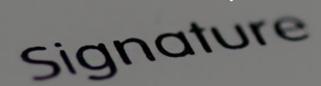
Overview of Egypt ERA Role in Supporting private sector Engagement

Salma Osman

Head of Central Department for Technical Affairs and Licensing



Why?

Why Regulator?
Why Regulation?



Why?
Because:

Protect Consumers

Quality and Price

Attract Investment

Competition



Egypt (Egypt ERA Objective)

Organize, follow up, monitor and develop all the electricity activities, including electricity production, transmission, distribution and/or consumption.

Ensure availability, efficiency and quality of electricity and that electricity needs in the various uses thereof are all met at suitable prices.

Peserve environment, <u>attract investments within a framework of free, legitimate competition</u> and without prejudice to the interest of the consumers and the other Electricity Utility Stakeholders.

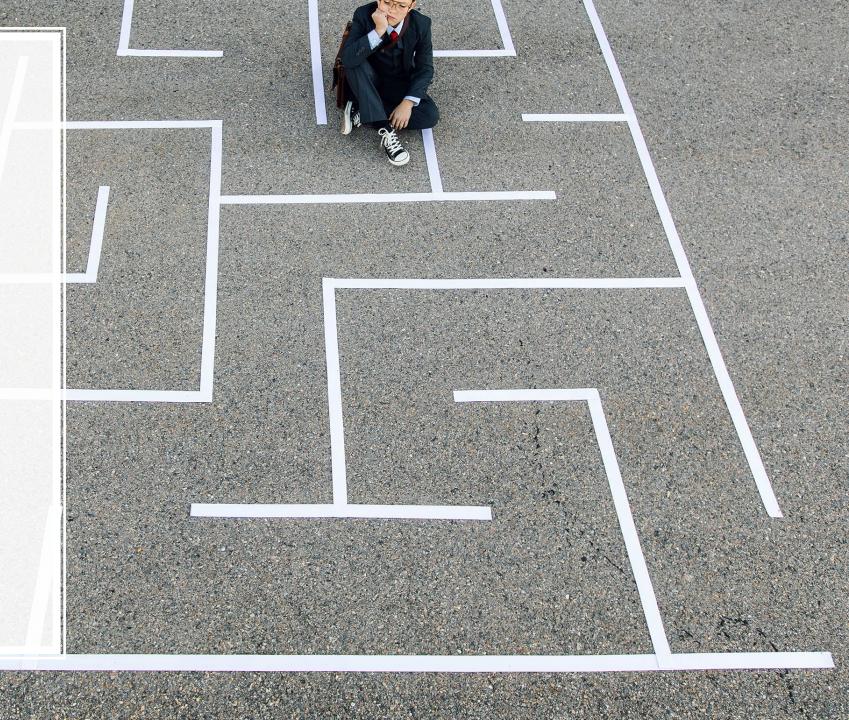
Plans to provide information without favoritism and act within a framework of equality and free competition.

How?

Legislations

Do you have a law for Regulatory establishment? Primary or secondary

Do you have the basis for Establishment?



Egypt ERA Governing Laws

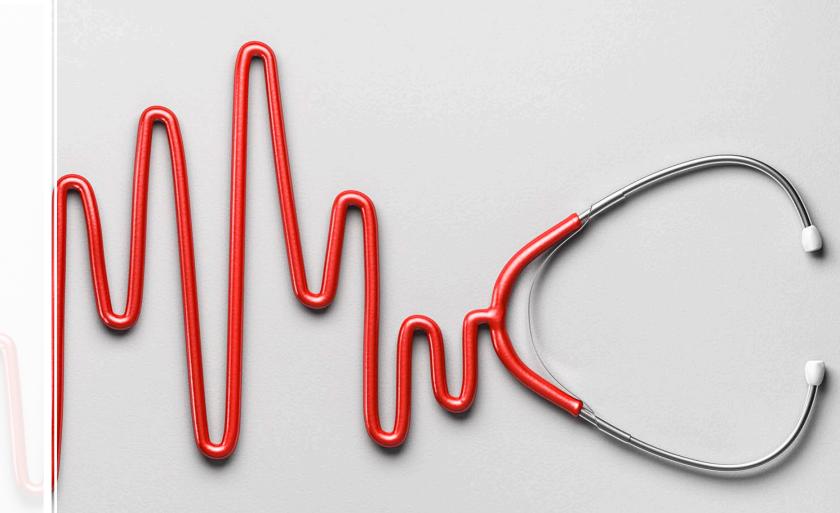
- ✓ Presidential Decree 339 yr. 2000
- ✓ Electricity Law 87 and its secondary Legislation
- ✓ Renewable Energy Law



Regulatory Character

What a Regulator should have ?

The right Practices



Needs

- ✓ Independence
- ✓ Competencies
- ✓ Internal organization
- ✓ Procedures for core regulation
- ✓ Accountability
- ✓ International activities
- ✓ Enforcement



Independence

- ✓ Legal (separate, Hierarchal)
- ✓ Financial (budget resources, who approves)
- ✓ Functional (regulatory Decisions, appealing system)
- ✓ Recruitment (who appoints , Who remove, requirements)
- ✓ Ethical (conflict of Interest)



Egypt ERA
competencies
Accountability
And
Enforcement





Law Stated ERA Activities

- 1. Set plans, programs, rules and means of management conforming to the Agency activities.
- 2. Set general principles and rules governing the Electricity Utility Stakeholders, securing their interest and the interest of consumers and enhancing free competition.
- 3. Set proper economic rules and principles to calculate the electricity sale tariff for Unqualified Subscribers, the electricity exchange prices in the Organizing Market and the consideration for utilizing the Transmission and Distribution Networks within a framework of justice and transparency, and to further have these rules and principles approved by the Cabinet and notified through the Agency.

ERA Activities

- 4. Set rules and procedures ensuring due protection of the Consumer rights.
- 5. Confirm that electric power is securely supplied to Consumers, through careful review- in coordination with the authorities of concern- of the investment plans that apply to the electricity production, transmission and distribution.
- 6. Set technical quality principles and other standard measures on the performance of the various electricity services.
- 7. Monitor the scope of availability of the technical, financial, economic and administrative efficiencies that are required by the Electricity Utility Stakeholders, with the aim of achieving sustainability and quality of services.

ERA Activities

- 8. Set an electricity sale tariff for Unqualified Subscribers, covering the various voltages and all uses, fix electricity exchange prices in the Organizing Market and approve consideration for using the transmission and distribution networks, provided that such activities shall be undertaken within a framework of equality, justice and according to the previously declared economic rules and principles as referred to in Clause (3) herein.
- 9. Approve any changes in equity or in the controlling interest of the assets of licensees, and approve any liquidation procedures.

ERA Activities

- 10. Impose any of the penalties set forth in Article (23) of the present Law, in case of violating the legitimate, free competition rules or the transparency and equal opportunity principles.
- 11. Set the rules and procedures required to develop and encourage the production and use of the electricity derived from renewable sources, and raise the electricity use efficiency.
- 12. Issue Electricity Source Certificates to the renewable source electricity producers, in accordance with the rules and procedures set by the Agency Board of Directors.

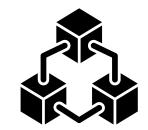
- 13. Set systems and rules duly planned to receive, register, study and investigate into any complaints raised by the Consumers, issue decisions to this effect and follow up the implementation of these decisions.
- 14. Review and adjudicate on any dispute that may arise between the Electricity Utility Stakeholders in connection with the Electricity Utility's workflow and level of regularity.
- 15. Provide information, reports and recommendations that assist the Electricity Utility Stakeholders and Subscribers in learning their rights and obligations.
- 16. Give permissions and licenses for the establishment, management, operation and maintenance of electric power production, distribution and sale projects.

Egypt ERA



Financial (License Fees, Grants, Approval by Parliament)

Functional (Board of Directors 13 members, appealing system)



Recruitment (BOD and CEO by Prime minister, Staff HR committee)

Ethical (conflict of Interest Law)

Competencies



Information Access (financial and Technical Info)

Security Of Supply (a say on the technical standards, monitoring quality of supply)

Market Opening

timetable for market opening, third party access,

incentive-based regulation,

issue secondary legislation for tariff, transmission and distribution network tariffs,

connection fees, Tariff design,

Licensing, penalties

Electricity Supply Chain



Generator

Produce electricity from sources including coal,gas, solar, water, wind, biomass and geo-thermal.

Transmission Lines

Carry electricity long distances.
Many large energy users like,
mines, take their electricity supply
at this point by purchasing
wholesale electricity directly from
generators to ensure price
certainty.

Electricity Retailers

Purchase wholesale energy from generators and on-sell to homes, offices and businesses.

Energy Users

Homes, offices and factories use electricity for lighting and heating and to power appliances.





Generator Transformer

Converts low voltage electricity to high voltage for efficient transport.

Distribution Transformer

Converts high voltage electricity to low voltage for distribution.

Distribution

Carry low voltage electricity to consumers.



Some homes have solar panels. Excess electricity generated is transferred back into the grid or into their own battery storge system.



Licenses Activities

Generation

(Conventional & R.E)

- Public Companies
- Private Companies

Distribution

- Public Companies
- Private Companies

Licenses and Permits



Duration of license

Type of Service (Generation-Distribution)

License:

The official document issued by the Agency to a corporate person allowing it to practice an Electricity Activity in accordance with the Electricity Law

Permit

The official document issued by the Agency to a corporate person allowing it to start the establishment or carry out an extension of an Electricity Activity in accordance with the Electricity Law.

The Geographical Area of The Scope of the License

The Tariff approved by the Agency for the license applicant



Permits and Licenses 1- Type of Service

The Agency shall issue the permits and the licenses for the <u>Generation</u> energy or <u>Distribution energy</u> in accordance with the provisions of the general conditions and elec. law.

Permits and Licenses 2- Duration

Permits

The Agency shall issue the generation permits for 1 year and can renew it to other years with max duration 4 years.

The Agency shall issue the distribution permits for 1 year and can renew it to anther year with max duration 2 years.

Licenses

- The Agency shall issue the generation license and distribution license for 5 year with renewal this license every year.
- Except for Renewable energy projects license

Permits and Licenses

3-The Geographic Area of The Scope



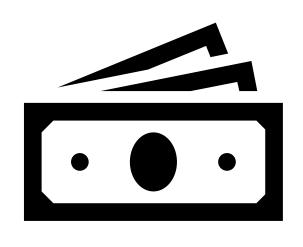
License

The Agency issues one generation license or one distribution license even there is more than one site where generation and distribution is to take place

• Permit

The Agency issues the permit for each project separately.

Permits and Licenses 4- The Tariff



- (Distribution Activity) The Tariff approved by the Agency for the license applicants
- EVs Tariff
- (Generation Activity) Tariff negotiable between the investor and the client, in some schemes, tariff set by the agency. (feed in Tariff, net metering)



Permit documents

Permit Application.

General Conditions of

Permits. (certificate)

Procedures of Permits.

License documents

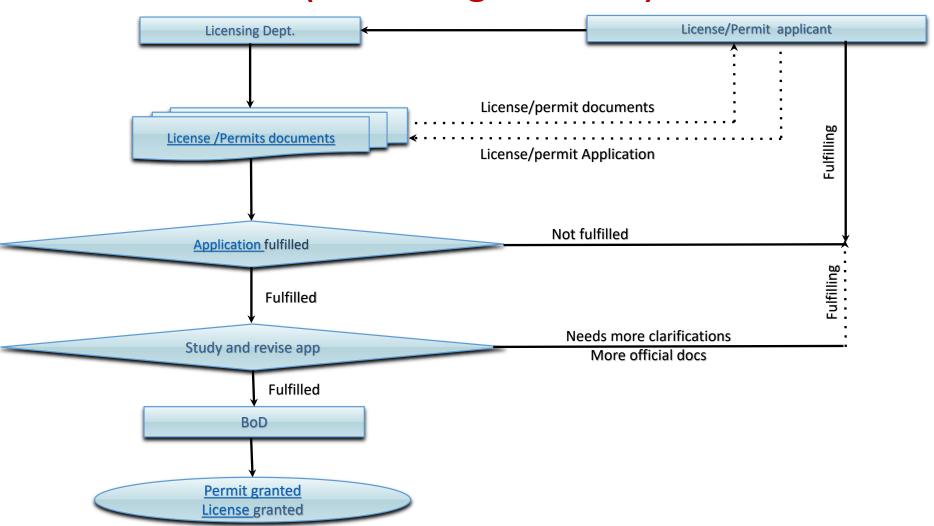
License Application.

General Conditions of

Licenses.(certificate)

Procedures of License.

Permits and Licenses (Licensing Process)



Egypt ERA Competencies (connection Regulations)

Connection guidelines (MV, LV)

Commercial Regulations
(MV, LV)

Egypt ERA Competencies (Tariff Regulations)

Cost of Service (methodology)

Transmission fees
(methodology)

Tariff Reform Program

EVs Tariff

FIT

Egypt ERA Market Regulations)

Market Phases (six phases)

Market Rules

Eligibility

Settlement Criteria

Agreements

(connection, Network access Contract)

Quality of Supply (codes)

Grid Code

Distribution Code

PV code

Quality of Supply Monitoring

Generation
Technical
Benchmarking

Distribution
Technical
Benchmarking

Generation
Financial
Benchmarking

Distribution
Financial
Benchmarking

Site visits

Dispute Resolution

Dispute Resolution Committee

Complaints committee

Consumer Protection
Department

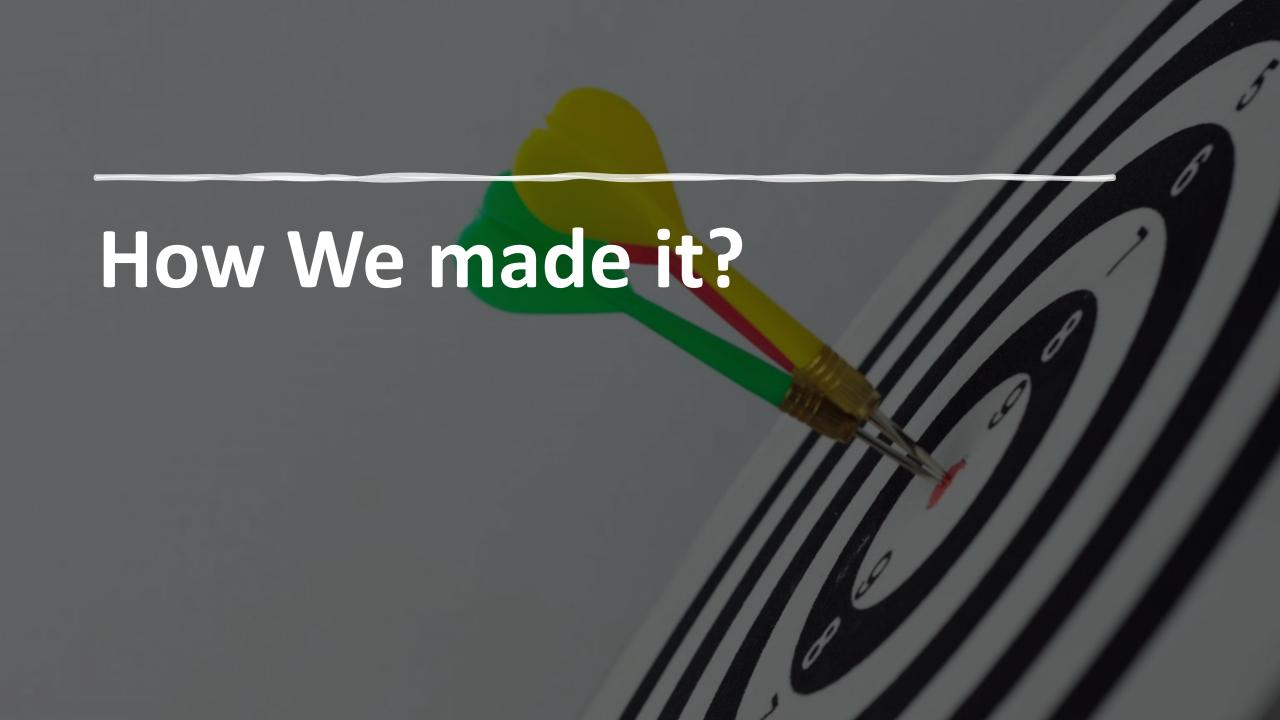
Appealing Mechanism

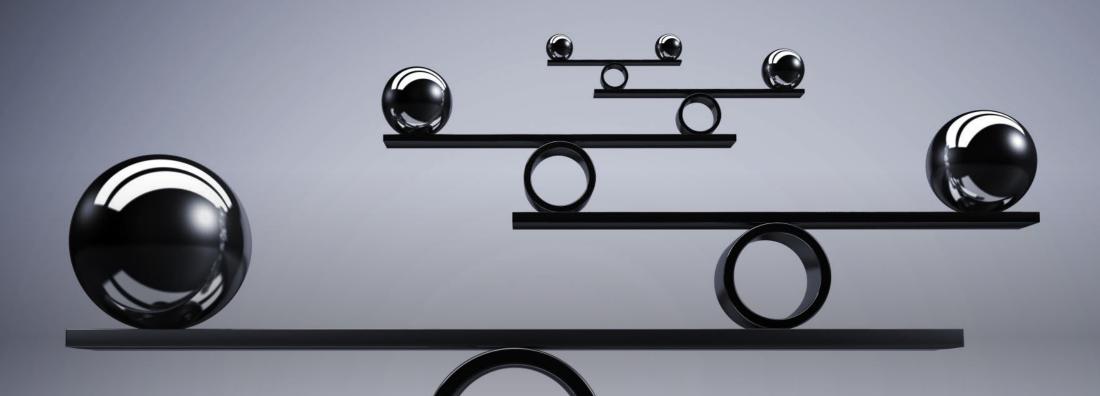
Penalties

Fines

License Suspension

License Revocation





RE Law and Regulations

RE Law 203

NREA	Auctions	FIT	Commercial projects
NREA shall call for establishment of renewable energy power plants for electricity generation , that will be operated by NREA Electricity generated to be sold to EETC	EETC shall call for RE biddings to work as BOO Electricity generated to be sold to EETC Prices upon the tender output PPA to be signed	the investors shall have the right to build, own and operate Re power plants accordance to the declared FIT prices which shall be valid for two yrs. or obtaining the required capacity generated to be sold to EETC PPA to be signed	Investors shall have the right to sign bilateral contacts with potential consumers, Connection agreement with EETC Or discos Contractual prices
 Price proposed by ERA and approved by the cabinet ERA to license Approve contracts	ERA to license Monitor PPA approval	FIT design Interim License Construction Authorization Permanent license	Construction Authorization Permanent license Contracts approval

PPA approval

Feed In Tariff

FEED In Tariff Scheme	Large Scheme	Small Scheme
NUMber of companies	32	3
Total Capacities (MW)	1465	15



Net Metering Regulations

NET Metering Scheme	
Number of Projects	14
Capacity (MW)	32.5 MW

Coca-Cola Factory 1 MW net metering project





EGYPTIAN REGULATIONS FOR SUPPORTING RE MARKET

Small Scale PV Installations
On LV networks



General Regulations

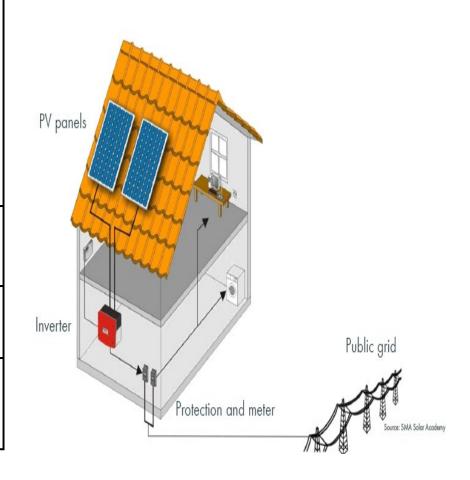
technical PV Code

Distribution Code

contractual Ame

Amendment Generation Contract

Supplementary Certification Requirements for Installers



SMALL SCALE PV INSTALLATIONS ON LV NETWORKS .. PARTIES



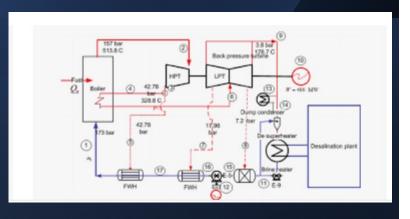
Self Consumption Regulation (No Access Power To the Grid)

Self Consumption Scheme	
Number of Projects	16
Capacity (MW)	96.5

BOO Scheme (Tenders by EETC)

	BOO Scheme					
No	Company Name	Capacity (MW)	Client	Area	License/Permit	L/P Date
1	Ras Ghareb	262.5	EETC	Suez	License	
2	Lekela BOO	250	EETC	Suez	License	until 1/1/2022
3	Acwa Powe		EETC	Komombo	Permit	
	Komombo	200				until 24/5/2022
4	Abydos solar power		EETC	Komombo	Permit	
		500				until 4/1/2023
5	Amunet Wind		EETC	Suez	Permit	
	power	500				until 4/1/2023

Cogeneration Scheme



Cogeneration Scheme	
Number of Companies	6
Capacities	71.9

Private Companies

Activity	Number of Companies	Capacity
Conventional Generation	20	2787.6 MW
Distribution Companies	69	2272 MW

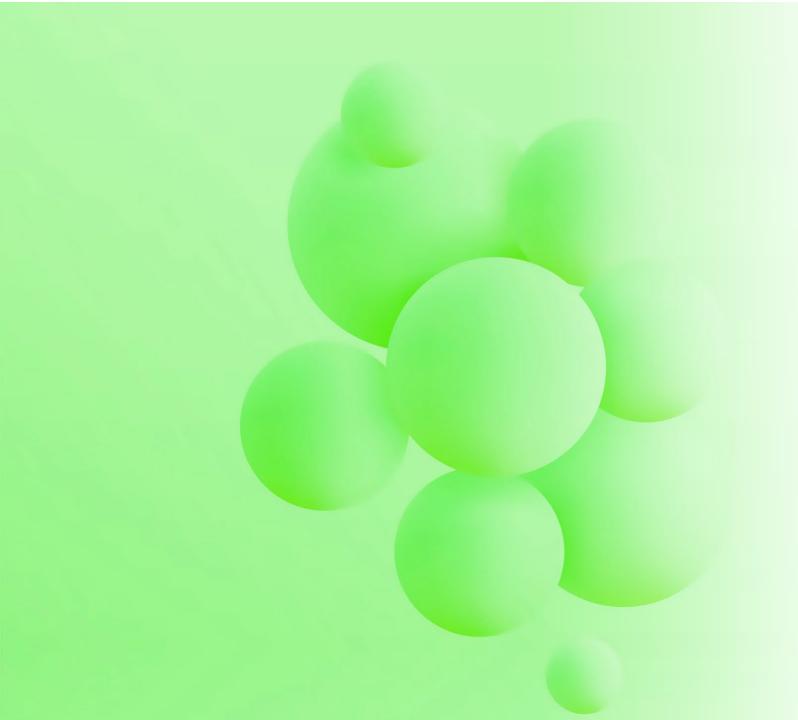
EVs

Number of Companies permitted 3

Coming Up 2 more

Potential another 2 to three





Coming Up
Green Hydrogen

7 MOUs

GoO

Thank You



