

# Renewable Energy Development Schemes in Egypt

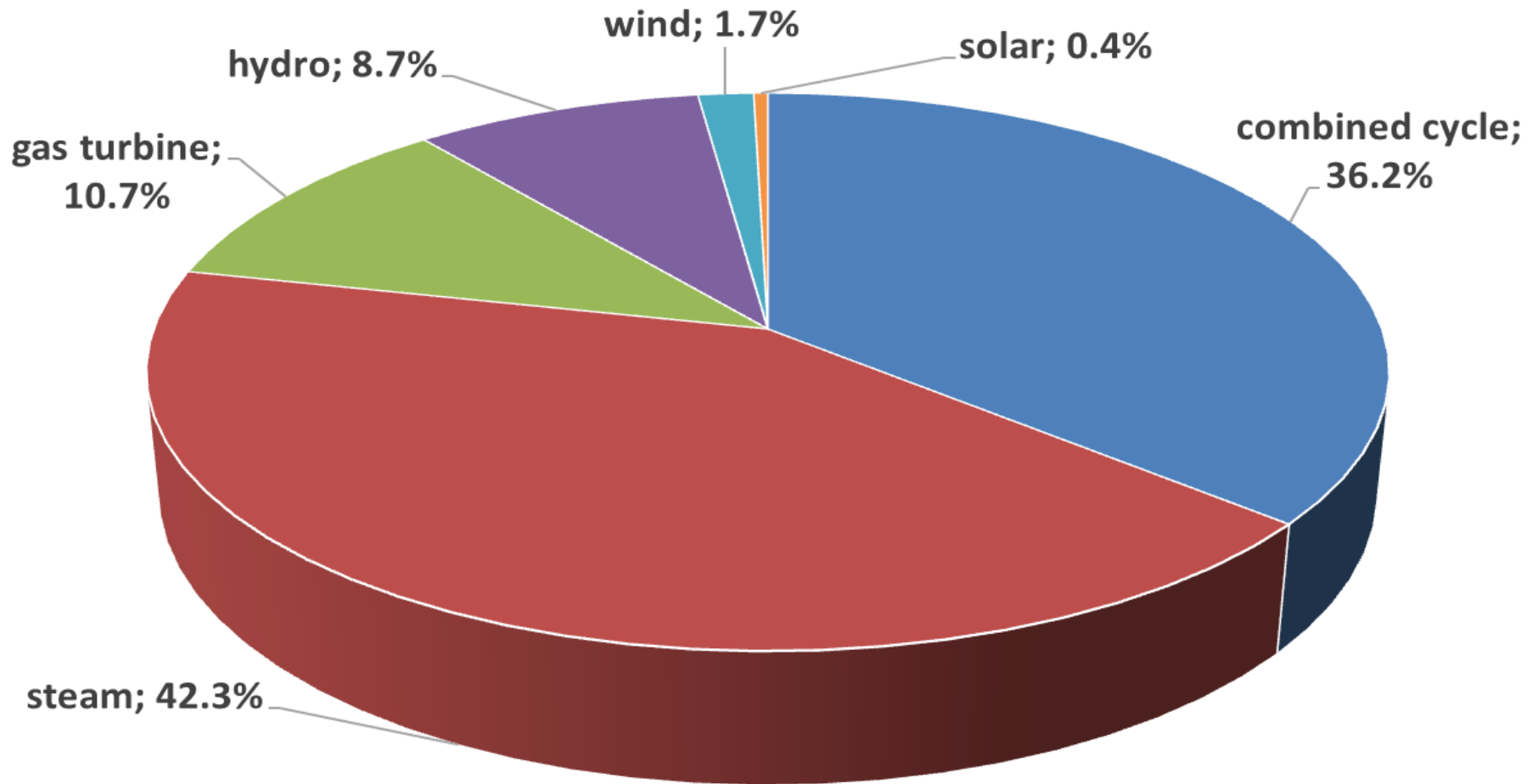
*Mohamed Salah ElSobki (Jr)*

*محمد صلاح السبكي*

*Executive Chairman - New and Renewable Energy Authority (NREA)*

*Ministry of Electricity and Renewable Energy (MoE&RE)*

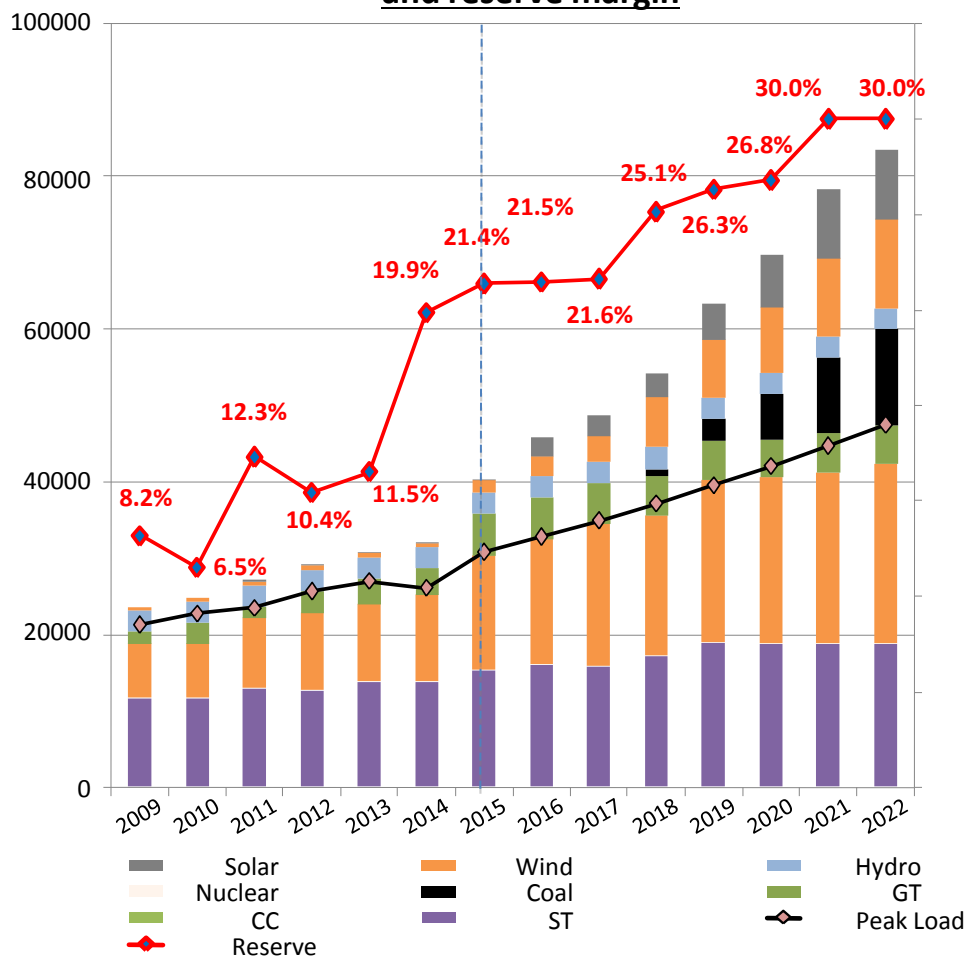
# Current Capacity



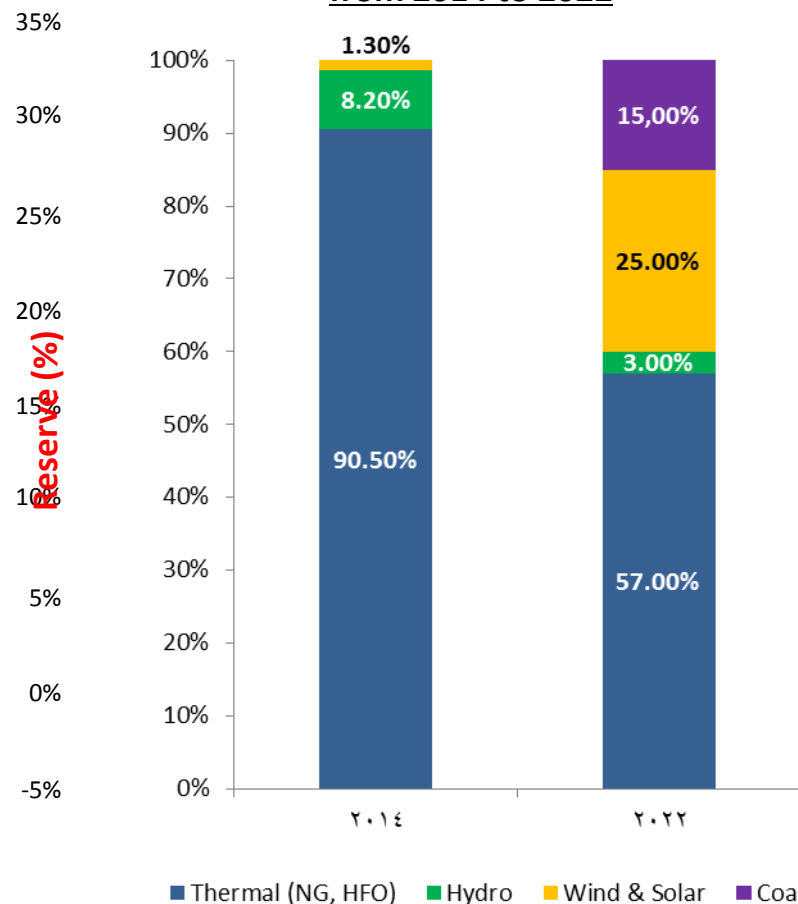
# Power generation security

Generation plans call for a marked acceleration in the construction of **23 GW of** new capacity by 2022

**Government power generation expansion plans and reserve margin**



**Generation capacity mix from 2014 to 2022**



Source: Ministry of Electricity and Renewable Energy



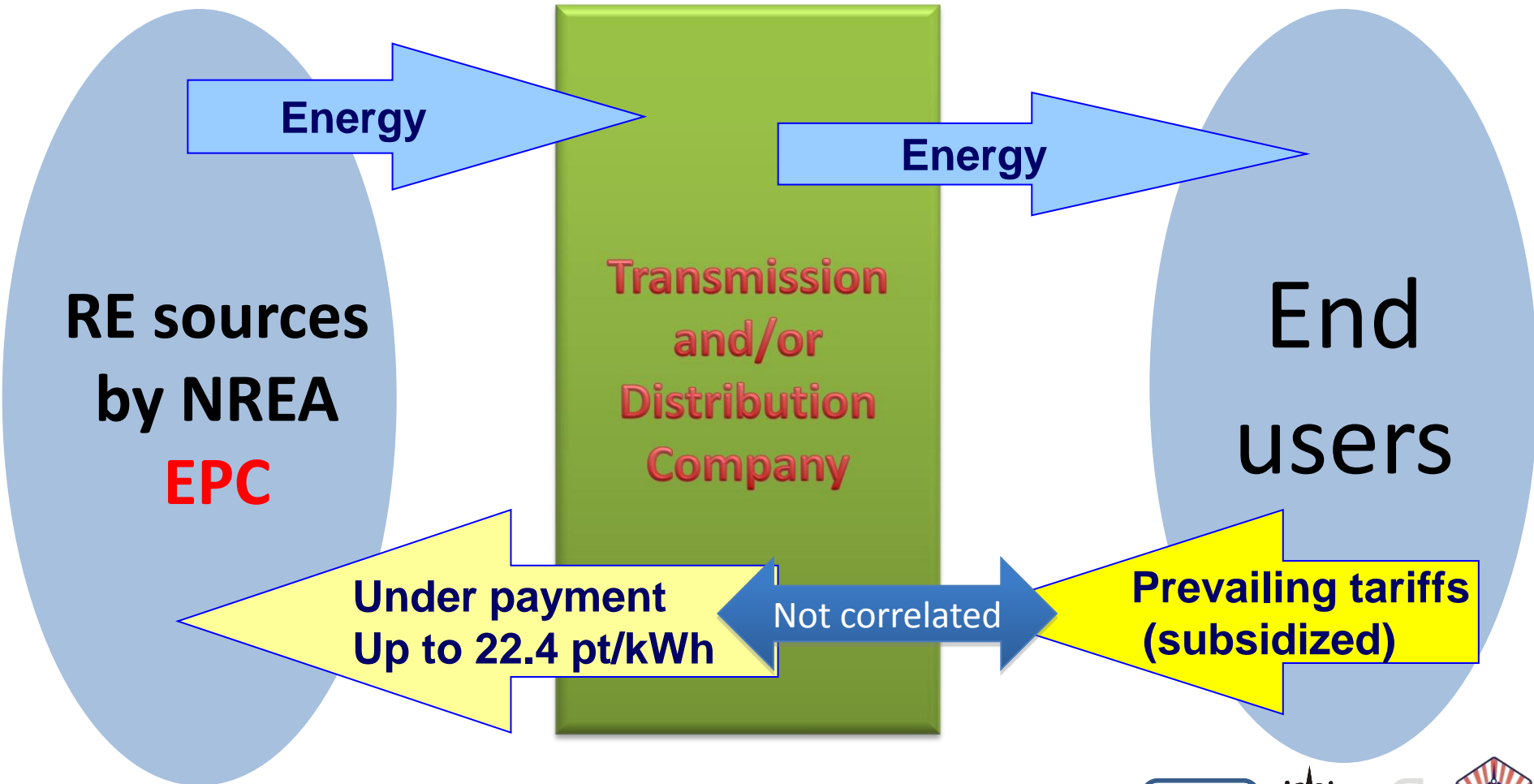
# Renewable Energy Development Schemes

## Framework for RE Development Mechanisms

Competitive  
Bidding

New & Renewable  
Energy Authority (NERA)  
(EPC contracts) since **1993**  
750 MW → 1890 MW  
**Solar(PV) ≈ 80 MW**

# Competitive bidding on the supply side



# Renewable Energy Development Schemes

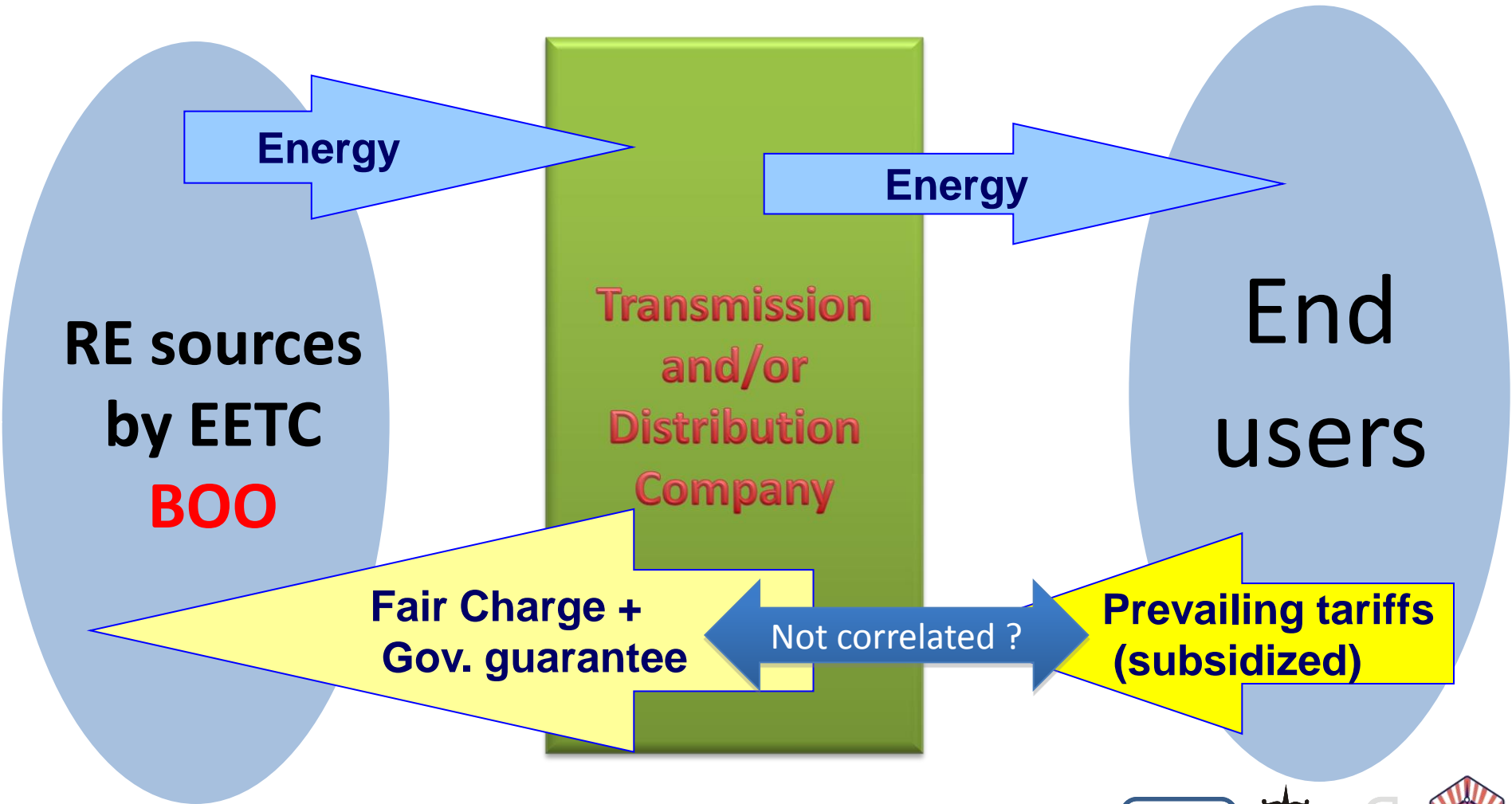
## Framework for RE Development Mechanisms

### Competitive Bidding

**New & Renewable  
Energy Authority (NERA)  
(EPC contracts) since 1999**  
750 MW                      1890 MW  
**Solar(PV) ≈ 80 MW**

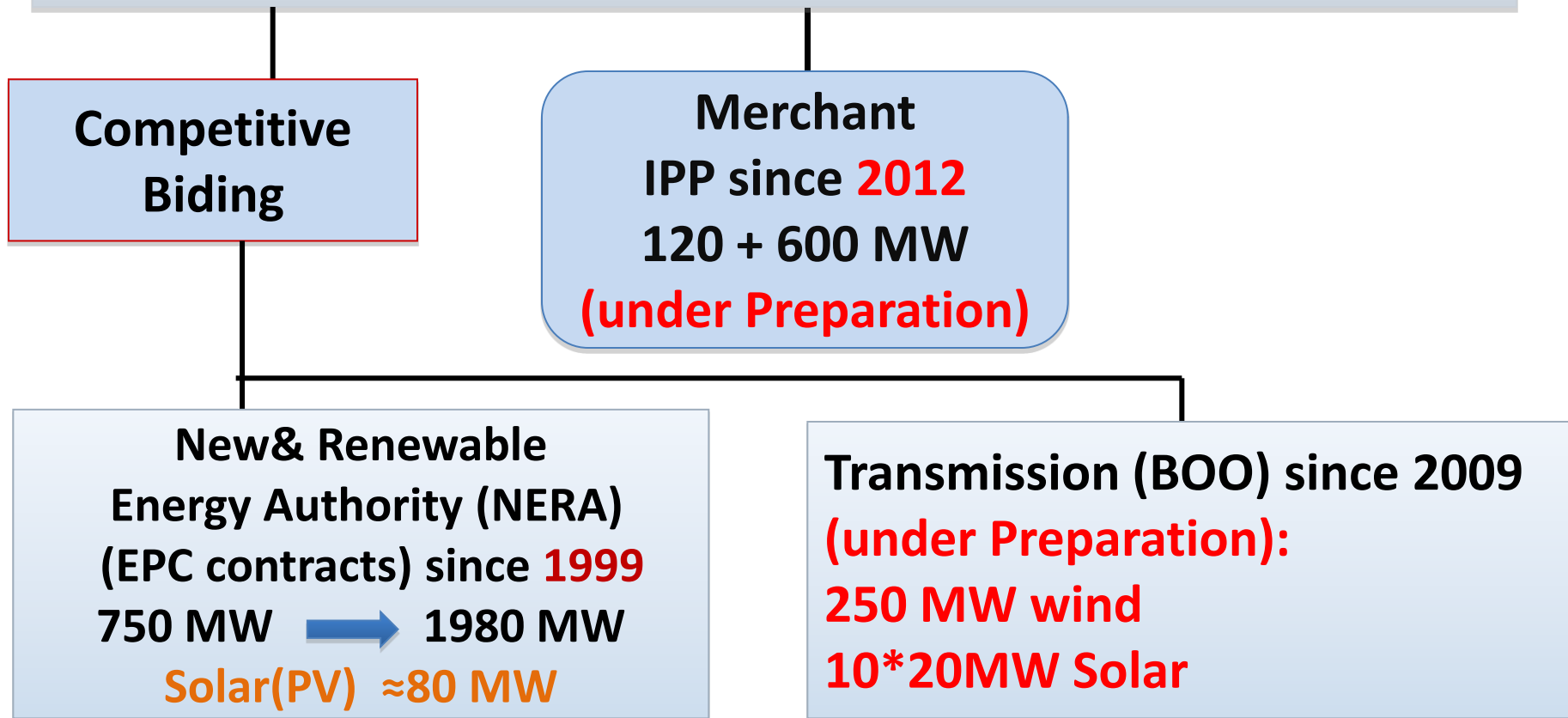
**Transmission (BOO) since 2009  
(under Preparation):**  
**250 MW wind**  
**10\*20MW Solar**

# Competitive bidding on the supply side



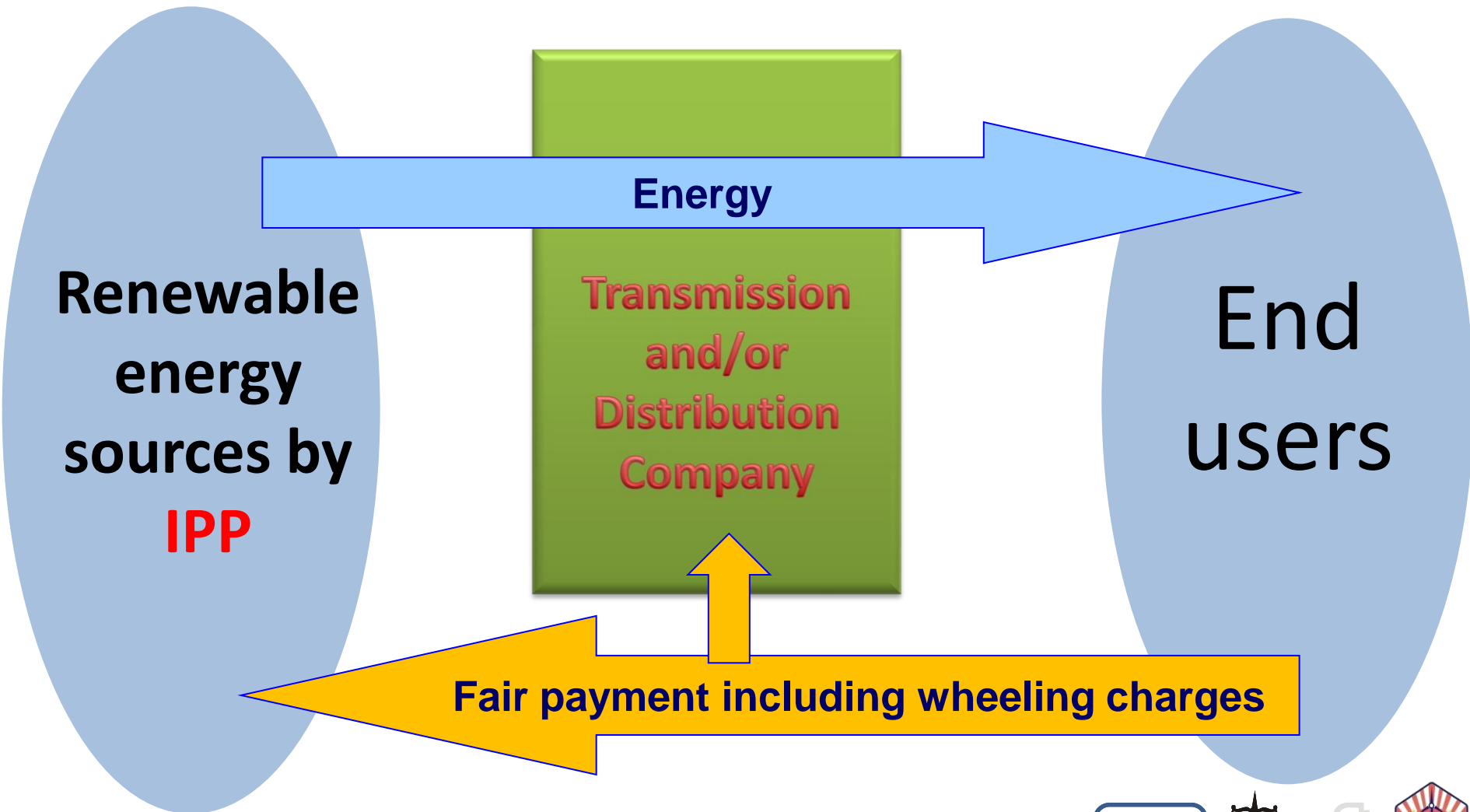
# Renewable Energy Development Schemes

## Framework for RE Development Mechanisms





# Bilateral agreements (merchant scheme)



# Renewable Energy Development Schemes

## Framework for RE Development Mechanisms

**Competitive Bidding**

**Merchant IPP since 2012**  
**120 + 600 MW**

**(under Preparation)**

**Fit/Quota since 2014**

**2000+2000+300 MW**

**(under Preparation)**

**New & Renewable Energy Authority (NERA) (EPC contracts) since 1999**

**750 MW      1900 MW**

**Solar(PV) ≈ 80 MW**

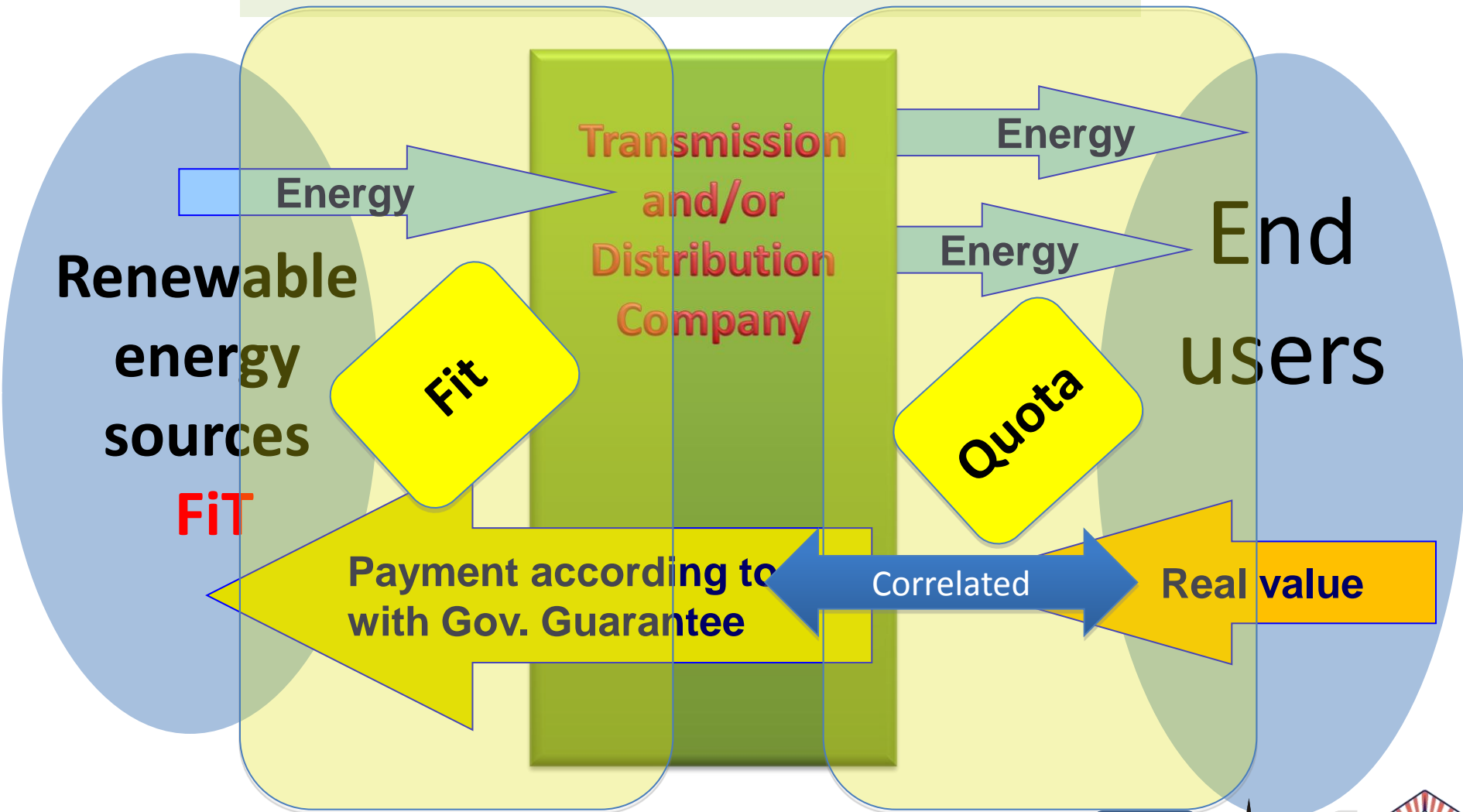
**Transmission (BOO) since 2009**

**250 MW + 200 MW**

**(under Preparation)**



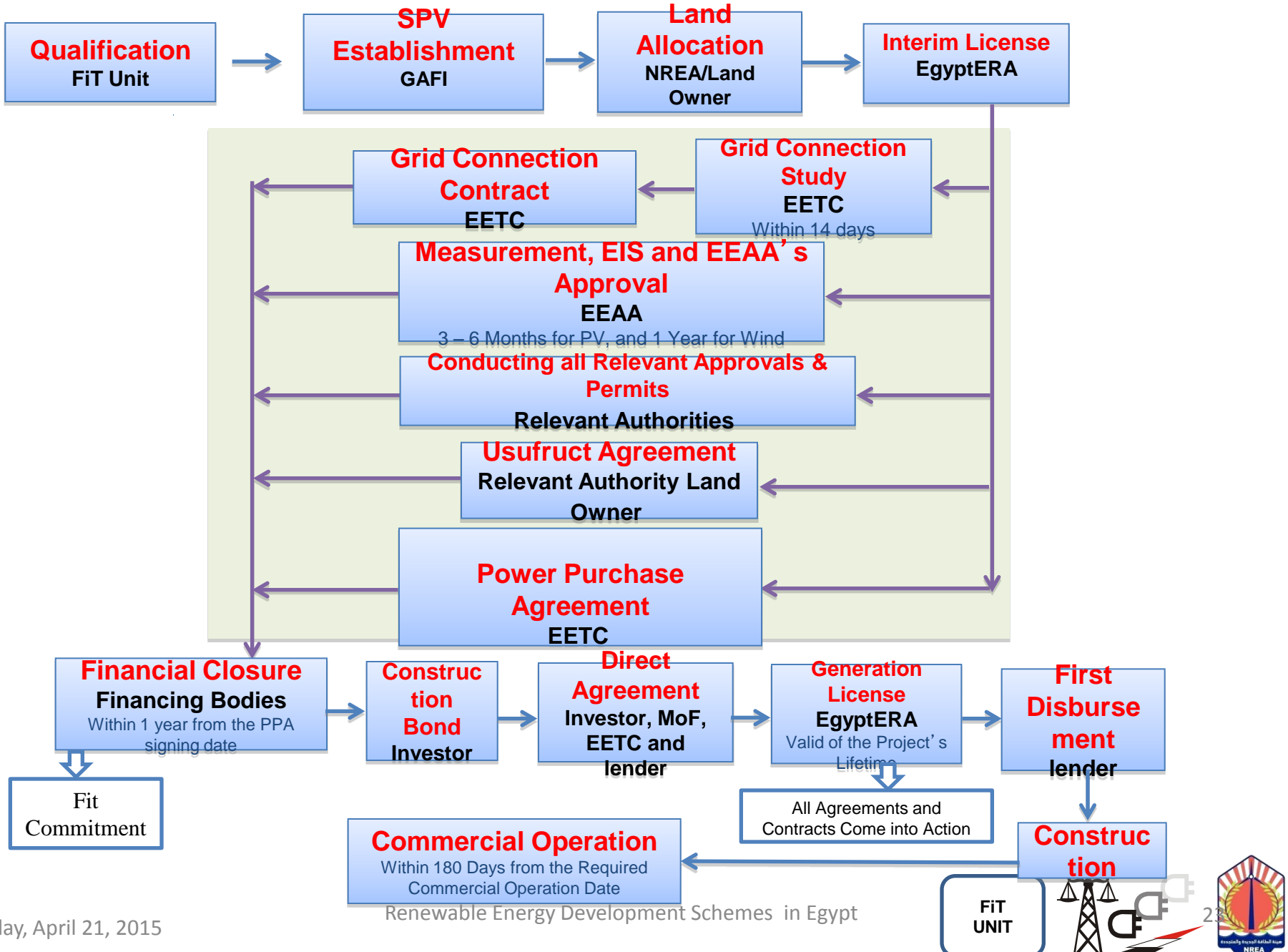
# Feed in Tariff / Quota



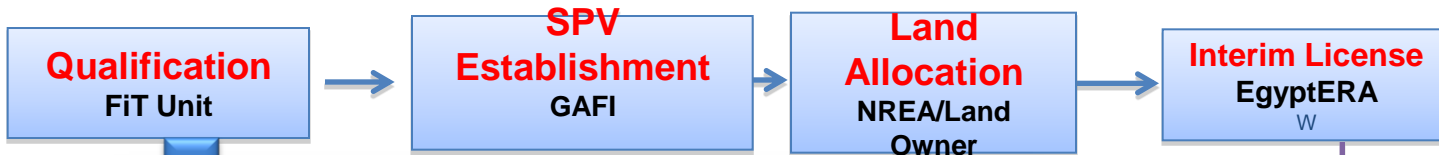
# Investment Potential in RE schemes

Scheme	Solar PV		Wind		Total
	Capacity MW	investment Mill \$	Capacity MW	investment Mill. \$	investment Mill. \$
NREA	80	120	1890	2457	2577
BOO	200	300	250	325	625
IPP		0	720	936	936
FIT	2300	3450	2000	2600	6050
<b>Total</b>		<b>3870</b>		<b>6318</b>	<b>10188</b>

# RE – FiT Projects: Above 500 kW



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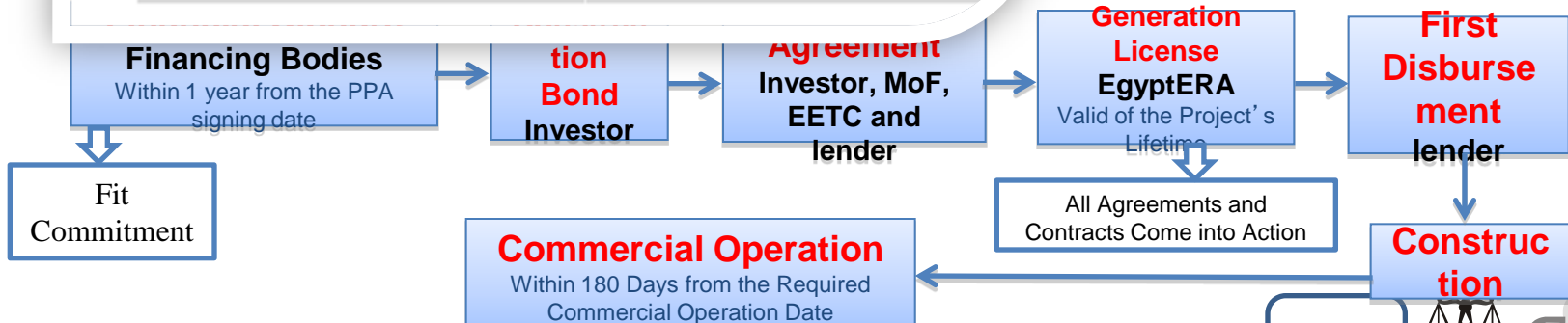


## 1. QUALIFICATION

### Criteria for qualification

- In this step investors apply for getting qualified against the following criteria
- The investor is considered to be qualified if he receives 650 points or more

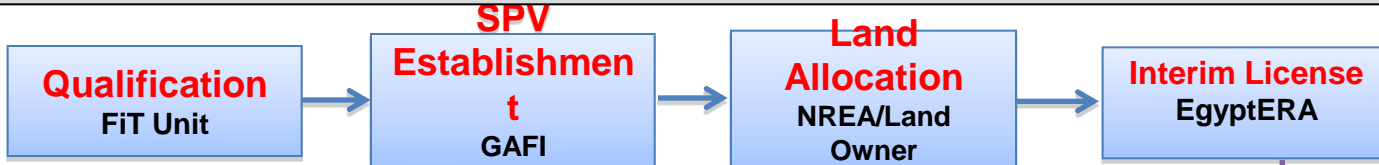
Item to be Evaluated	Maximum Score (Points)
General Format and Completeness	50
Introduction	50
Project Understanding	200
Qualifications and Experience	300
Human Resources	150
Financial Resources	250
<b>Total</b>	<b>1000</b>



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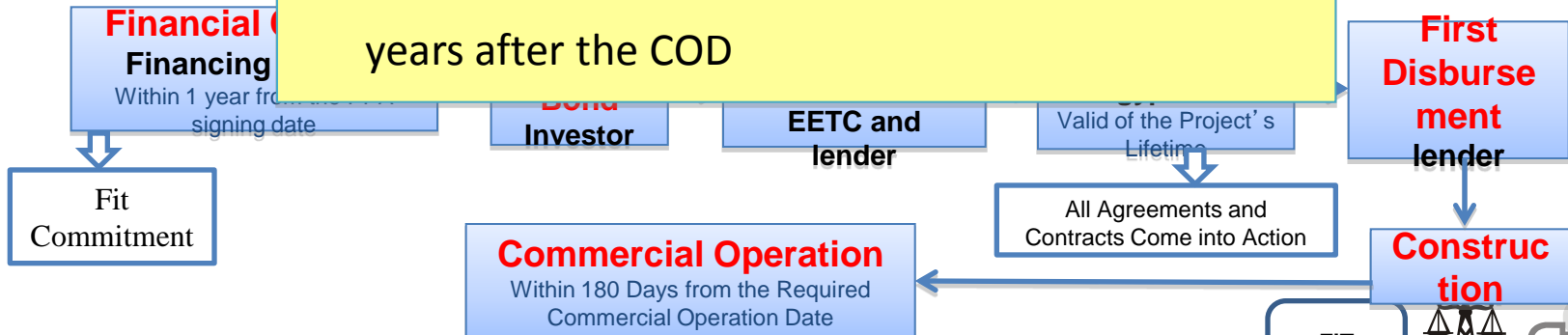


# RE – FiT Projects: Above 500 kW



## 2. SPV Establishment

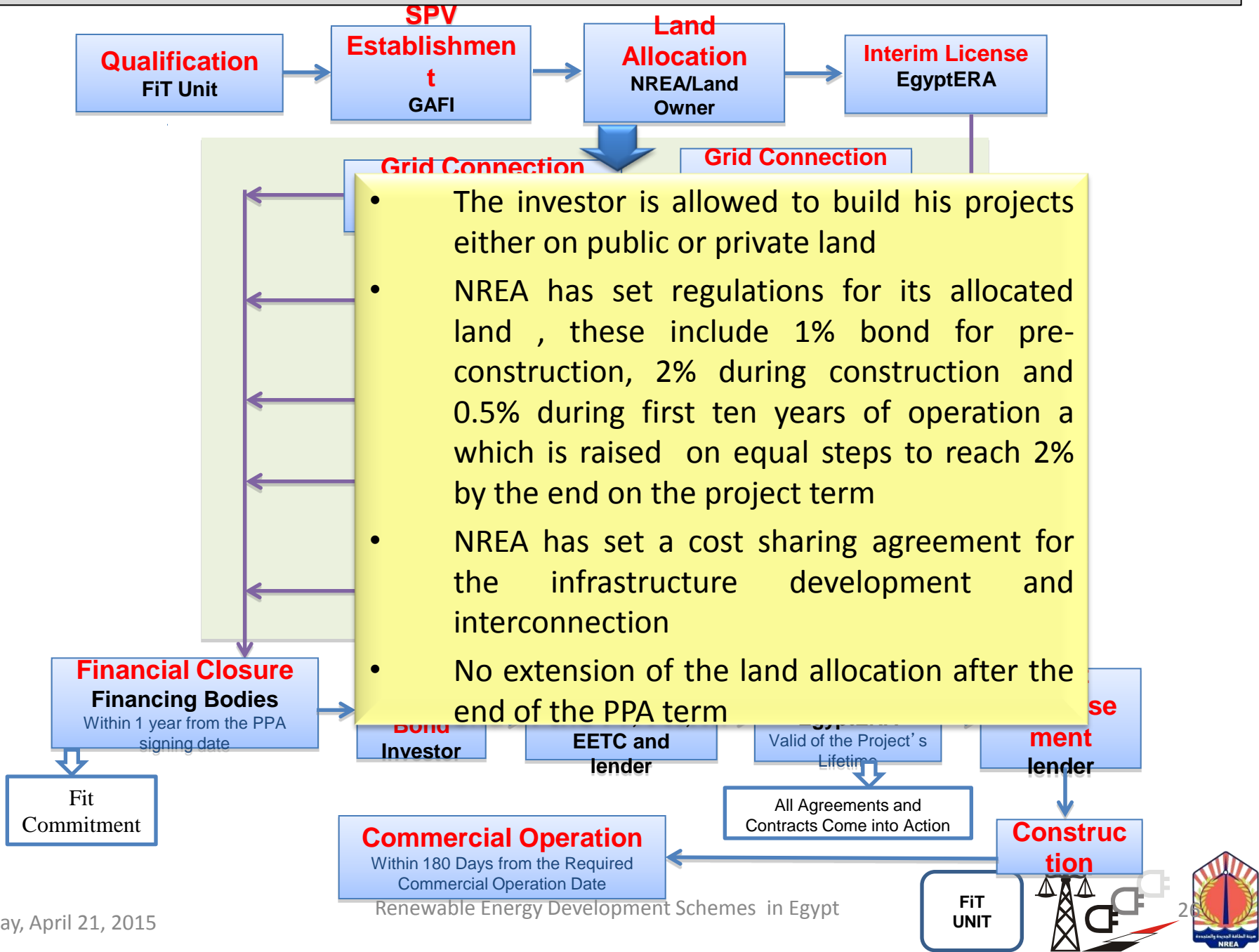
- Qualified investors shall establish a joint stock single purpose project company (SPV) under the investment law .
- The qualified consortium shall have at least 51% of the company shares
- The share of the leader investor shall be at least 25%, and and do not go below this share for two years after the COD



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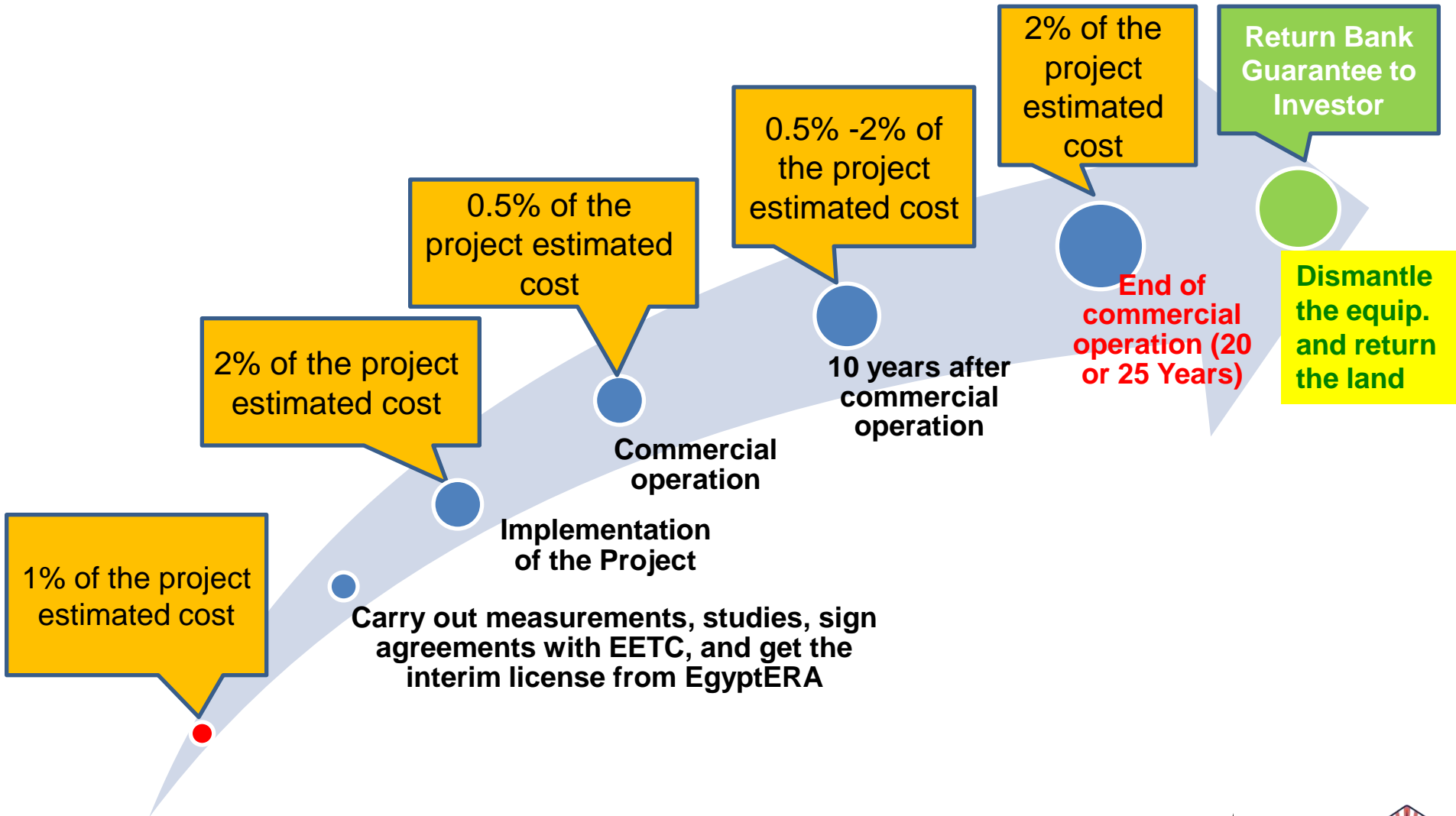


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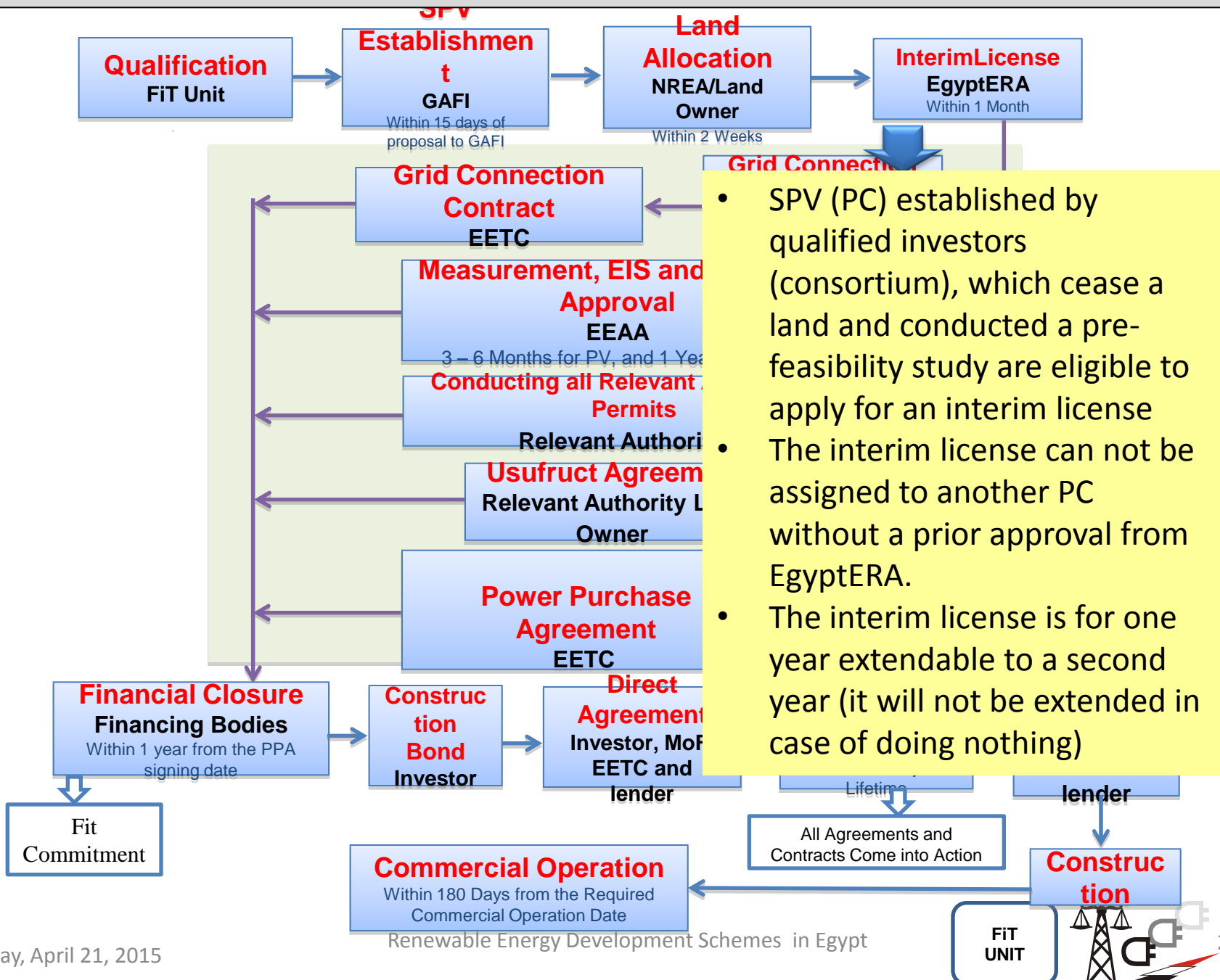




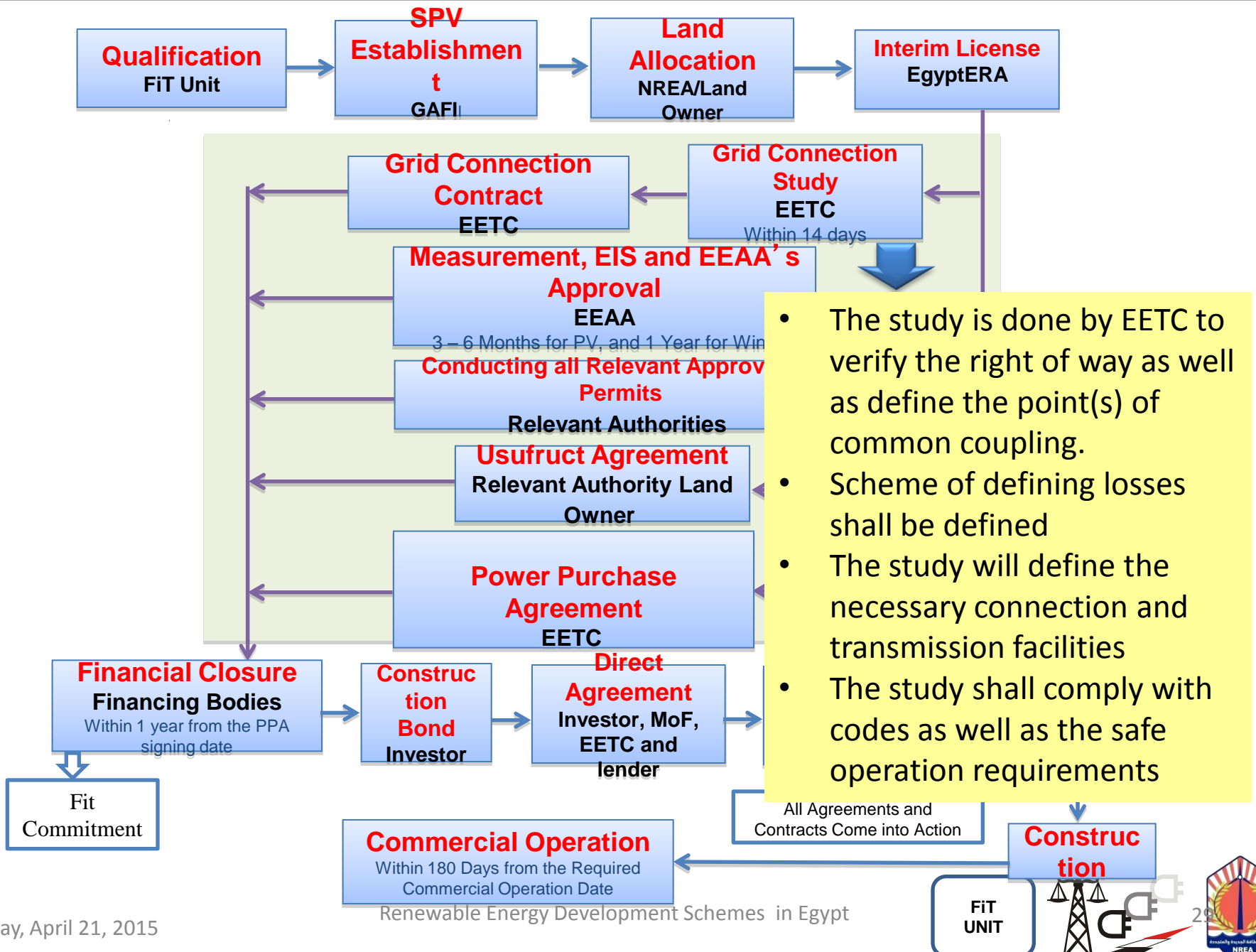
# Availing the land & Development of the Bank Guarantee



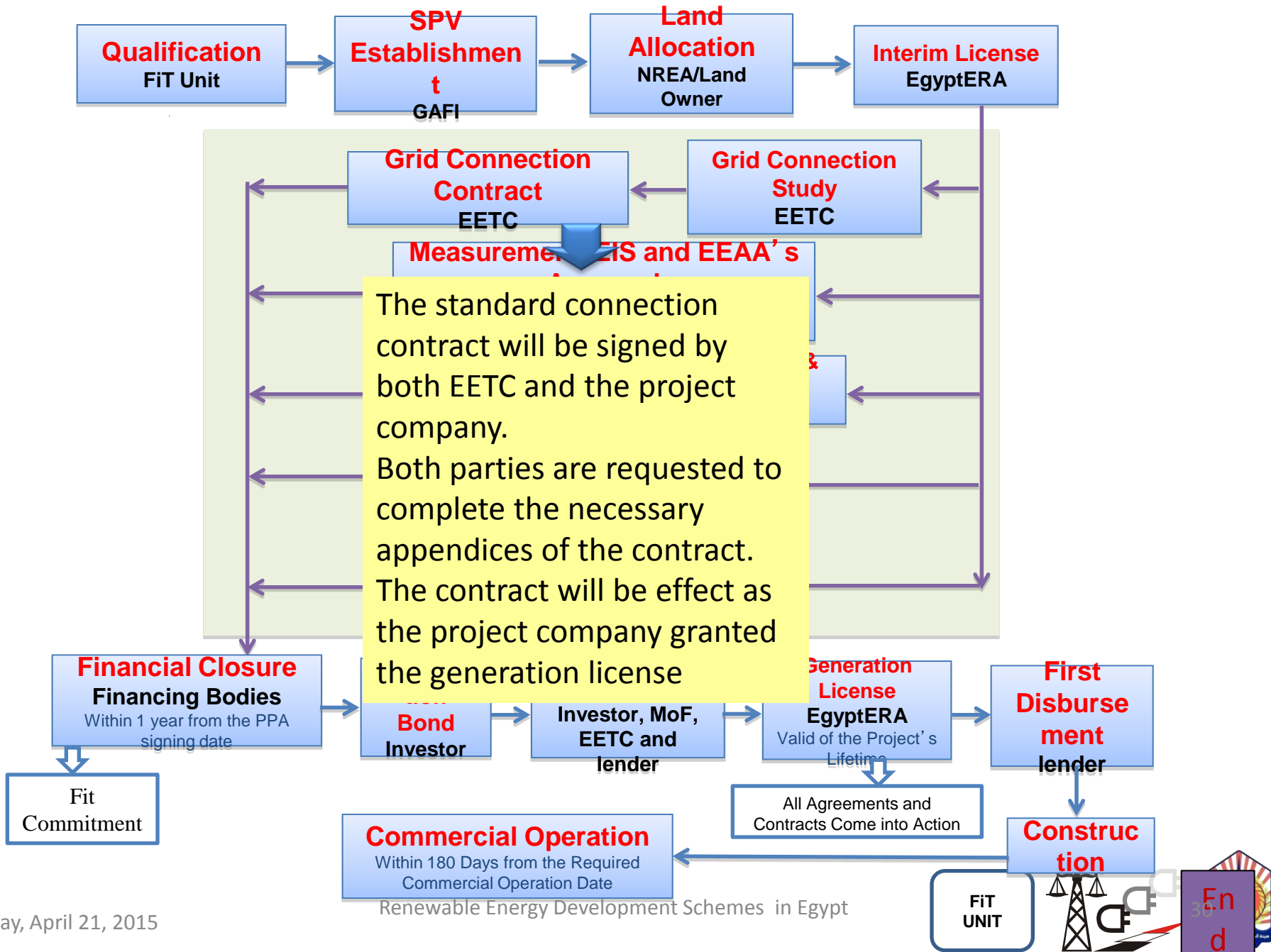
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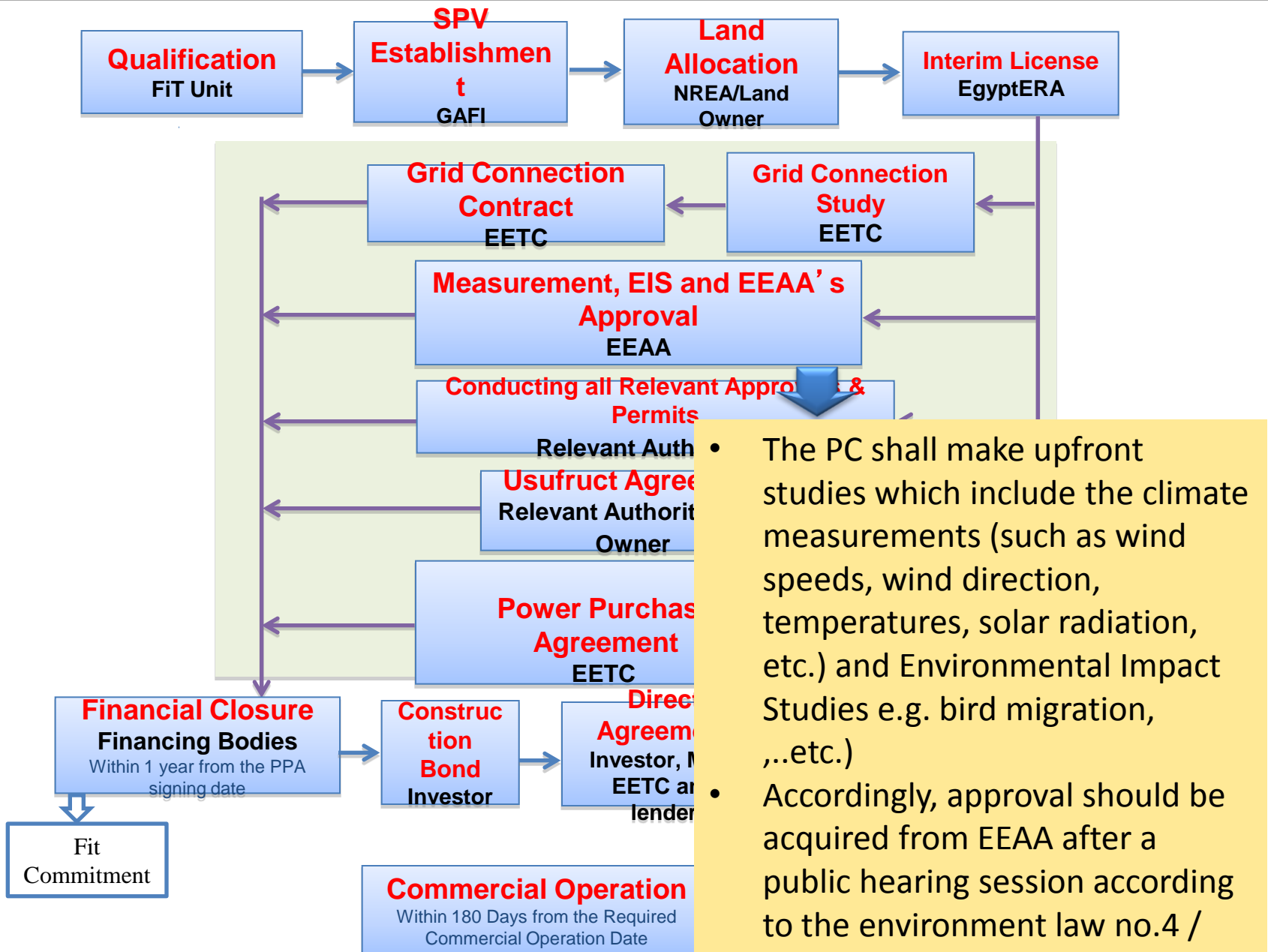
# RE – FiT Projects: Above 500 kW



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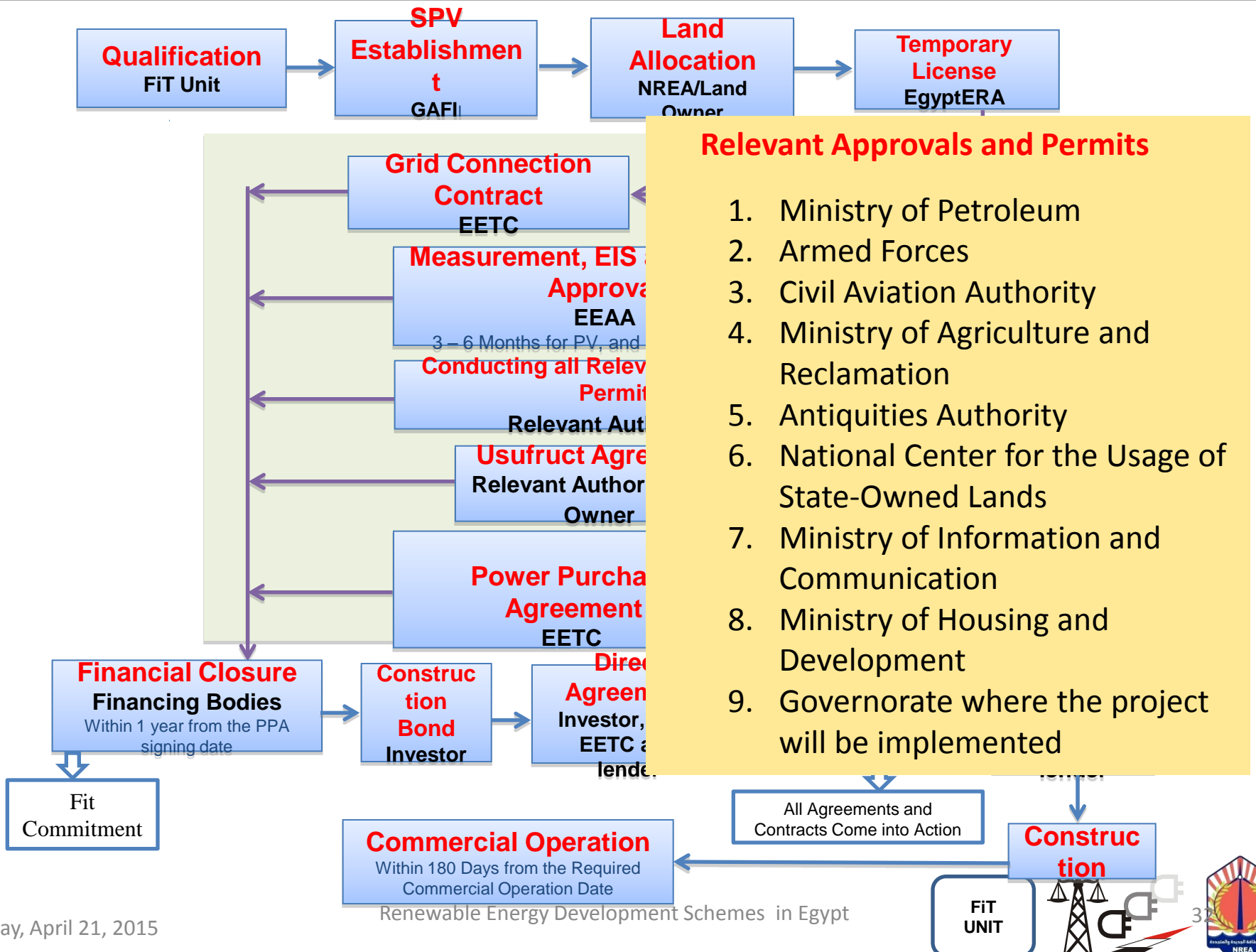
# RE – FiT Projects: Above 500 kW



- The PC shall make upfront studies which include the climate measurements (such as wind speeds, wind direction, temperatures, solar radiation, etc.) and Environmental Impact Studies e.g. bird migration, ...etc.)
- Accordingly, approval should be acquired from EEAA after a public hearing session according to the environment law no.4 / 1994,



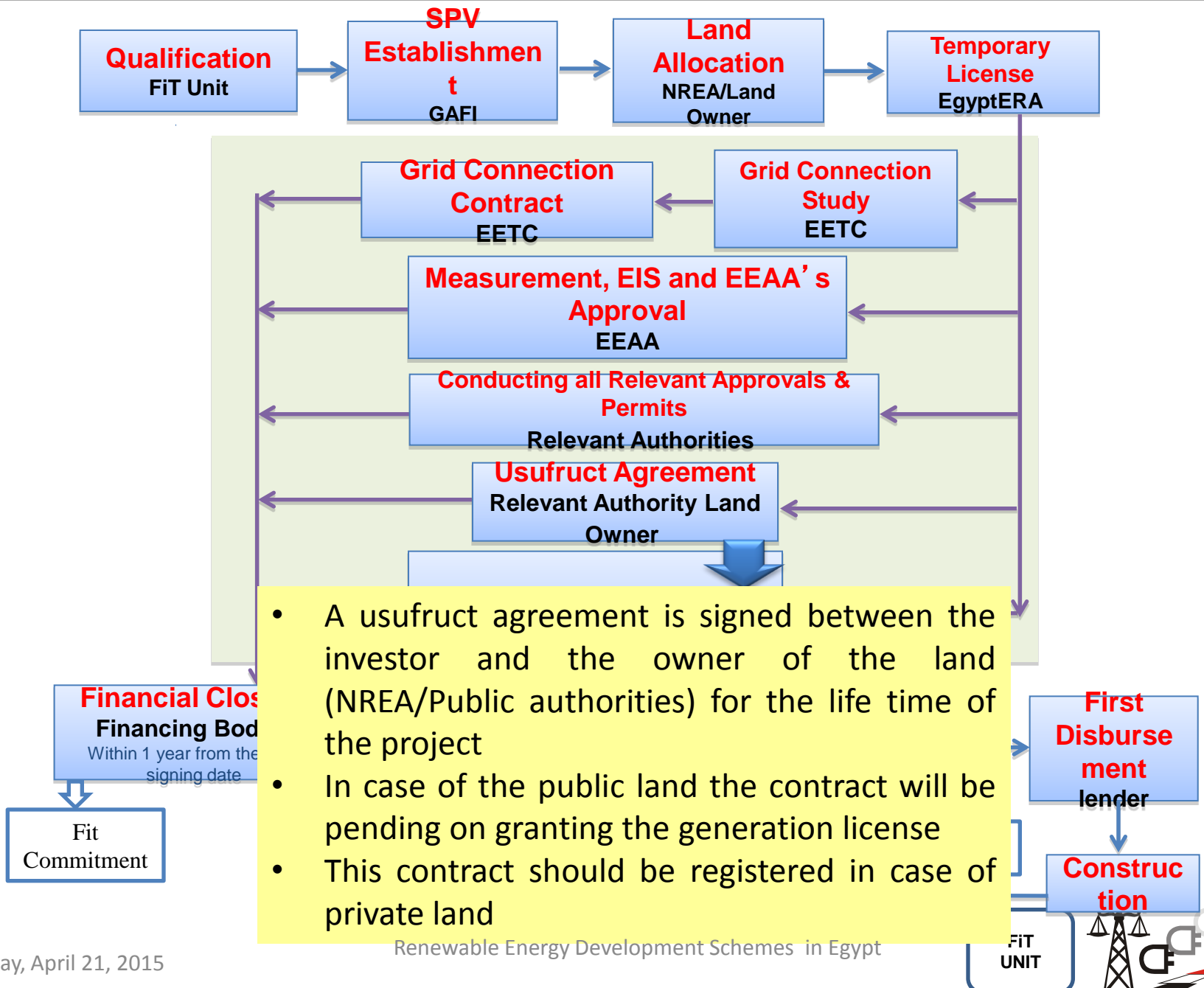
# RE – FiT Projects: Above 500 kW



- ### Relevant Approvals and Permits
1. Ministry of Petroleum
  2. Armed Forces
  3. Civil Aviation Authority
  4. Ministry of Agriculture and Reclamation
  5. Antiquities Authority
  6. National Center for the Usage of State-Owned Lands
  7. Ministry of Information and Communication
  8. Ministry of Housing and Development
  9. Governorate where the project will be implemented



# RE – FiT Projects: Above 500 kW

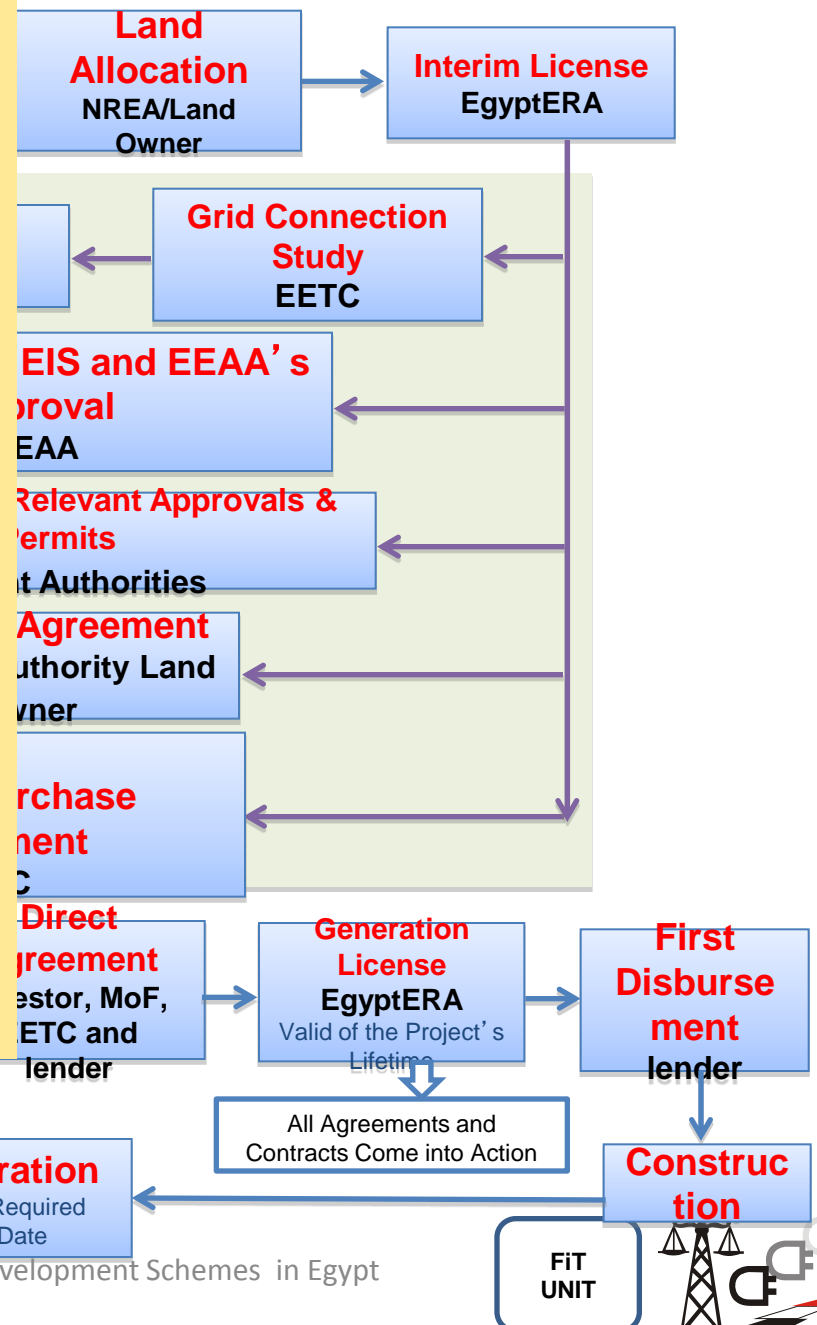


- A usufruct agreement is signed between the investor and the owner of the land (NREA/Public authorities) for the life time of the project
- In case of the public land the contract will be pending on granting the generation license
- This contract should be registered in case of private land



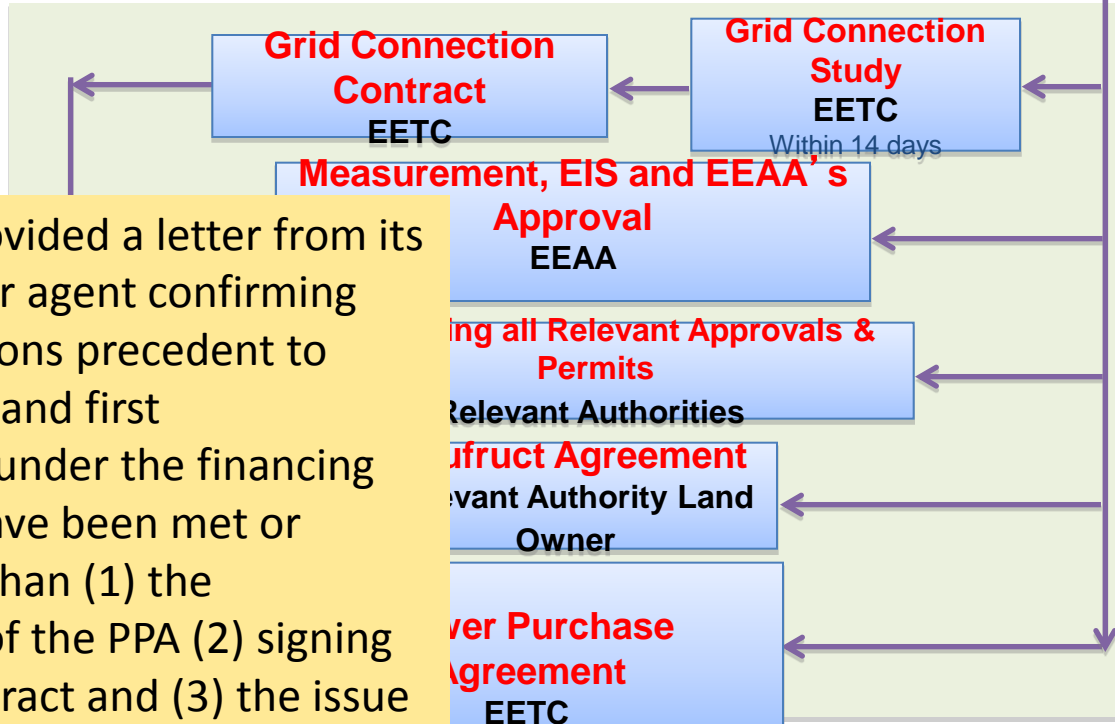
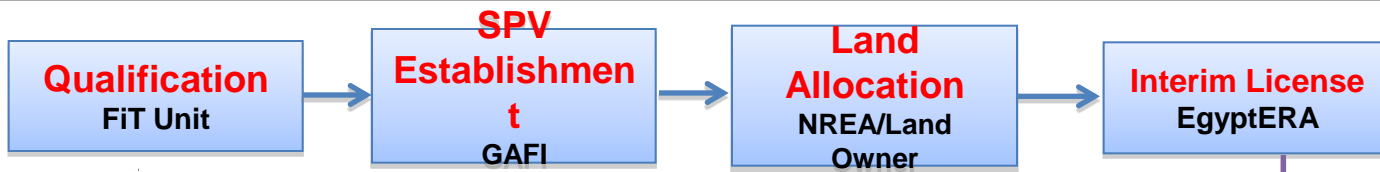
# RE – FiT Projects: Above 500 kW

- The PC will be contracted according to the valid tariff on the financial closure date
- The contract will be terminated in the PC has not finalized all necessary studies and contract within 9 months or fulfill financial closure within 12 months from the day of signing
- The contract will cover both the project construction period as well as the project lifetime.
- This contract is not extendable beyond its original term.
- The obligations of the parties under this contract will come into effect only if the PC has granted the electricity generation license.

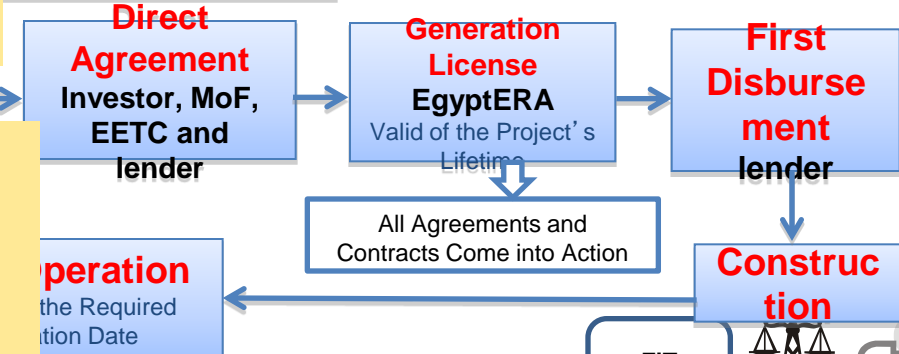




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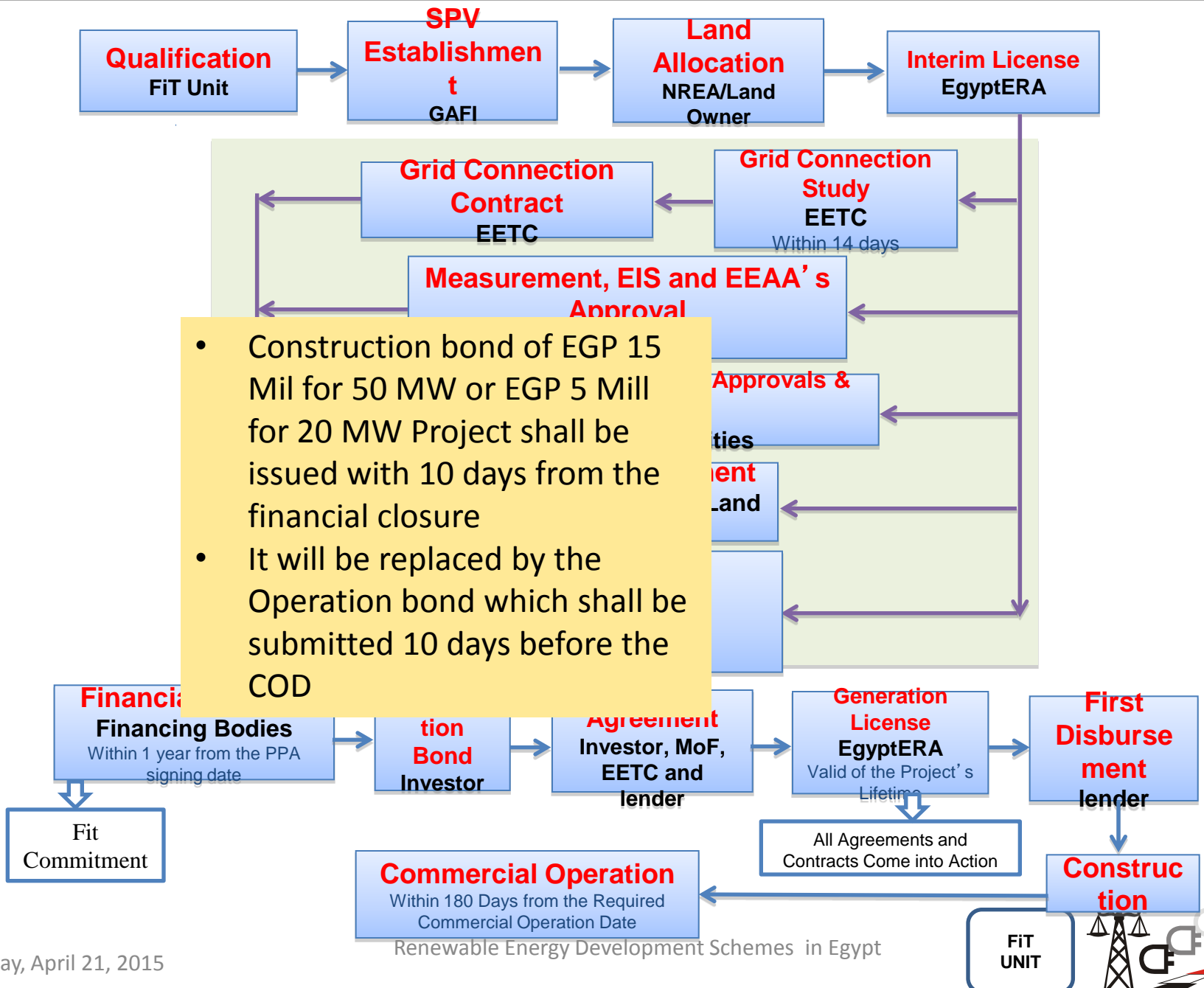
The PC has provided a letter from its lenders or their agent confirming that all conditions precedent to financial close and first disbursement under the financing agreements have been met or waived other than (1) the effectiveness of the PPA (2) signing the direct contract and (3) the issue of a permanent generation license.



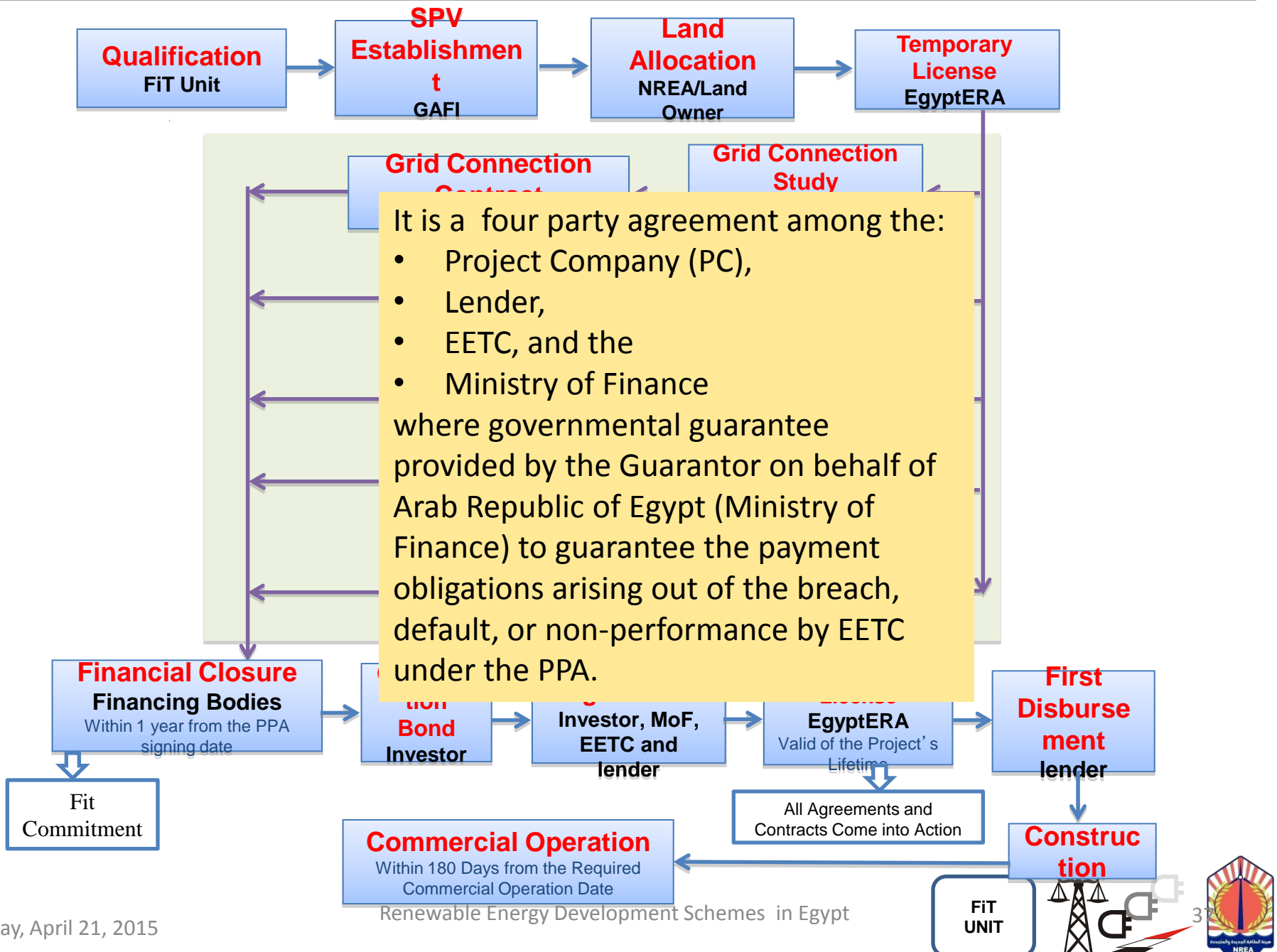
The valid tariff issued by the PM decree at the day of Financial Closure



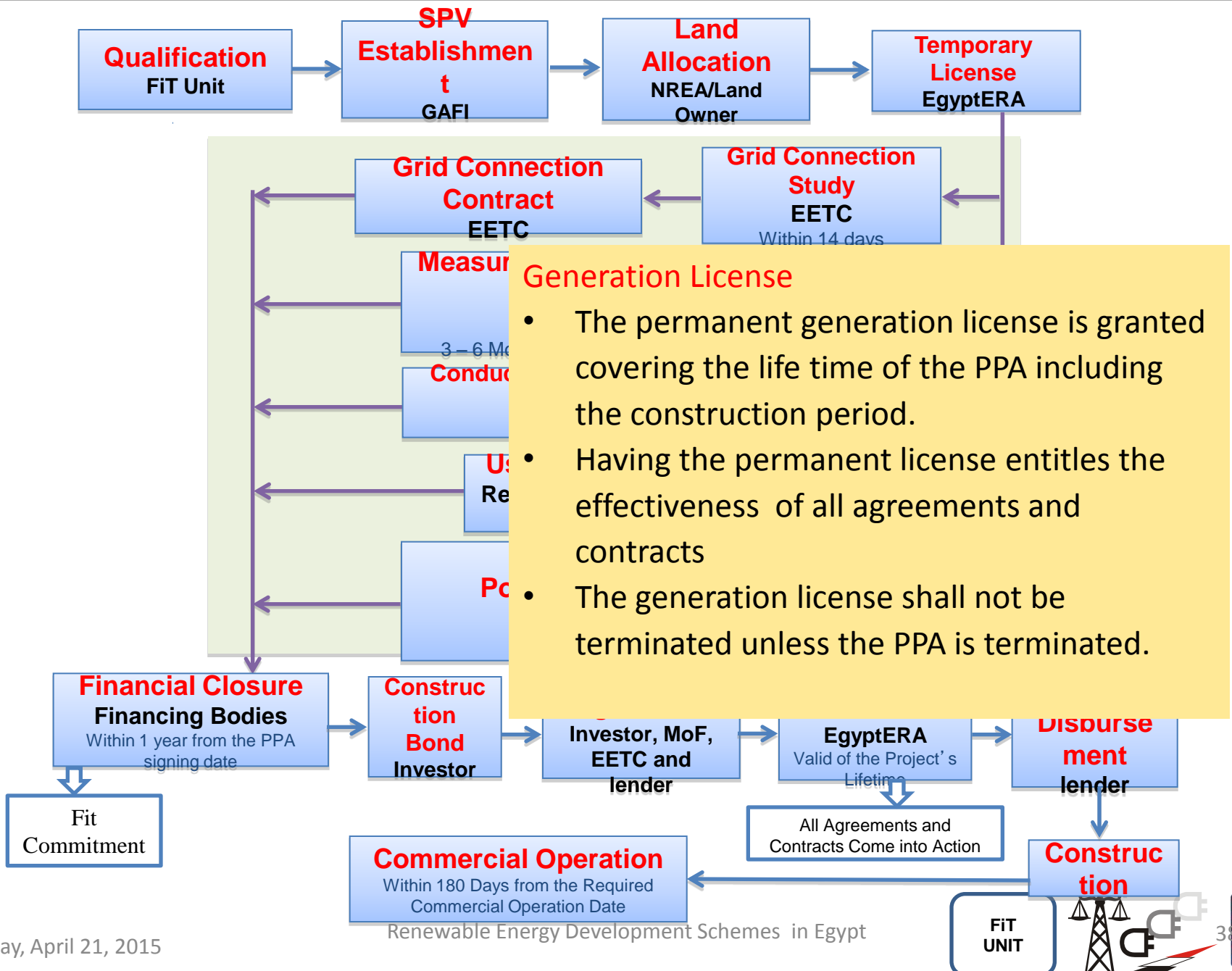
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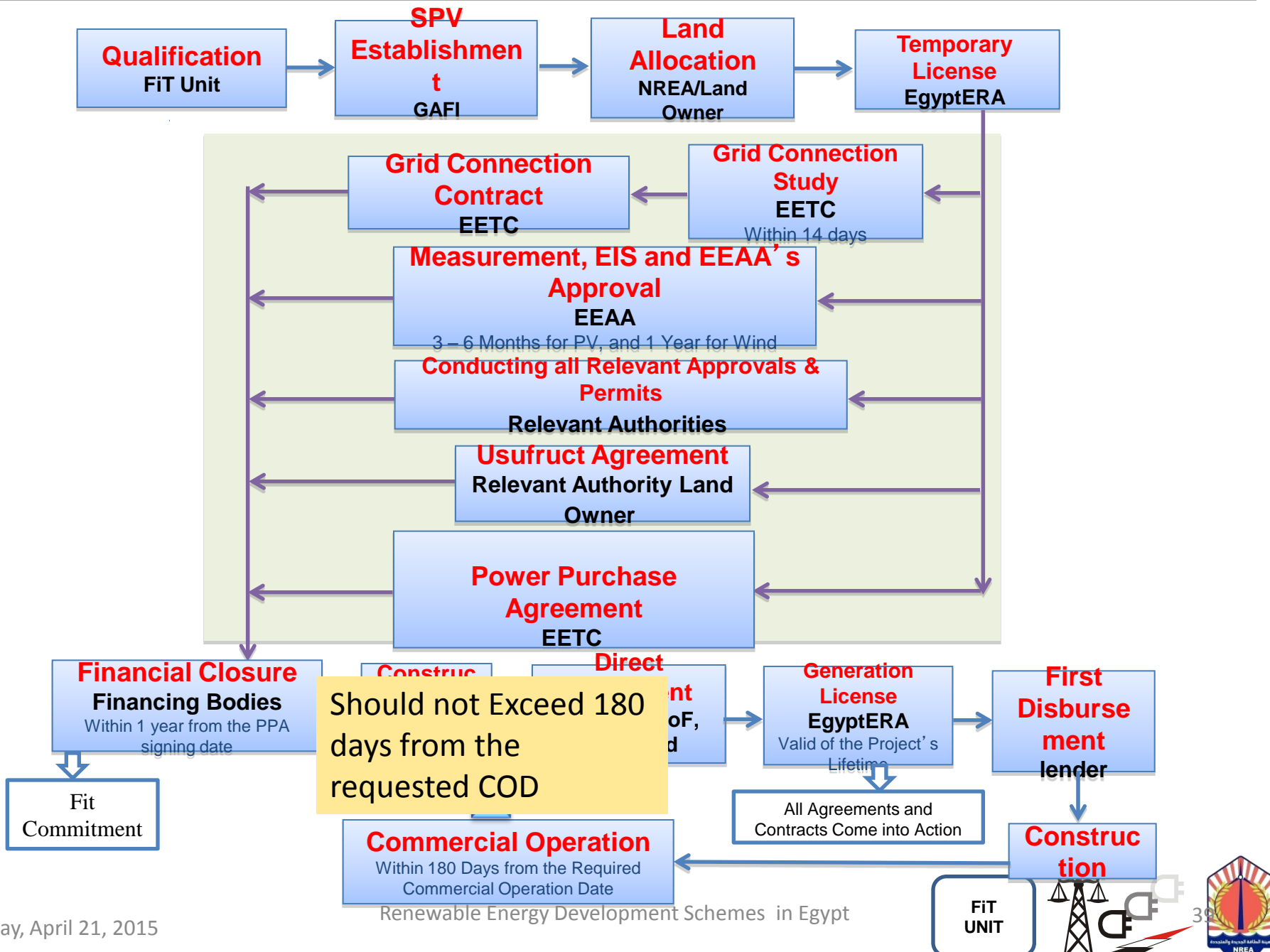
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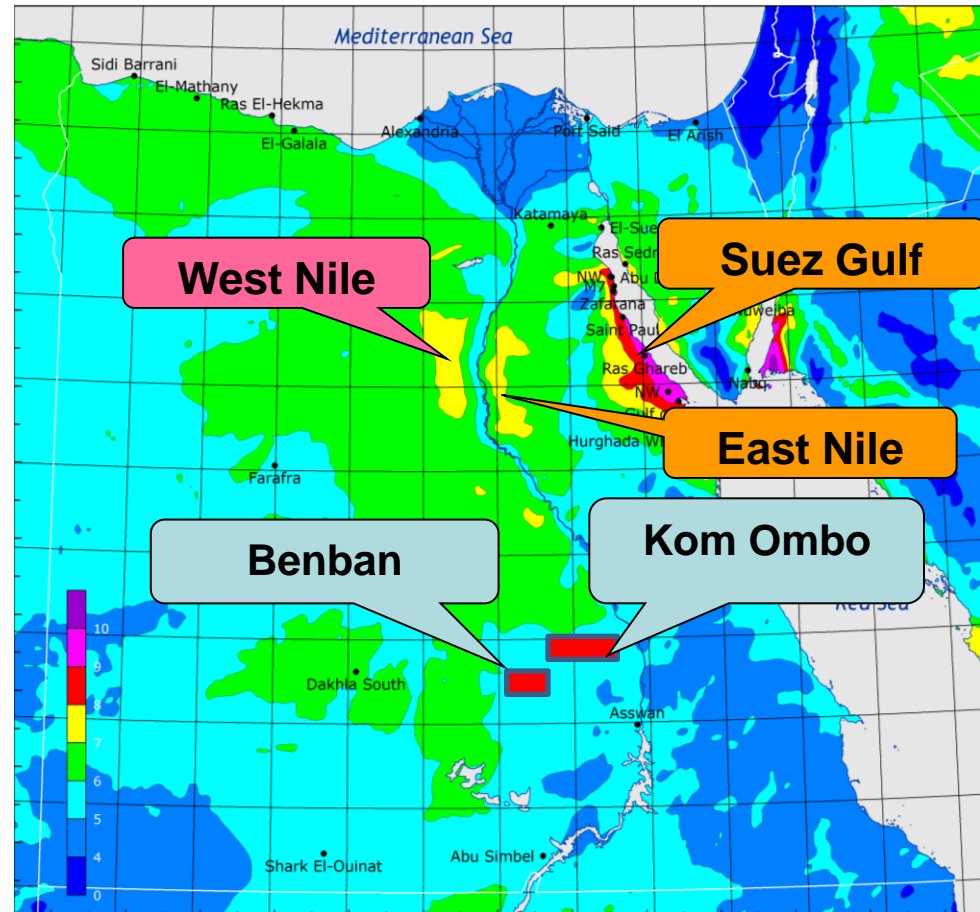


# Land for RE

**7650 KM2** were allocated for  
**Implementing RE projects**

Areas			
Zone		Areas (km <sup>2</sup> )	Capacity MW
Suez Gulf (wind)		1220	3550
East Nile	wind	841	5800
	Solar	1290	34900
West Nile	wind	3636	25350
	Solar	606	17400
Benban (Solar)		37	1800
Kom Ombo (Solar)		7	260

Yellow shaded cells represent the available areas



*7000 years ago we  
cherished the sun*

*We still do*

***Thank you for your attention***

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