestine.

Leadership Development Center of the Electricity Sector

To ensure early detection of elements qualified for leadership and preparation of a second generation, the Leadership Development Center (LDC) was established in 1995 to achieve the following mission: "Prepare a new generation of leaders who are capable through their knowledge, behaviors and experience to achieve the sector goals."
The achievements of the LDC during FY 2017/ 2018 are represented in the following: -

- Renewing the status of LDC being certified to ISO 9001/2015 in quest of excellence and preeminence in leadership and management training in Egypt and the Arab world.
- Conducting effective communication and marketing of the training courses organized by the Center through the establishment of an official website of LDC on the internet.
- Introducing a brochure and promotional films in English and French to facilitate communication with foreign visitors.
- Extending the activity of the Center to include 11 ministries and entities outside the Electricity Sector with a total number of 193 trainees in addition to 21 Palestinian trainees.
- Completing the leadership development program for batches 24 and 25 on an intensive basis for a period of 18 weeks, thus doubling the number of graduates each year while maintaining the quality and substance of the program content. The number of LDC graduates since the launch of the program has reached approximately 676 graduates.
- The total number of training courses implemented at the LDC during FY 2017/ 2018 reached 248 courses for 5650 trainees compared to 194 courses for 3600 trainees FY 2016/2017
- The Center's achievements were not limited to training and qualification of leading cadres, but also extended to keep abreast with the latest international quality systems and their application. The process of rehabilitating the Abu Qir Training Center of West Delta Electricity Production Company was successfully completed and the Center was certified to ISO 9001:2015 from the donor company. The training centers of Fayed in East Delta Electricity Production Co., Talkha in Middle Delta Electricity Production Co., Koriemat in Upper Egypt Electricity Production Co. and Upper Egypt Electricity Distribution Co. are being rehabilitated for ISO Certification.

Development of Regulations & Organization Structures of EEHC & Subsidiaries

Considering the desire of the electricity companies to keep up with all developments that occur on work system and policies of human resources, some existing regulations and procedures have been issued or modified to create a stimulating work environment, foremost among which are:

- Modifying some of the rules and regulations governing the work in respect of granting an encouragement raise and obtaining special leaves without pay, as well as the rules of combining periods of scientific and practical experience.
- Completing the modification of all financial regulations of the Company to keep pace with current business requirements and be standardized at the level of affiliated companies, and the necessary arrangements are ongoing for their approval and application.
- Utilizing Information technology in managing internal activities and services with the adoption of electronic management.
- Preparing a study for restructuring the medical sector at EEHC and affiliated companies through the establishment of an independent health care company in cooperation with RSM for Financial Consultancies.
- Approving and adopting the compliance policies and guidelines at EEHC and subsidiaries to enhance the reputation and credibility of the Company before all parties dealing with it and before the international financing institutions.
- The economic feasibility study has been finished for the establishment of an Egyptian joint stock company for training services to consolidate all training centers of the affiliated companies under one umbrella based on modern management principles to achieve optimum utilization of the potentials and capabilities of the training system.

Governance

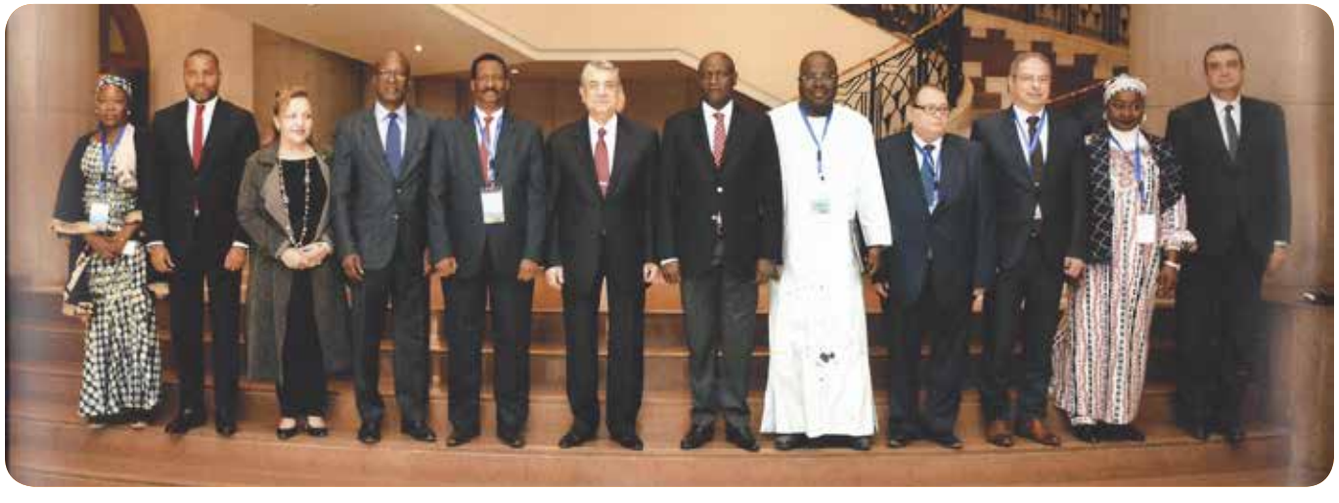
The Board of Directors and the Executive Management of EEHC are working together to implement the recommendations of the Improvement of Financial Management and Governance Project through the following:

- Taking the necessary actions for the issuance and approval of the Code of Governance developed by the consultant PWC.
- Activating the works of Audit Committees at the level of EEHC and subsidiaries to assist the respective boards of directors in applying the mechanisms of governance and carrying out its supervisory role.
- Hiring the consultant Ernst & Young to provide technical support to EEHC for preparing its consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) through a grant from the European Bank for Reconstruction and Development (EBRD).
- Introducing the General Department of Internal Audit at the level of EEHC and subsidiaries to provide the Management and the Audit Committee with their continuous assessments regarding the internal control system, risk management and governance procedures.

Compliance

Within the framework of activating the regulatory environment and adopting a proactive approach to comply with the legislations in force and reduce the risk of non-compliance, and to complete the adoption of the policy of compliance and reporting, the following have been made:

- In collaboration with the consultant PWC, the register of inherent risks of the various sectors and departments within the Holding Company is being finalized to ensure that a strategy is appropriately developed to deal with such risks and minimize their impacts.
- Disseminating a culture of transparency and reporting on illicit practices, which yielded its harvest through receiving manifold complaints from the employees of EEHC and subsidiaries where such complaints are verified and solved on prompt basis.
- A program and plan are being developed for the assessment of the extent of compliance with the laws, regulations and by-laws.



COMMERCIAL AND FINANCIAL ACTIVITY

Electricity Re - Pricing

- The internationally recognized pricing policies aims to achieve the following:
  - Prices realize financial and economic efficiency of the electricity utility.
  - Prices cover costs according to supply voltage.
  - Prices reflect the right indicator of electricity use, taking into consideration the social dimension (i.e. affordable price to consumer), transparency, simplicity and justice.
- According to the new Electricity Law, the Electricity Utility and Consumer Protection Regulatory Agency (EGYPTERA) has been mandated to review the prices adopted by the Council of Ministers for selling electricity for the 4th year of the Electricity Tariff Restructuring Plan (ETRP) (FY 2017/ 2018) and to develop a proposal for adjusting prices that achieves balance between the interest of the electricity companies and maintaining their continuity in providing the service entrusted to them, taking into account the low-income population and the gradation in electricity selling prices to different segments of consumers according to the amount of consumption.
- On July 6, 2017, the Minister of Electricity & Renewable Energy issued Decree No. 312 of 2017 in modification of the electricity selling tariff for the year 2017/2018 (4th year of the ETRP) as from 1/7/2017 to 30/6/2018.
- On June 4, 2018, the Decree of the Minister of Electricity & Renewable Energy No. 157 of 2018 was issued in modification of the electricity selling tariff for the year 2018/2019 (5th year of the ETRP) as from 1/7/2018 to 30/ 6/ 20 19.

The following table shows the electricity sales tariff and the specific customer service tariff for different uses during 2018/ 2019 *

Purpose of use	price of capacity(1) EGP/KW month	Average price of energy(2) Pt./KWh	Off-peak(3) Pt./KWh	On-peak(3) Pt./KWh	Customer service EGP/customer-month
Ultra-High Voltage(132-220 KV)					
Kima	-	60.00	-	-	35
Subway	-	85.00	-	-	
Rest of customers	30	96.4	89	133.5	
High Voltage(22-66 KV)					
Subway	-	90.00	-	-	35
Rest of customers	40	101.5	93.7	140.5	
Medium Voltage(11-22 KV)					
Irrigation	30	80	74	111	35
Water and Sanitation Co's	0	115	0.0	0.00	
Rest of customers	50	105	96.9	145.4	
Low Voltage(380V)					
Irrigation	-	50	-	-	4
Water and Sanitation Co's	-	110	-	-	-
Rest of customers	-	110	-	-	
Public lighting	-	110	-	-	

Household uses

Consumption brackets (KWh/ month)	Pt./KWh	Customer service EGP/ customer-month
0-50	22.0	1
51-100	30.0	2
0-200	36.0	6
201-350	70.0	11
351-650	90.0	15
651-1000	135.0	25
0 - more than 1000	145.0	40
Read by Zero	-	9

Commercial uses

Consumption brackets (KWh/ month)	Pt./KWh	Customer service EGP/ customer-month
0-100	55	5
0-250	100	15
0-600	115	20
601-1000	145	25
0-more than 1000	150	40
Read by Zero	-	9

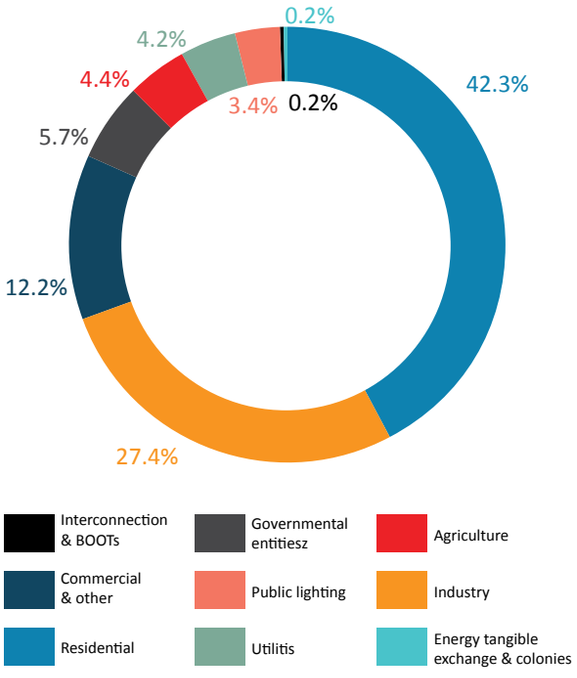
*** Prices are based on a 0.92 Power Factor.**

1. The demand charge is based on the maximum demand of a consumer recorded over 3-month period.
2. In case no meters are available, the applied tariff is the average energy price.
3. The ToU tariff is applied in accordance with the smart meter application program, and the peak hour duration is 4 hours starting at a time defined by the Ministry of Electricity & Renewable Energy.

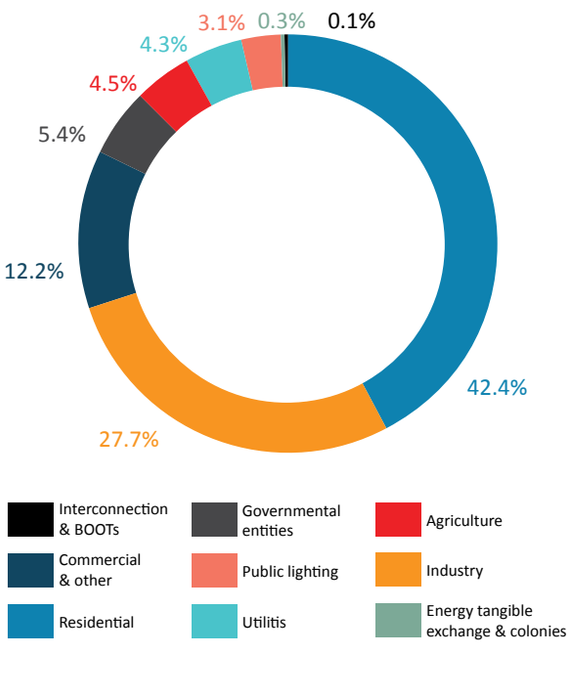
Total Sold Energy on All Voltages Classified According to Uses (GWh)

Type of Usage	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Industries	37320	38242	38310	41479	43623
Agriculture	6310	6555	6755	6743	7057
Utilities	5962	6338	6519	6395	6734
Public lighting	5692	5353	5293	5115	4927
Governmental Entities	8297	6062	6292	8630	8562
Residential	61962	64546	73361	64125	66809
Commercial and other	17392	18851	18788	18585	19179
Interconnection & BOOTs	417	699	510	268	228
Energy tangible exchange and colonies	232	260	472	266	491
Grand total	143584	146906	156300	151606	157610

2016 / 2017



2017 / 2018



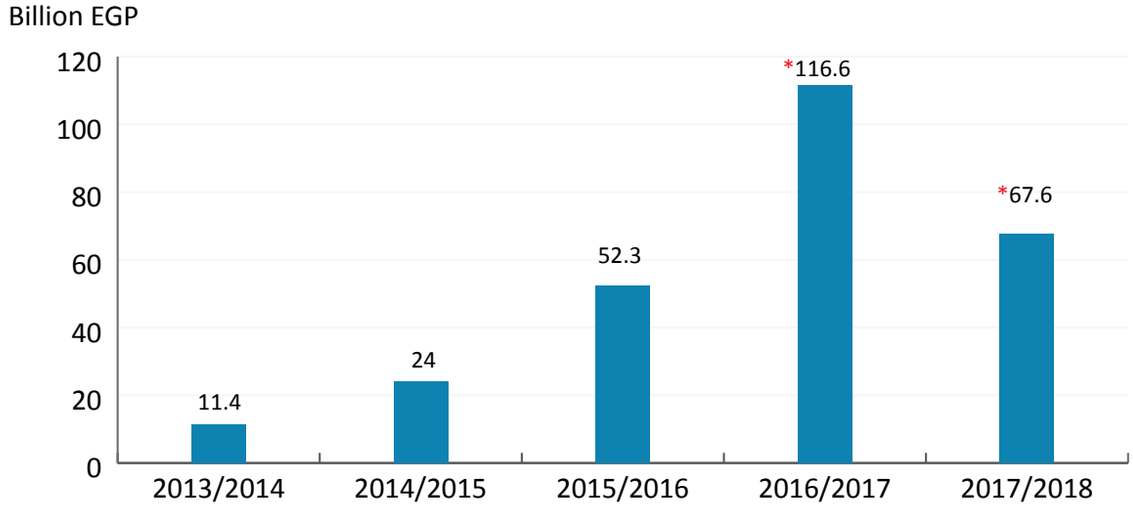
It is noticeable that the ratio of household consumption to industry and other purposes is relatively high due to the continued urban expansion under the current conditions in the country and the ongoing increase in the use of electrical appliances, especially air conditioners due to high temperatures during summer.

Financial Position of EEHC and its affiliated Companies

Billion EGP

Description	2016/2017	2017/2018	Variation %
Net Fixed Assets	237.1	289.8	22.2
Inventory	21.8	30.8	41.3
Cash and Banks	12.8	16.0	25.2
Net Working Capital	(87.4)	(76.3)	(12.7)
Equity	16.9	25.2	49.1
Total Revenues (excluding revenues from exchanged energy)	125.5	153.9	22.6
Total Cost and expenditures (excluding expenditures of exchanged energy)	128.1	153.6	19.9
Net Profit (Loss)	(2.5)	0.351	-
Investments *	116.6	67.8	(41.8)
Financing burdens (installments & Interests)	26.9	36.6	26.5
Balances of Loans	280.4	333.1	18.8

Executed Investments at EEHC & Affiliated Companies



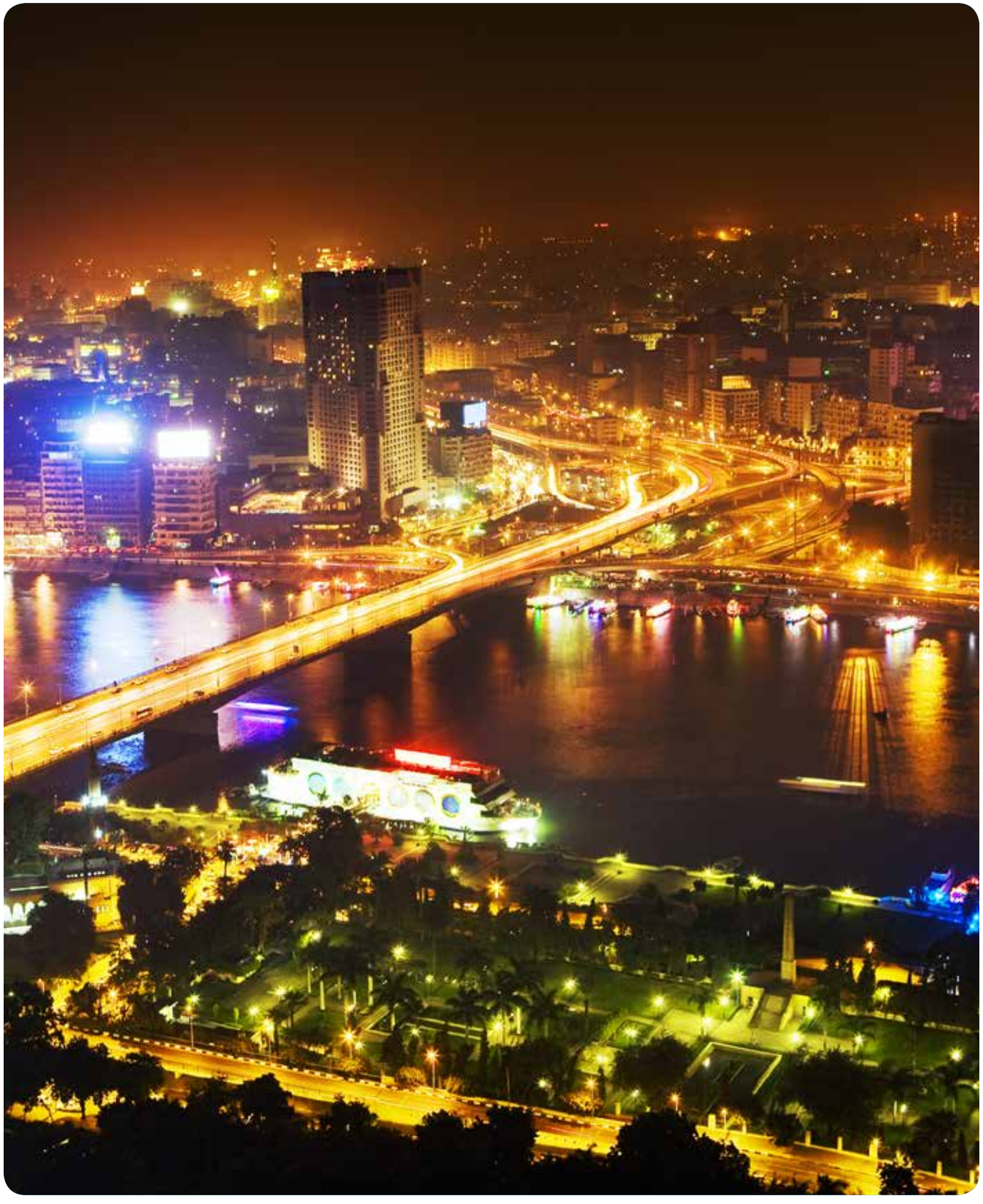
* The average progress rate of executed investments at EEHC and its affiliated companies is about 56% per year during the period from 2013/ 2014 till 2017 /2018.

* That includes part of the fast-track plan for summer 2015 and Siemens projects, and the increase in investments is due to the surge in material prices resulting from the economic decisions, foremost among which is the liberalization of foreign exchange rates.

Companies Having Capital Shares by EEHC

Description	Authorized capital	Percentage of capital participation
The Egyptian Company for Manufacturing Electricity Insulators	100 Million EGP	4.97%
Electric power System Engineering Company	5 Million EGP	20%
Egyptian German Electric Manufacturing Company (EGEMAC)	500 Million EGP	62.48%
Power Generation Engineering and Services Company (PGESCO)	10 Million EGP	20%
ARABIAN Consultancy Engineering Services Company (ACESCO)	3 Million USD	49%
Egyptian Syrian Company for studies and Engineering Consultations*	20 Million SYL	50%
African Company of Electrical and Mechanical Projects (Libya*	5 Million LYD	10%

* Companies stopped for the current events.



Consolidated BALANCE SHEET
of E.E.H.C and Affiliated Companies
30/06/2018

(Amounts in 1000 LE)

ITEM	Cost	Cumulative Depreciation	Net Value
ASSETS			
Non-Current Assets			
FIXED ASSETS	368750086	78996753	289753313
projects in progress	118388594		118388594
Long-term investments	45594		45594
Long-term loans & debit balances	33731140		33731140
Other Assets	12063		12063
Total Non-Current Assets	**520927457**	**78996753**	**441930704**
CURRENT ASSETS			
Retained assets for sale	112065	2852	109213
Inventory	30821418		30821418
Clients, notes receivable & debit accounts	138130960		138130960
Cash In Hand &Cash At Banks	16043583		16043583
Total Current Assets	**185108026**	**2852**	**185105174**
Total Assets	**706035483**	**78999605**	**627035878**
Equity			
Capital	26302293		26302293
Reserves			
Legal Reserve	2351641		2351641
Capital Reserve	672946		672946
Other Reserves	1821341		1821341
Revaluation Surplus	46035		46035
Carried Profit (Loss)	-6043113		-6043113
Total Equity	**25151143**	**0**	**25151143**
NON-CURRENT LIABILITIES			
Long-Term Loans From Banks	291644708		291644708
Long-Term Loans From Other Entities	41417708		41417708
Other Long Term Liabilities	7449832		7449832
Total Non-Current Liabilities	**340512248**	**0**	**340512248**
Current Liabilities			
provisions	6354059		6354059
Credit Banks	1347712		1347712
Suppliers , Notes Payable & Credit Accounts	253670716		253670716
TOTAL CURRENT LIABILITIES	**261372487**	**0**	**261372487**
TOTAL EQUITY & LIABILITIES	**627035878**	**0**	**627035878**

Chairman

Eng. Gaber Dessouki Moustafa

Board Mermber
Financial , Commercial & Financing Affairs

ACC. Nadia Abdel-Aziz Katry

Consolidated Income Statement
of E.E.H.C. and Affiliated Companies
for the Period from 1.7.2017 to 30.6.2018

(Amounts in 1000 LE)

Item	1.7.2017 to 30.6.2018	
Revenues of Current Activity:		
Net Sales of Finished Products (Other than Electricity Sales)	132295	
Net Sales of Finished Products (Energy)	31424	
Net Sales of purchased goods (Energy)	97957550	
Net Sales of purchased goods (Lamps)	25978	
Rendered Services(customer service)	3344045	
Rendered Services(Other)	3899360	
Revenues of Operation for Others	1548413	
Other Revenues of Current Activity	1325842	
Total Revenues of Current Activity		108264907
Less:		
Cost of Production or Purchasing Sold Units	-125039343	
Plus:		
Grants and Subsidies	40175629	
Grants and Subsidies(Assets gift)	5020	
Gross Profit (Loss)		23406213
Plus:		
Investment Revenues:		
Revenues of Other Financial Investments	17598	
Other Revenues & Profits:		
Provisions No Longer Required	166023	
Electricity Hospital Revenues	333355	
Miscellaneous Revenues & Profits	3316190	
Less:		
Adminstrative Expenses:		
Salaries, Attendance & Transport Allowances for Board Members	-16088	
Other Administrative Expenses	-5396515	
Costs of marketing	-3770963	
Burdens and Losses:		
Provisions (other than Depreciation and Fall of Inventory Prices)	-1750939	
Bad Debts	-47	
Miscellaneous Burdens and Losses	-1559559	
Financing Expenses	-13509935	
Plus:		
Credit Interests	1116815	
Net Profit (Loss) from continous operations		2352148
Plus (or Less) result from non continous operations:		
Profits (Losses) of Foreign Exchange Differences	-2062894	
Revenues (Expenses) of Previous years	0	
Capital Profits (Losses)	-127344	
Extraordinary Revenues and Profits (Losses)	203493	
		-1986545
Net Profit (Loss) Before Income Taxes		365603
Income Taxes		14117
Net Profit (Loss)		351486

Chairman

Eng. Gaber Dessouki Moustafa

Board Member
Financial , Commercial & Financing Affairs

N. Katry

ACC. Nadia Abdel-Aziz Katry