



# Belated French RES-E take off

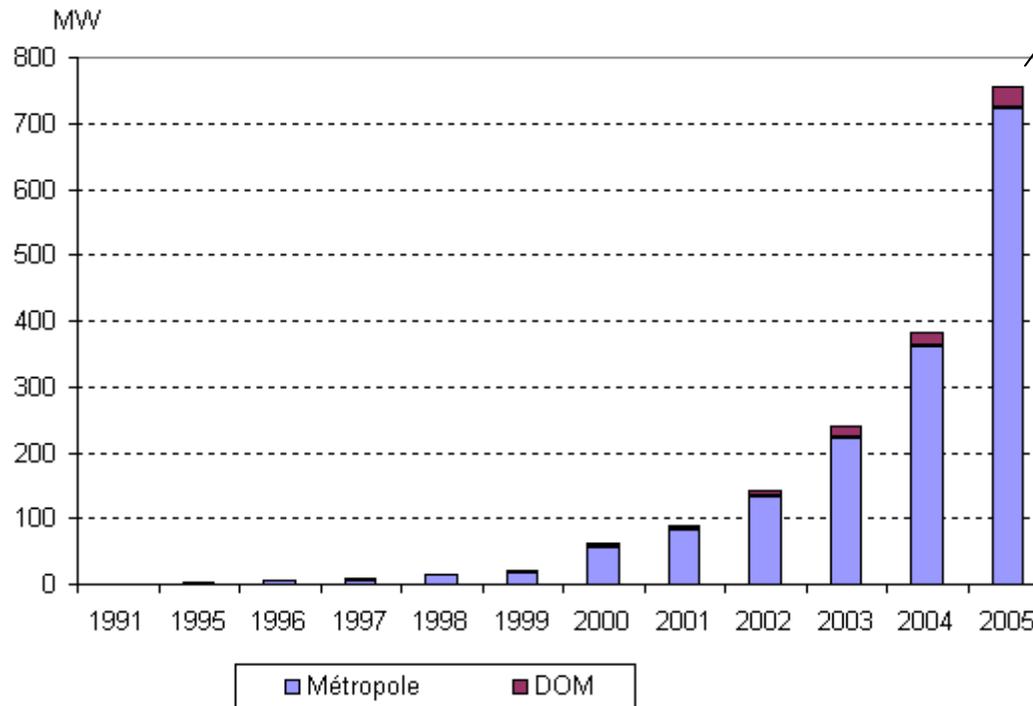
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- In order to respect the French commitment of the 2001 directive on RES-E (5, % share of new RES-E), the capacity new RES-E should have to be between 10000 à 14000 MW à l'échéance 2010.
- In 2002 France have only very modest installed RES-E capacity of 150 MW in windpower , the most developed RES-E technology
- **Explanation of the lateness** by nuclear option and influence of the national power utility:
  - Low stake of industrial policy
- **Present take-off of installed capacities in wind power**
  - New focus on bio-electricity (biogas)

## French windpower development



+ 550 MW in 2006

+ 2500-3000 MW in  
the administrative  
tube

The most probably  
6000 MW in 2010

**Énergie éolienne raccordée au réseau électrique**

## The first two steps of the French RES-E policy:

- **1995 under right-wing government, despite national electric opposition**
  - **Bidding instrument**
  - Windpower : program Eole 2005 : goal of 500 MW
  - Modest Bidding programm for biogas RES-E in 2000
  - Feed in tariffs for CHP
- **2001 under socialist, communist and green coalition: adoption of FIT**
  - Decree of creation of generous feed-in tariffs for different technologies
    - limit of project capacity: 12 MW legacy of the former decentralised limited and EDF's purchase obligation
  - **FIT Design** with
    - **sliding scale tariffs** for the successive new projects,
    - two steps tariffs on the lifetime of the equipment (5 years , then 10 years)
    - Revision after 1500 MW of installed capacity
  - **Complementary tool : tendering for large scale projects in on-shore windpower, off-shore windpower and new technologies (biofuel):**
    - Tender in 12. 2003 for 500MW on shore and offshore/ 200 MW biomass/ 50 MWbiogas and in 2005 tender on CHP biomass
    - Selection in 2005 of 280 MW on shore (7 proj.), 105 MW off shore (one project), 216 MW biomass (14 projects): mean bidding price 86€/MWh
  - Financing of the RES-E cost by tax on every kWh going to the public service funds

# Main barriers to projects

Numerous candidates in 2003 : 12000 MW

## 1. **Very long learning in planning and licensing for**

- Numerous administrative controls
- Social acceptability and lack of procedures of local dialog
- Diverging attitude of local authorities in different regions
- No law on planning as in Denmark and Germany
- So administrative costs and high risk on projects: important rate of refusal and

## 2. Quite high cost of connexion tariffs for small units

But no problem with balancing costs with the help of purchase of obligation by EDF

## 3. Classical barriers in the fields where needs of coordination with other policies

(agriculture, forestry, waste management)

## 4. Insufficient level FIT for some technologies: biogas, methanisation, forestry waste

# Adaptation of RES-E policy in 2005

- Since 2003 under right wing government, Large energy policy debate and vote of an energy law in July 2005
- Review of the FIT tariffs with stakeholders
  - decree in July 2006 and improvement of tariffs
  - Extension of the first period of high tariffs from 5 years to 10 years for windpower
  - Off shore tariffs
  - Adjustment of biogas and PV tariffs (doubling)
- And smart definition of the obligation to purchase (from mid 2007):

	<b>2005 tariffs</b>	<b>2005 New technologies</b>	<b>2001 tariffs</b>
<b>Windpower FIT 2005</b>	<p>-on shore : <b>8,2 c€/kWh</b> during 10 y, -puis entre <b>2,8 et 8,2 c€/kWh</b> pendant 5 ans selon les sites. -</p>	<p><b>2005</b> <b>off-shore : 13 c€/kWh</b> during 10 y, puis entre <b>3 et 13 c€/kWh</b> pendant 10 ans selon le sites.</p>	<p><u>2001</u> <b>8,38 c€/kWh</b> (during 5 years, puis <b>3,05 à 8,38 c€/kWh</b> pendant 10 ans selon les sites</p>
<b>Biogas/ méthanisation</b>	<p><b>7,5 et 9 c€/kWh</b> + premium for energy efficiency comprise between <b>0 - 3 c€/kWh</b>, + premium to méthanisation <b>2c€/kWh</b></p>		<p><b>4,6 c€/kWh</b> + premium to energy efficiency  <b>0- 1,2 c€/kWh</b></p>
<b>Biomass and animal wastes</b>	No adaptation		<p><b>4,9 c€/kWh</b> + premium to energy efficiency <b>1,2 c€/kWh</b></p>
<b>PV</b>	<p><b>30 c€/kWh</b>, + prime d'intégration au bâti de <b>25 c€/kWh</b></p>		<p><b>15,25 c€/kWh</b></p>

## Smart redefinition of the obligation to purchase

- Every RES-E equipment set in specific zones defined by the local and district communities
- so-called « Zones de développement éolien » by order of the prefect
  - Improve the local dialog
  - Direct Involvement of local community
  - Integration of the issue of land scaped conditions by the developers

# Future problems

- Success :
  - Importance of involvement of the main French energy companies (EDF, GDF, Total) + independent developers-producers with foreign companies (ENEL, etc)
  - Banks' Specific financial funds
- **But hostility of some major players** (regulator CRE, staff of ministry, TSO, nuclear industry) to the FIT system :
  - too high tariffs , too costly (estimation of 600 M€ in 2010 by Regulator)
  - Preference for quotas: no externalisation of RES-E cost
  - Some politicians: focus on other RES : wood, solar thermal
- **But too large focus on windpower:**
  - In mid-2005 **on 3100 MW of demand of connexion, only 110 MW on other techno.**
  - how to skip effort to other RES-E technologies?