

# Arab Republic Of Egypt



**Ministry of Electricity & Renewable Energy  
(MOERE)**

# Energy Policy (B)

Presentation  
of

# *Country Report*



**July 2017**

# Prepared by

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# EGYPT



**The Gift of the Nile**

# Egypt Location :

**Egypt is in Africa**

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**Map of North Africa**

## Country profile

Item	Statement
Total area	About One Mill km <sup>2</sup>
Population	93million (Populated area 7.8%)
Capital	Cairo
Number of Governorates	27
Unemployment Rate	12%
Religion	90% Muslim; 10% Christian; And a few Jewish families
Adult literacy	66.8% (for over 15-year-olds)
Life Expectancy	72 years

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# Economic Indicators

## - GDP:

330.78 billion US\$ in 2015 (Current US\$) – “WB Statistics”

## -GDP per Capita:

nearly 3595 US\$

## -Inflation rate:

14.5% in 2016 “Estimates of CAPMAS”

## -Fiscal Year:

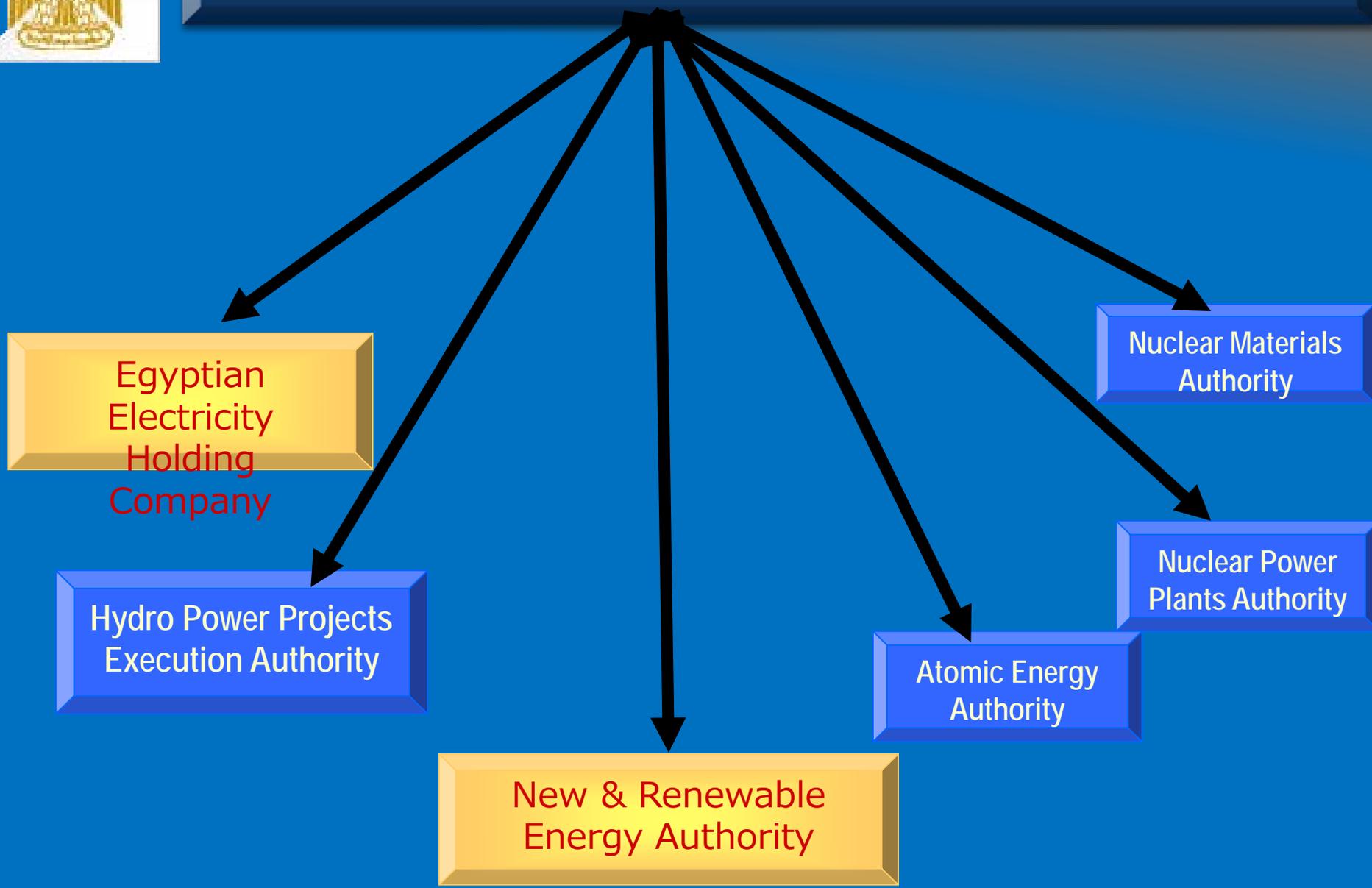
From 1 July to 30 June (for Governmental institutions) & From 1 Jan to 31 Dec ( for privet sector company's)

## -No. of households:

about 22.3 million

\* CAPMAS: Central Agency for Public Mobilization and Statistics

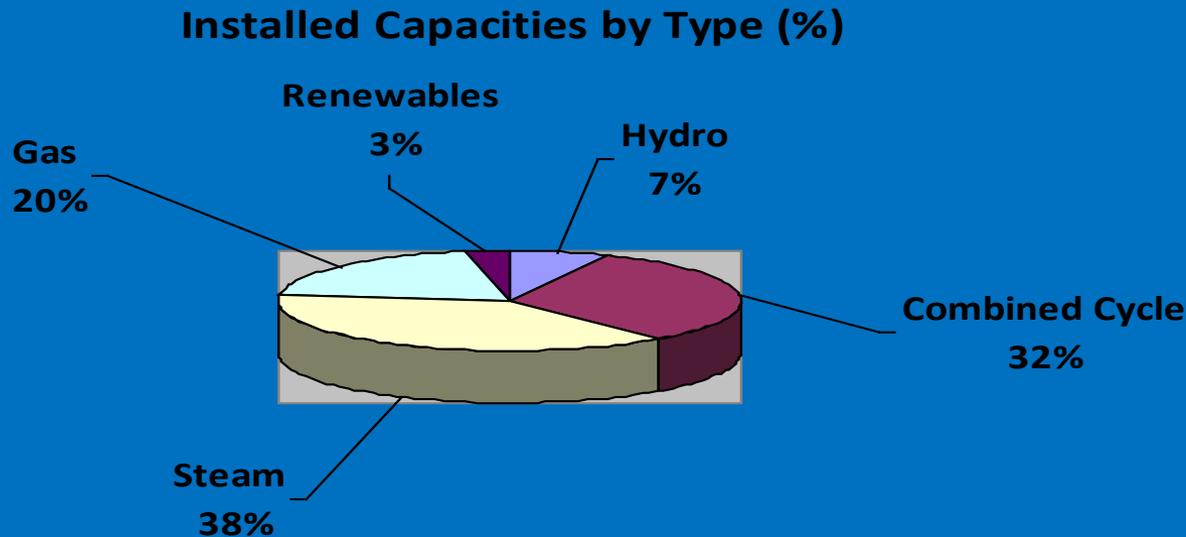
# ORGANIZATION CHART OF MINISTRY OF ELECTRICITY & RENEWABLE ENERGY



# Current profile of the electricity Sector

➔ The total installed capacity reached 38,857 GW in 2015/2016 compared to 35,220 GW in 2014/2015 with a percentage rate of increase about 10.3 %, Secured supply to 99% of the population.

➔ The installed capacities in 30/6/2016 are distributed by type as follows:

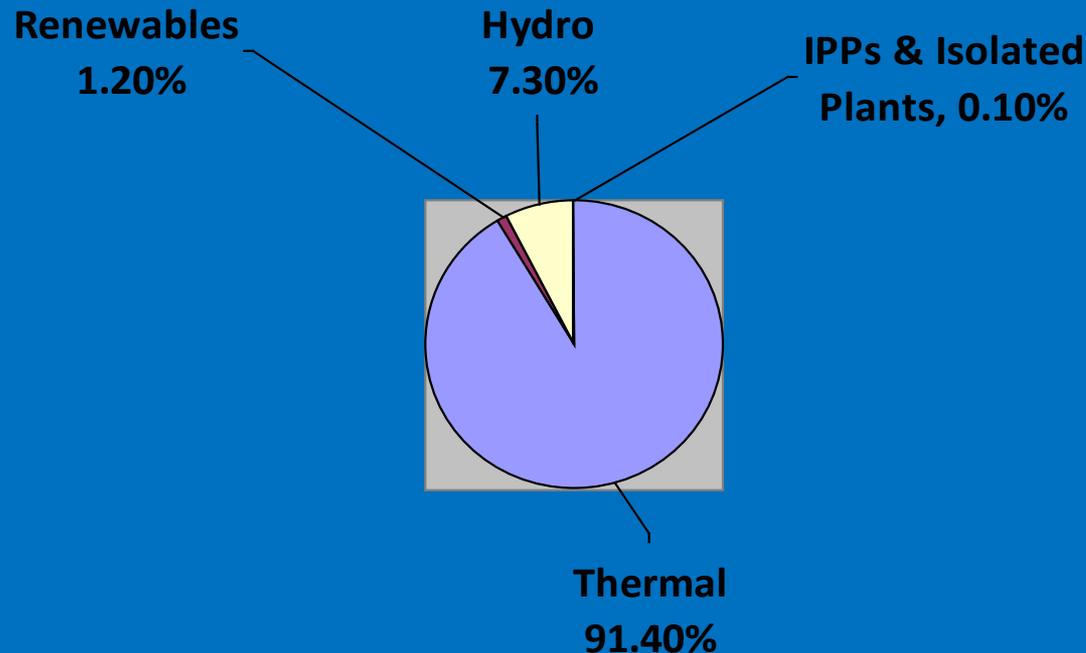


# Current profile of the electricity Sector (Cont.)



The generated energy in year 2015/2016 (186320 GWH) is distributed by type and technology as follows:

Generated energy by Type and Technology (%)



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# SUMMER 2014



# Summer 2015



# Electrical Energy Reserves

Power reserve reached 5000 MW &  
Maximum load reaches about 25,300 GW  
at April 2017 “National Control Unit”.

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## Current energy policy and measures

- The strategic vision of the electricity and renewable energy sector aims to develop the energy system which must be characterized by institutional efficiency and technological progress, be able to provide energy at competitive prices and environmental sustainability to improve the standard of living of the Egyptian people, leading to the provision of energy requirements and increasing the contribution of energy to economic growth.

# Current energy policy and measures (Cont.)

- The overall policies of this strategy are:
  1. Energy efficiency Improvement
  2. Diversify sources of energy supply (Natural gas, nuclear power, coal & Renewable Energy resources,.....).
  3. Energy infrastructure development, transmission network, smart grid, Land, market.
  4. Encourage private sector participation in power supply

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## a. Energy demand by sector

Year	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Industry	37045	37273	38916	40702	42098	39887	37320	38242	38310
Agriculture	4209	4617	4834	4927	5560	6230	6310	6555	6755
Public Utilities	4380	4714	5555	5759	6010	5904	5962	6338	6519
Public lighting	6759	6982	7050	6186	6537	6210	5692	5353	5293
Governmental entities	5691	5563	5443	5977	6385	7664	8297	6062	6292
Residential	40271	43811	47431	51370	56664	59757	61962	64546	73361
Commercial Shops & Others	8240	8754	9674	10238	10715	14605	17392	18851	18788
Total	106595	111714	118903	125159	133969	140257	142935	145947	155318

The Average for Industry sector 28% & for Houses 42%

## b. Demand and supply by energy

Year	Demand GWh	Supply GWh
2005/2006	92085	108690
2006/2007	98443	115407
2007/2008	106595	125129
2008/2009	111714	131040
2009/2010	118903	139000
2010/2011	125159	145224
2011/2012	133969	156413
2012/2013	140252	162785
2013/2014	142935	168050
2014/2015	145946	174875
2015/2016	155318	186343

The Average for Demand increase= 5% & for Supply = 6%

## c. Electrical Energy Prices

Purpose of usage	Demand Charge (2) Pound/ KW/m	Energy Average (3) Price Piaster/ KWh	Off Peak (4) Piaster/ KWh	On Peak (4) Piaster/ KWh	customer service Charge Pound/cust/m
<b>Extra High Voltage (220,132) KV</b>					
Kima	-	-	4.7		25
under ground metro	-	-	18		
Intensive industries (1)	15	39.6	36.6	54.8	
Other Consumers	15	26.9	24.8	37.2	
<b>High Voltage (66,33) KV</b>					
under ground metro	-	-	20.5		25
Heavy industries (1)	26	41.4	37.9	56.9	
Other Consumers	26	29.1	26.9	40.3	
<b>Medium Voltage(22,11) KV</b>					
all Consumers	30	43.5	40.2	60.2	25
<b>Low Voltage(380 V )</b>					
Irrigation	-	-	22		3
Other Consumers	-	-	46		7
Public Lighting	-	-	58		

1. Heavy duty industries: iron-cement- fertilizers- aluminum-petrochemicals in addition to somid company.
2. The demand charge is applied based on the maximum demand recorded over the year.
3. In case there are no smart meters, the applied tariff is the average energy price.
4. The ToU tariff is applied in case smart meters are installed and the peak hours duration is 4 hours to be defined by the Ministry of Electricity and Renewable Energy.

# Electrical Energy Prices (cont.)

## Residential Purposes

Sliced consumption (KWh/m)	Piaster/KWh	customer service Charge Pound/cust/m
0-50	7.5	1
51-100	14.5	1.5
101-200	16	3
201-350	30.5	6
351-650	40.5	8
651-1000	71	20
More than 1000	84	20
Zero Read	-	6

## Commercial Purposes

Sliced consumption (KWh/m)	Piaster/KWh	customer service Charge Pound/cust/m
0-100	32	3
0-250	50	10
251-600	61	10
601-1000	81	20
More than 1000	86	20
Zero Read	-	6

## Energy Prices ( More than 1000KWh ):

Year	Price/KWh ( EGP Cent )	%
2001/2002	25	---
2002/2003	26	4%
2003/2004	25	-4%
2004/2005	25	0%
2005/2006	21	-16%
2006/2007	21	0%
2007/2008	38	81%
2008/2009	48	26%
2009/2010	48	0%
2010/2011	48	0%
2011/2012	57	19%
2012/2013	67	18%
2013/2014	70	4%
2014/2015	74	6%
2015/2016	78	5%

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## 5. Outlook of energy demand and supply (2050)

Year	Demand – GWh	Supply – GWh
2016/2017	199995	214978
2017/2018	214535	230456
2018/2019	230131	247049
2019/2020	246862	264837
2020/2021	264809	283905
2021/2022	284061	304346
2022/2023	3044712	326259
2023/2024	326864	349749
2024/2025	350627	374931
2025/2026	376118	401926
2026/2027	403462	430865
2027/2028	432793	461887
2028/2029	464257	495143
2029/2030	498009	530794
2030/2031	534214	569011
2031/2032	573052	609980
2032/2033	614712	653898
2033/2034	659402	700979
2034/2035	707341	751449
2035/2036	758764	805554
2036/2037	813926	863553
2037/2038	873099	925729
2038/2039	926573	991382
2039/2040	100466	1093833
2040/2041	107770	1140429
2041/2042	115605	1222540
2042/2043	124009	1310563
2043/2044	133024	1404928
2044/2045	142695	1506078
2045/2046	153069	1614516
2046/2047	164198	1730761
2047/2048	176135	1855376
2048/2049	188940	1988963
2049/2050	202676	2132168

## 5. Outlook of energy demand and supply (2050) (Cont.)

The Average for Demand & Supply  
increase= 7%

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## 6. Energy-related investment for domestic and overseas:

Total direct target investments to the electricity sector and renewable energy plan 2016/2017:

Sector	Amount - MILL EGP
Government agency	958.7
Economic Entities	6859.5
Public companies	55511.1
Private sector	35
<b>Total</b>	<b>63364.3</b>

## 6. Energy-related investment for domestic and overseas:

Government and economic entities target investments at the electricity and renewable energy sector 2016/2017 according to sources of funding:

Type	Amount	%
Foreign Loans	1948.9	24.93%
Reserves and provisions - local	972.7	12.44%
National Investment Bank - Local	198.3	2.54%
State Treasury – Local	690	8.83%
Local Loans	271.5	3.47%
Other sources	3736.8	47.80%
<b>Total</b>	<b>7818.2</b>	<b>100.00%</b>

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## 7. Major difficulties and bottlenecks currently faced in formulating energy policies:

- Non-standardization of data published by working entities in the energy sector.
- Lack of historical data sufficient to analyze the situation and understand the problems and predict what will happen in the future.
- Increase the interest rates, especially for domestic loans, raises the investment cost of the projects.
- Lack of local manufacturing, which increases the percentage of foreign loans.
- Non-participation of the private sector as planned
- Lack of open market mechanisms for selling energy.
- Weak infrastructure, Leads to increase the financial cost of the plan.
- Lack of required coordination between the parties which working in the field of energy strategy implementation & follow up process.
- Lack of plan follow up mechanism and develop solutions to avoid expected problems.

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- Plan follows up mechanisms, Scenarios to avoid future problems.
- Process to encourage private sector to participate in the implementation of the planned projects.
- Finance average cost for energy projects in Japan & other world country.
- Is it better to have one Entity for all energy projects (gas, carbon, nuclear... and renewable energy)?
- Learn about Japanese success experience.

# *Thank You*

