



Wind energy development by Self Producers in Tunisia

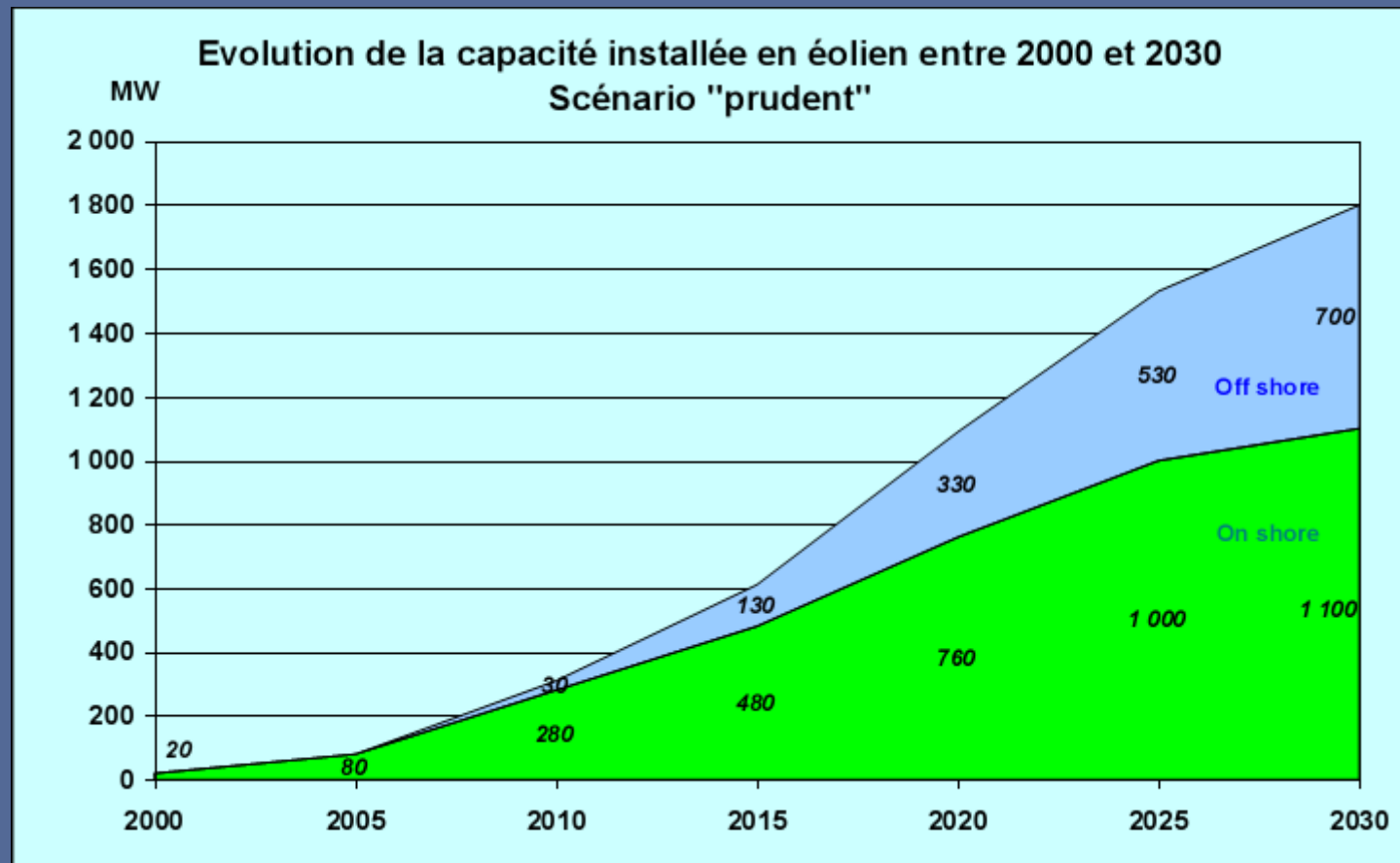


Amor Ounalli & Nafâa BACCARI-ANME (TUNISIA)

General context of wind in Tunisia

- ❖ law makes it possible at the Tunisian State to grant independent producers concessions of electricity production for its exclusive sale to the national utility (STEG);
- ❖ There is not institutional framework specific to the wind energy development;
- ❖ There is not feed in tariff as in Germany, ...;
- ❖ That partly explains the weak development of wind energy in Tunisia

Potential of Wind in Tunisia



Source : Etude Stratégique Renouvelables 2004

Confirmation: Wind atlas and capacity of network

Wind program (2007-2011)

- Extension of the existing park of Sidi Daoued to 55 MW
- Installation of 120 MW wind park (Bizerte)
- Wind energy development by the self producers



Self production electricity : New opportunity to develop wind in Tunisia

Privatization of some large energy consuming companies bought by great international groups

- ❖ International competitiveness by the optimization of the energy costs
- ❖ Reduction of CO2 emission to satisfy the quota imposed by the countries of origin

Self-production of electricity :

New opportunity to develop wind in Tunisia

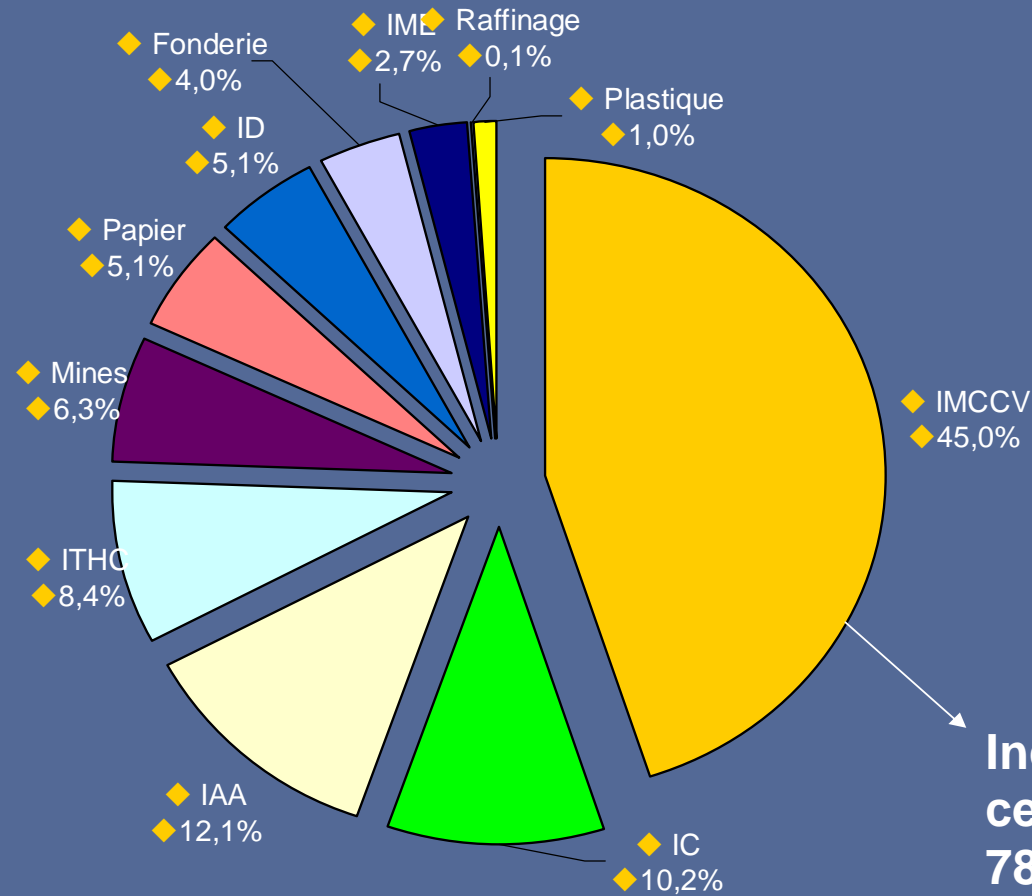
Significant potential on the level of
the large electricity consuming companies

- Electricity consumption of the industrial sector rose in 2005 to more than **330 ktep of final energy**
- That is equivalent to **40% of the electricity consumption** of the whole sectors .

◆ Self-production of electricity :

◆ New opportunity to develop wind in Tunisia

◆ Structure de la consommation électrique des assujettis par branche



Including 70% by cement factories: 780 GWh

Development Program of Wind at IGCElec.

OBJECTIVE:

Installation of wind parks in order to produce electricity by the Large Energy Consuming Industries (IGCElec.) to satisfy part of their requirements in electricity.



Development Program of Wind at IGCElec.

Expected results:

- Fossil energy consumption reduction of the concerned companies;
- Reduction of the subsidy granted by the State to the energy sector;
- Reduction of the CO2 emissions;
- To profit from the Clean Development Mechanisms

60 MW	Economie d'énergie	45 000 tep/an
	CO2 évité	100 000 t/an

Development Program of Wind at IGCElec.

CONCERNED COMPANIES:

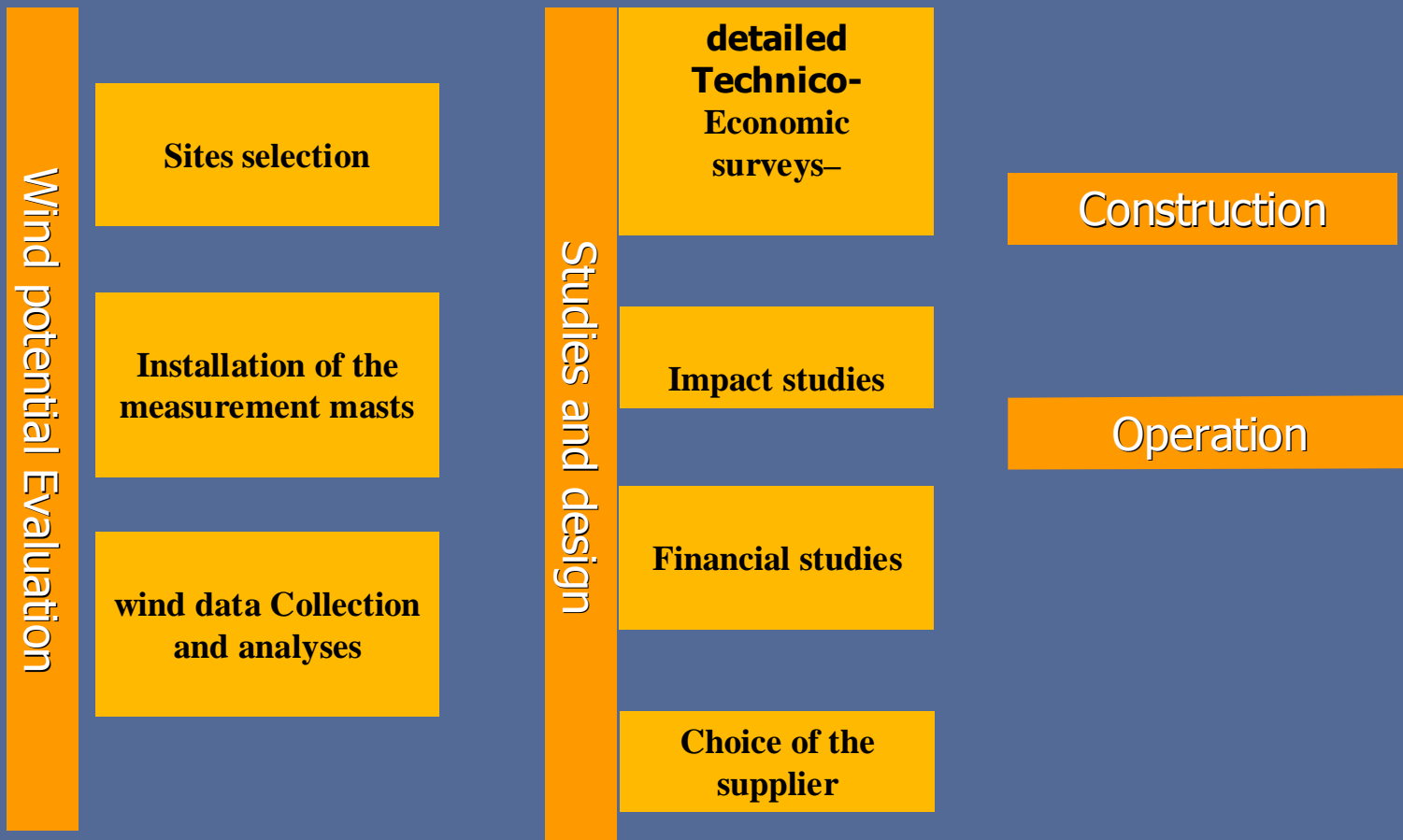
- Cimenterie d'Oum Klil
- Cimenterie de Bizerte
- Cimenterie de Jbel Ouest
- Ciments Blancs (SOTACIB)
- Cimenterie de Gabes
- El Fouledh
- STIR
- CPG

Tripartite conventions were signed between ANME-STEG-Own producer on February 12, 2008



Development Program of Wind at IGCElec.

STEPS OF THE PROJECTS:





Development Program of Wind at IGCElec.

ROLE OF The ANME:

To accompany and advise the IGCE in various phases:

- Preliminary evaluation of the sites.
- Installation of the measurement mâsts and collection of the wind data;
- Mobilization of experts;
- Giving technical support to studies implementation;
- Reinforcement IGCE capacity building in the field of wind energy.

To accompany and advise the IGCE to benefit from the financings offered by the CDM:

- Reinforcement IGCE capacity building of in the field of CDM,
- Development of the Project PIN and presentation of the project to the Designed National Authority,
- Elaboration of the Project Document Design (PDD)
- Promotion of the project at the international level (Units of emission reduction)

Development Program of Wind at IGCElec.

PROGRESS REPORT:

sites Evaluation Janv. 2007	Data analyzis; Availability of the grounds; Accessibility, Evacuation of energy, Sites of measurement masts, constraints...
Installation of measurement masts	Masts installed for 5 IGCE including 4 in collaboration with the GTZ
Wind data gathering	In progress (since June 2007)
Reinforcement of local capacity building	Analysis and exploitation of wind data with the support of GTZ



Development Program of Wind at IGCElec.

New Decisions (CM of January 15, 2008):

To authorize the companies producing electricity from wind for their self consumption:

- To transport the electricity produced by the national grid, from its wind park to the point of consumption, and thus using a tariff fixed by the Ministry in charge of energy ;
- To exclusively sell the excess of the energy produced to STEG within a limit of 30% of the annual production of the wind park at the high voltage electricity tariff.

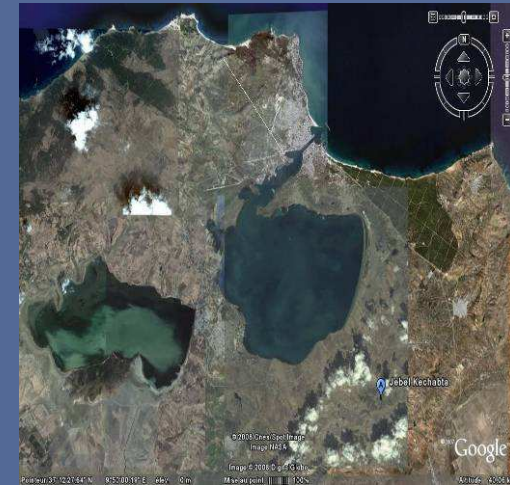
Development Program of Wind at IGCElec.

Impacts of New Decisions

- Possibilities given to IGCE to install their wind parks in the best wind sites;
- To exploit the wind parks at 100% capacities (even when the IGCE production activities stop)

→ To improve the economic profitability of the investments

Bizerte / Cap Bon...: Facteur d'utilisation des parcs > 30%





Thank you

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