

## **Webinar: Opportunities for wind energy development in Tunisia**

**The contribution of wind energy to the  
diversification of the energy mix and  
the creation of local value**

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# Role of REs in meeting future energy demand

- The continued growth of energy demand and the strong dependence of electricity production on natural gas are major challenges for Tunisia
- Security of supply through the diversification of the energy mix is a necessity
- REs have a major role to play in contributing to the development of national energy resources and the diversification of the electricity mix, through the ambitious objectives set by the Tunisian Solar Plan.

# Main achievements in the wind energy sector

The Tunisian context is favorable to the development of wind energy production. Several works have been carried out since the 2000s and achievements are in progress:

- A wind Atlas in continuous update
- Completion by STEG of wind projects totaling 245 MW
- Realization of studies for industrial projects on auto-production regime
- Conducting pre-feasibility studies on three potential sites of wind generation
- Development of a study on the local value creation potential of the Tunisian industry in the wind energy sector
- Establishment of the regulatory framework encouraging the realization of projects by the private sector
- Adoption by the GoT of the Tunisian Solar Plan setting ambitious objectives for the contribution of wind energy in the electricity mix by 2030

# Main achievements in the wind energy sector

## The process of implementing the regulatory framework

**May 2015**  
Law on elect.  
Production  
from RE

**Dec. 2016**  
Establishment  
of the CTER

**Feb. 2017**  
Application Texts  
(GC, PPA, AP Co)

**May 2017**  
-1<sup>st</sup> Call of Projects  
Procedures Manual

**Aug. 2016**  
Applicat Decree  
of Law 2015

**Jan. 2017**  
Annual publication  
N°01/2016

**Mar. 2017**  
Establishment  
of the S.A

**Nov. 2017**  
Last submission 1<sup>st</sup>  
Call of Projects

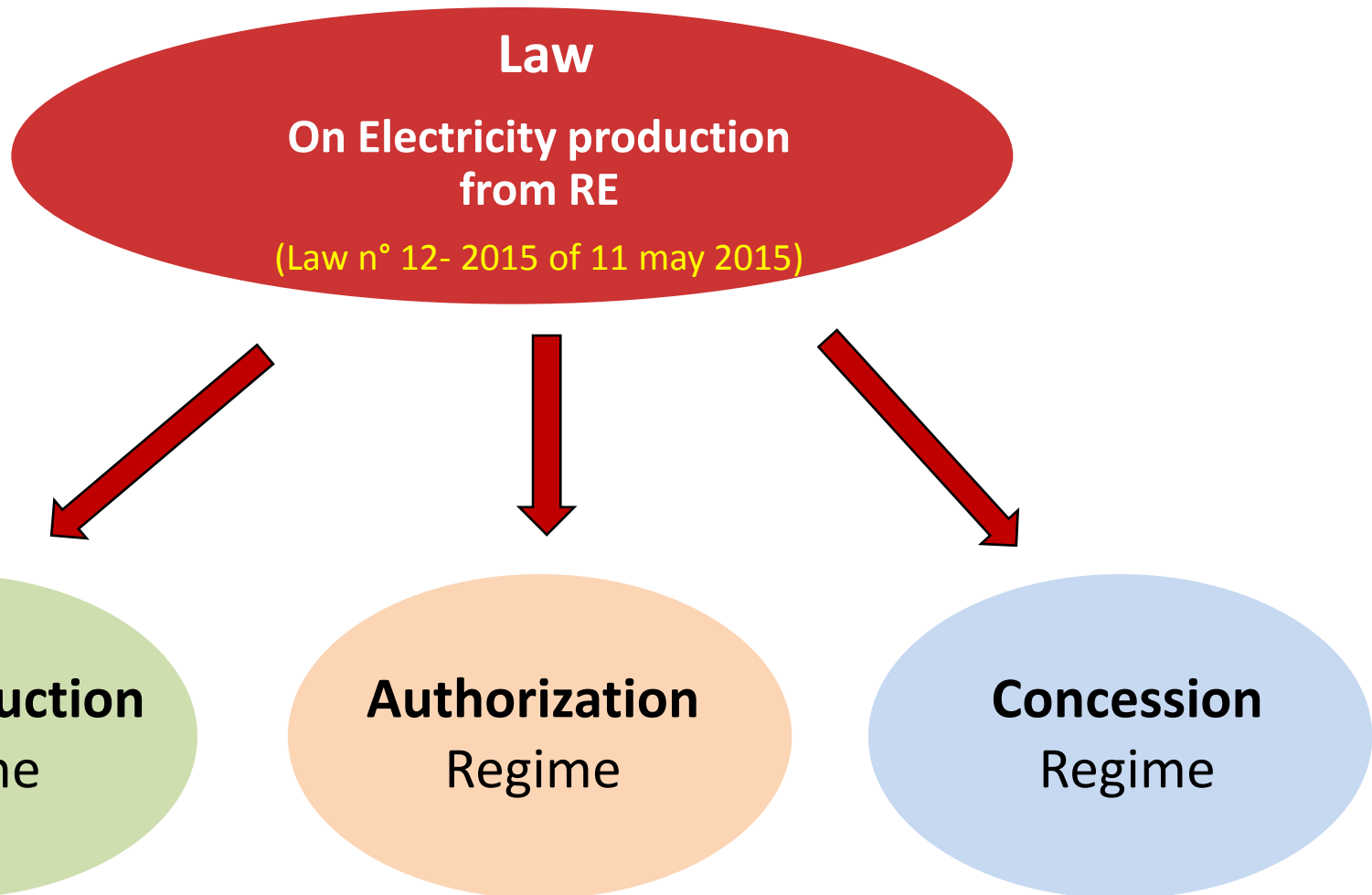
**Dec. 2017**  
National Conference  
on acceleration of  
PST implementation

**2018**  
Launch of the PCA  
& the RCT for  
concessions

**Mar. 2018**  
Declaration results  
1<sup>st</sup> Call of Projects

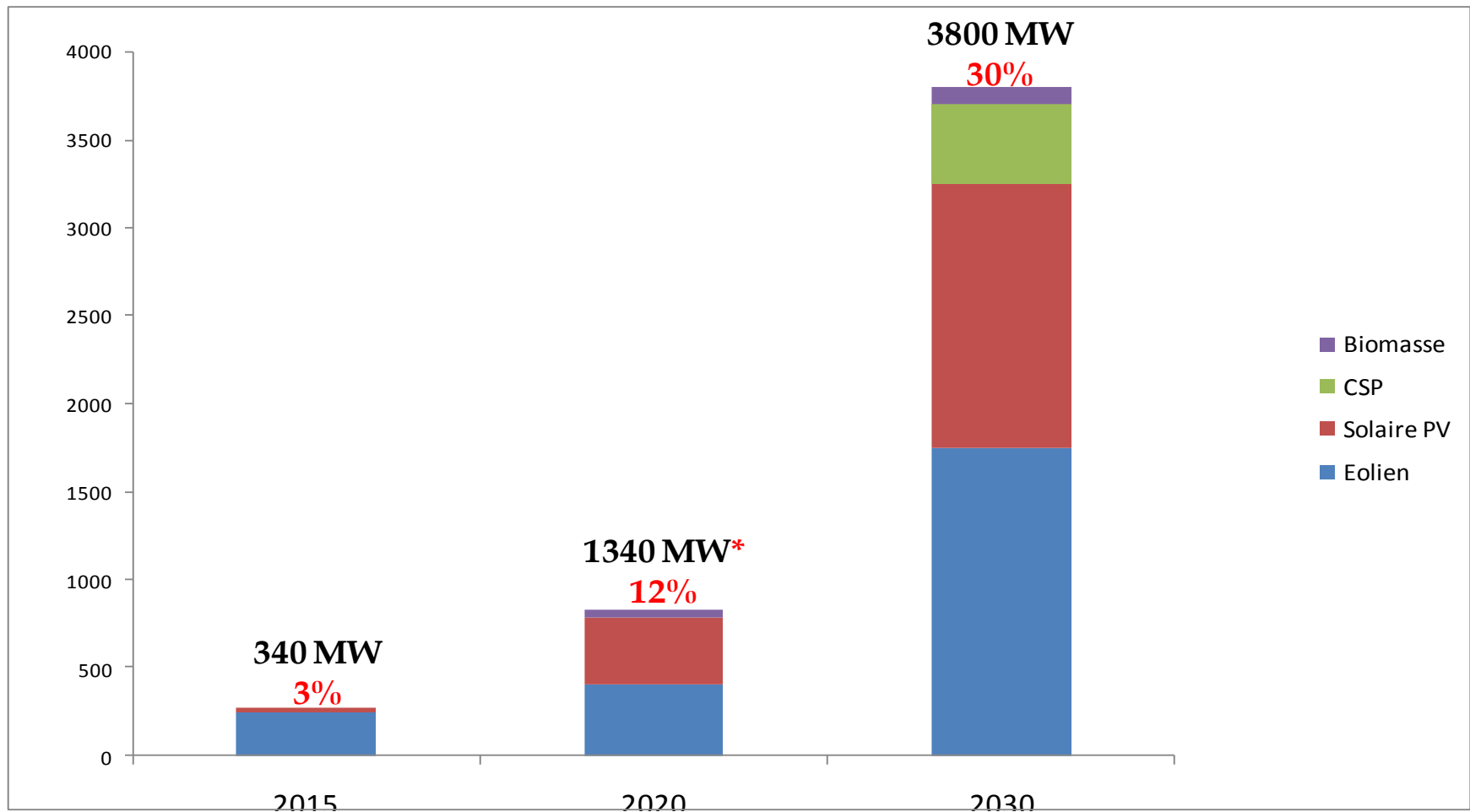
# Main achievements in the wind energy sector

## The different regimes of the law on RE



# Main achievements in the wind energy sector

➤ The Tunisian Solar Plan foresees a contribution of RE in the electricity mix of 30% by 2030, which constitutes an ambitious objective and a major challenge to overcome.



\* For 2020, capacities have been revised upwards

## State of RE programs in progress

- Publication of the Notice (N ° 1/2016) fixing the RE and wind power capacities by regime for the period 2017-2020
- Publication of the Call for Projects for the authorization regime with a wind capacity of **150 MW** over two phases
- Adoption by the GoT of an action plan to accelerate the implementation of RE projects
- Prequalification Call for Tenders will soon be launched under concessions for wind projects with a total capacity of **300 MW**
- Recruitment of a Consultancy firm and contribution of the IFIs to assist the MoE on the whole process of the Concessions regime
- A provisional schedule for the completion of projects under concessions is being prepared by the MoE, to inform developers about the next steps.



# The announcement of the National RE Plan (Avis N°1/2016)

Objectives 2017-2020:

**1000 MW**

Objectives 2021-2025:

**1250 MW**

## Breakdown of the 1000 MW (2017-2020) by Technology and by Regime

	Solar PV (MW)	Wind (MW)	Total (MW)
<b>STEG</b>	300	80	<b>380</b>
<b>Concessions</b>	100	100	<b>200</b>
<b>Authorizations</b>	120	90	<b>210</b>
<b>Autoproduction</b>	130	80	<b>210</b>
<b>Total</b>	<b>650</b>	<b>600</b>	<b>1000</b>

## State of RE programs in progress

➤ Expected results for March 15th 2018 of the call for projects for the authorization system , but “Wait and See”.

RE Technology	Total capacity (MW)	Max. capacity by project (MW)	Deadline for submission of applications	Expected Results
Wind	60	30	Nov. 15, 2017	March. 15, 2018
	10	5		
	60	30	Aug. 15, 2018	Dec. 15, 2018
	10	5		
Solar PV	60	10	Nov. 15, 2017	March. 15, 2018
	10	1		

# State of RE programs in progress

## Accelerating the implementation of RE projects

Measures to accelerate the implementation of RE projects have been adopted by the GoT, the main ones are the following:

- The launch of the Pre-Qualification Call for Applications for the concessions regime before mid-April 2018;
- The increase of the capacity of the concession projects to 700 MW;
- The revision of the PPA and the MoP for the Authorization regime;
- The simplification of procedures for projects of less than 1 MW by adopting a system of specifications instead of the authorization system;
- The establishment of regulatory authority in the electricity sector before the end of 2018.

# The Revised National RE Plan for the period 2017-2020

**Objectives 2017-2020:**

**1570 MW** (against 1000 MW)

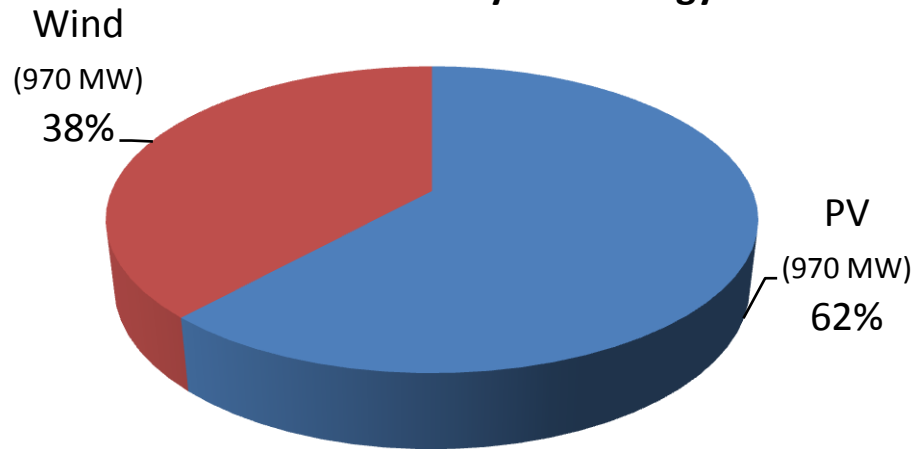
## Breakdown by Technology and by Regime

	Solar PV (MW)	Wind (MW)	Total (MW)
<b>STEG</b>	300	80	<b>380</b>
<b>Concessions*</b>	400	300	<b>700</b>
<b>Authorizations</b>	140	140	<b>280</b>
<b>Autoproduction</b>	130	80	<b>210</b>
<b>Total</b>	<b>970</b>	<b>600</b>	<b>1570</b>

**\* Pre-Qualification Call for Applications will soon be launched**

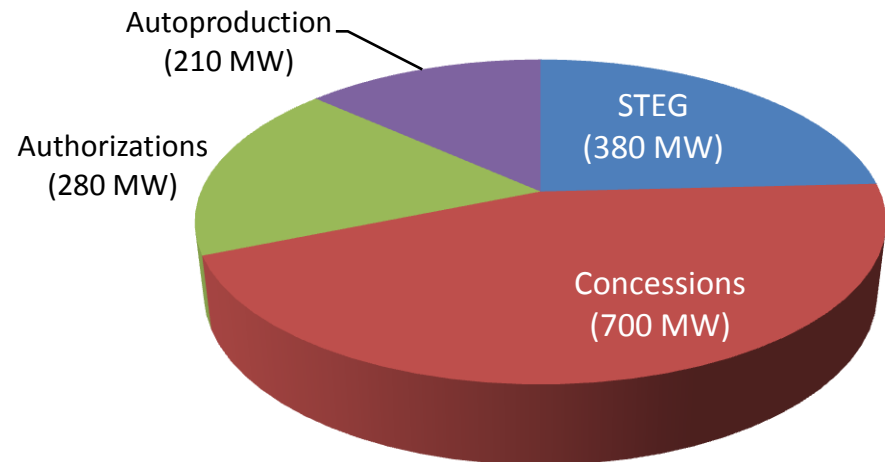
# The Revised National RE Plan for the period 2017-2020

**Breakdown by Technology**



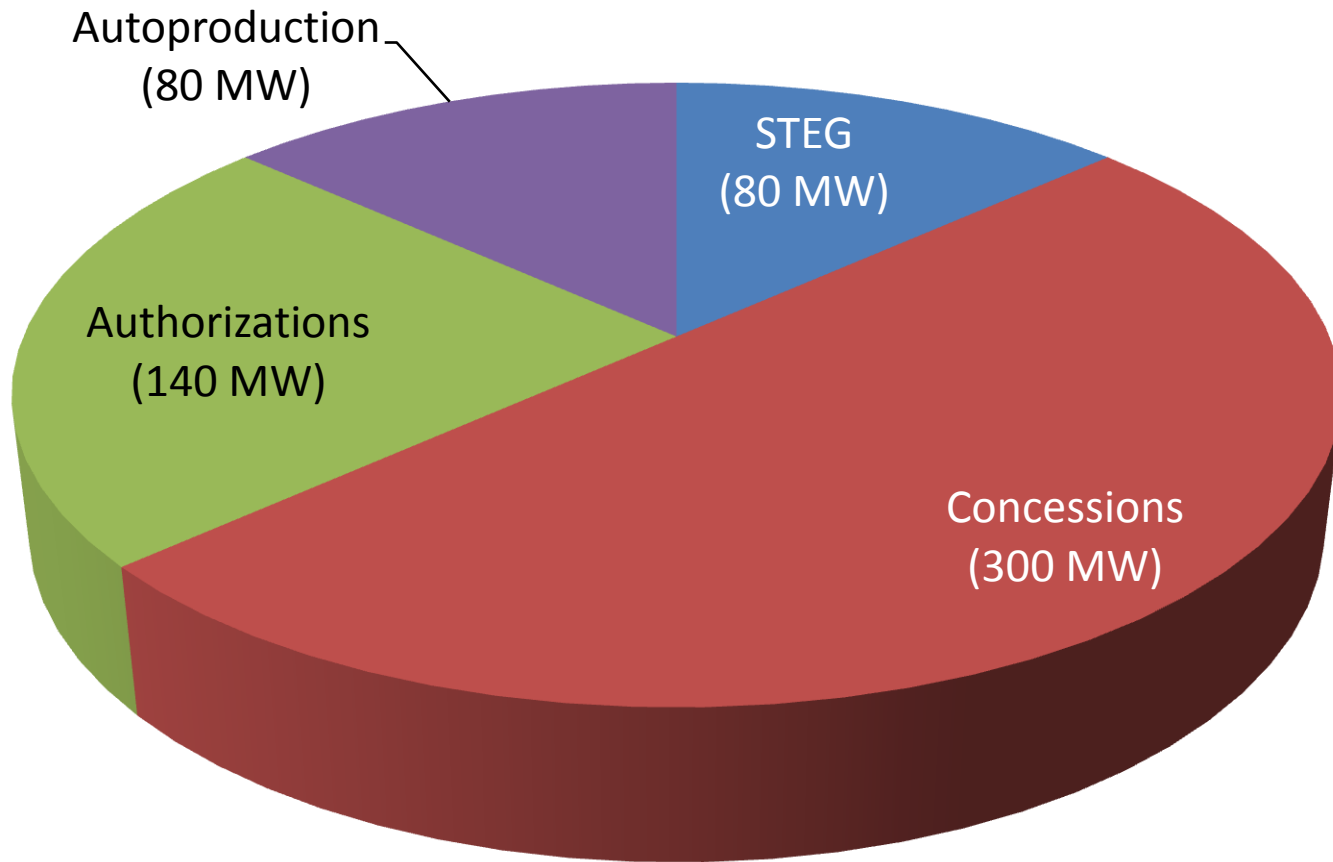
**Total capacity: 1570 MW**

**Breakdown by Regime**



# The Revised National RE Plan for the period 2017-2020

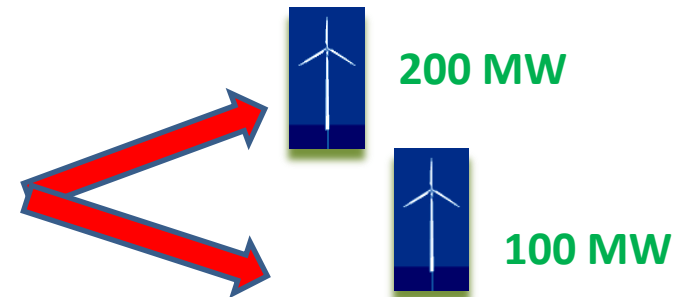
## Breakdown of the 600 MW wind energy



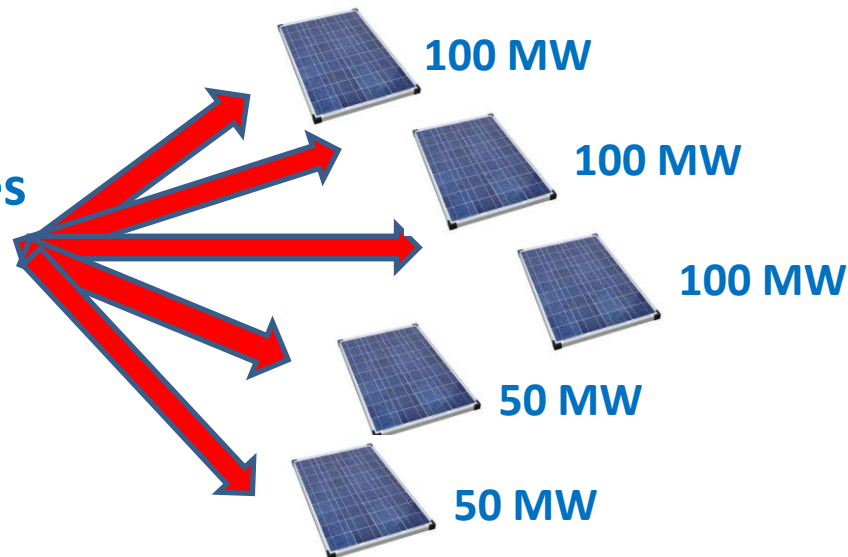
# State of RE programs in progress

For the Concessions regime, the Pre-Qualification Call for Applications (PCA) is scheduled for mid-April for the two technologies:

- **Wind: 300 MW on 2 separate sites**

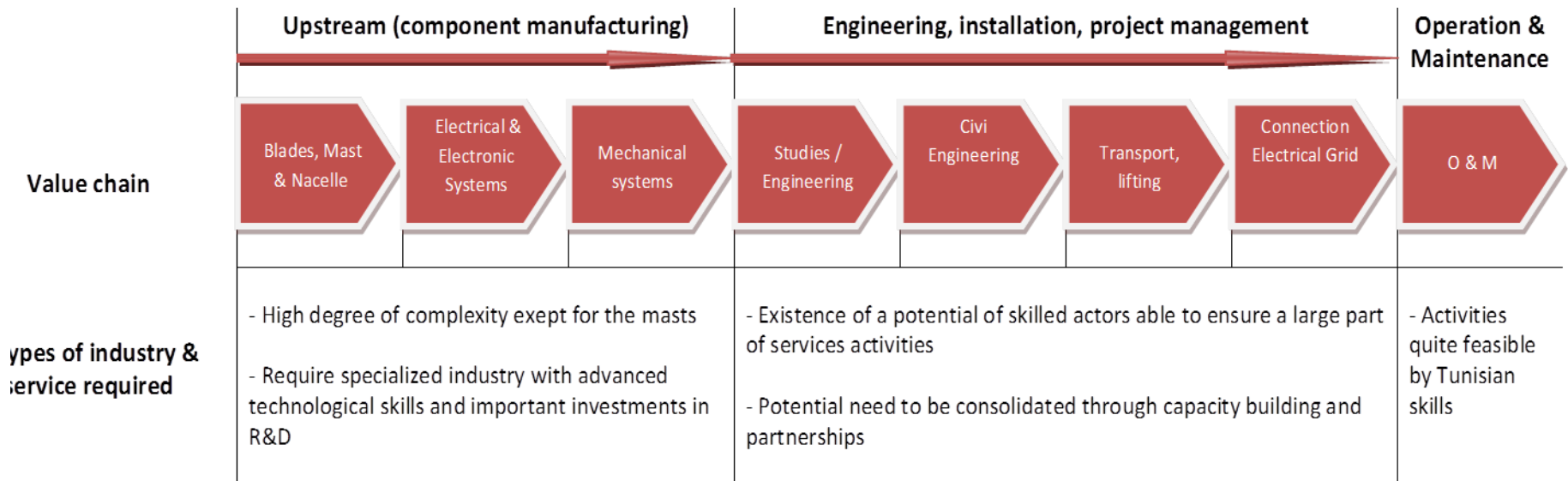


- **PV: 400 MW at 5 sites**



# Opportunities for local value creation

- Ambitious targets for the wind program, especially for concessions, provide an opportunity for the creation of local value of the wind industry in Tunisia;
- The UNDP study on the potential for local value creation of the Tunisian industry in the wind energy sector identified a series of opportunities:
  - There is already a real potential for component manufacturing and services that can partially meet the needs of the wind energy industry







**Thank you**

## Relevant questions and answers

**Q1 : What are the main challenges to wind energy development in Tunisia? How could they be mitigated?**

**R1 : The main challenges for the development of wind energy in Tunisia are:**

- The identification of sites with good wind potential and the studies to be carried out on these sites: So, It will be necessary to secure these sites from a land point of view and to coordinate the studies on these sites between the MoE and the Developers.
- The problem of absorption of wind power by the national grid: So we have to Ensure a good quality of the network and provide for storage of wind generation during the period of low demand (in the night). Studies are underway by STEG to improve the quality of the network and also for the construction of a pumped storage.
- The connection of wind farms to the network: It will be necessary to specify the role of each one between STEG and the Developers
- The contract for the purchase of electricity by STEG (PPA): We must ensure the bankability of this contract.

## Relevant questions and answers

**Q2 : What role is the private sector expected to play in the development of Wind energy in Tunisia?**

**R2 : The private sector has a large role to play in the development of RE in general and wind power in particular, since from the 600 MW foreseen for the period 2017-2020, 520 MW (87%) will be generated by the private sector under the three regimes: Concession (300 MW), Authorization (140 MW) and Autoproduction (80 MW).**

## Relevant questions and answers

**Q3 : Why build wind power and not another gas plant or a coal plant?**

**R3 : The development of RE is one of the main axes of the energy policy of Tunisia and is a real lever for securing and diversifying the country's energy supply.**

**Tunisia has opted for an energy transition that will allow it to gradually change the model of energy production and consumption to a cleaner one and more respectful of the environment. And so coal has no place in this transition. The gas is already there and we continue to use it as it is considered a relatively clean energy.**

## Relevant questions and answers

**Q4 : Do you anticipate that local businesses could benefit from the development of wind power in Tunisia? Could new business be created? If so, in which sectors?**

**R4 : Yes, many local businesses could benefit from the development of wind energy. Indeed, given the Tunisian industrial fabric and the existence of service delivery operators, the value chain of the wind industry offers through its various links, real opportunities and a real potential for local value creation. upstream for the manufacture of components, but especially downstream of the chain (studies, engineering, installation, project management, operation and maintenance).**