

## **PROJECT BRIEF**

# **EU-India Wind Energy Network (EIWEN)**

**To**

**EU-India Economic Cross Cultural Programme (ECCP)  
International Workshop 2005**

**13 December 2005, Delhi**

**Co-funded by  
The European Commission  
under the  
EU-India Economic Cross Cultural Programme**

**EIWEN**

# PRESENTATION STRUCTURE

- Project outline
  - Objectives
  - Activities
  - Deliverables
- Current activities (till end 2005)
  - SMEs to SMEs collaboration
  - Financial intermediation
  - Knowledge and information exchange

# PROJECT CONSORTIUM

3 European and 2 Indian project partners

- PROJECT COORDINATOR: ECN
  - 1) European Wind Energy Association (EWEA), Belgium
  - 2) Risoe National Laboratory (Risoe), Denmark
  - 3) Confederation of Indian Industry (CII), India
  - 4) Indian Wind Turbine Manufacturers Association (IWTMA), India

## WHAT THIS PROJECT IS ABOUT ?

### Ensure

- sustainable & economically competitive development of WE
  - in India, Europe and the World
- reduce cost of wind generated electricity or increase its value
- greater off-take of WE
  - in India, Europe & the World

### Develop

- a network for enabling direct partnerships
  - between various WE actors & players in Europe & India

# MAIN ACTIVITIES

- Enable knowledge and information exchange about best practices in policy, O&M and technical issues, and facilitate collaborative research/commercial projects.
- Facilitate research establishments and industry in India & Europe to interact with each other to bring about knowledge creation and/or commercialisation of research findings.
- Create awareness among financial institutions for greater participation in the Indian wind energy sector
- Identify the barriers of EU-India trade policy in the wind energy sector and suggest new policy initiatives to remove the involved commercial and regulatory barriers

# PROJECT BENEFICIARIES

## DIRECT

- Industry & SMEs, design bureaus and consultancy firms
- Research institutes, universities, policy & regulatory bodies
- Wind energy associations
- Financial institutions
- Investors

## INDIRECT

- Utilities
- Insurance companies
- Local people (through new employment opportunities)

# DESCRIPTION OF MAIN ACTIVITIES

Currently being undertaken

- Phase I Exploring SMEs to SMEs collaboration
- Phase II Developing a forum to facilitate financial intermediation {incl. 1-day seminar @ Brussels}
- Phase III Establishing a platform for knowledge and information exchange and co-operation
- Phase IV Exchange missions to Europe and India
- Phase V Culminating workshop for disseminating the project findings {at Chennai}

# CURRENT ACTIVITIES (till December 2005)

- Phase I: Exploring SMEs to SMEs collaboration  
Lead: IWTMA (India) & EWEA (Europe)
- Phase II: Developing a forum to facilitate financial intermediation  
Lead: CII(India) & EWEA (Europe)
- Phase III: Establishing a platform for knowledge and information exchange and co-operation  
Lead: ECN (Europe) & CII (India)

## Phase I: SMEs to SMEs Collaboration

### ACTIVITITES

- Inventory of all actors and players
- Policy research
- Internet portal creation

# Opportunities for Indian firms/organizations

- Design and engineering
  - Good availability of technical skills (aero-elasticity, aerodynamics, structures, Electro-techniques etc.)
- Measurement and testing services
  - Shortage of testing facilities in Europe
- Component/WT manufacturing
  - Higher productivity & lower labor cost
- Ability to design & manufacture WT's & components to local needs. For e.g..
  - Std. WT's designed for 20 emergency stops/yr.. Indian cond. have 5-10 times this threshold due to grid shutdowns
  - Majority of WT's installed in India <500kW...availability of spares an issue for many EU cos. stopped small WT production lines..for focus is on larger multi-MW WT's
- Information accessibility:

Thereby, be better informed about alternative options for sourcing, joint production/partnership, etc.

# Opportunities for European firms/organizations

- Ability to overcome capacity bottlenecks
- Achieve cost reduction both in terms of labour & material
- Provide opportunity to focus more on main business line

## Some of the barriers

- Perceived quality risk..
  - Can be overcome by/when
    - implementing rigorous testing and certification system that which is internationally compatible for both WT's and components
    - More and more Indian firms/org. should get MEASNET, ISO, etc. ratification
    - Indian research/universities take active participation in international projects and/or deliberations like the standards formulation under IEA.
- Lack of adequate interaction between Indian/European research, design and manufacturing firms with Global players...
  - Could be overcome with
    - greater access to information

# EIWEN portal view/structure



EIWEN Project database to be soon available on web

Project Help Desk can be contacted through web

## Phase II: Financial Intermediation

### ACTIVITIES

- Inventory of all actors and players
- Wind Energy Financing Handbook
- 1-day seminar at Brussels (Spring'06)
- Creation of a help desk

## Opportunities for European/Indian investors

- EUROPEAN INVESTORS
  - Potential higher returns
  - Carbon emission reductions allowance certificates
- INDIAN INVESTORS
  - Lower cost of capital
  - Potential additional revenue stream thru' CERs

## Concerns of European FIs

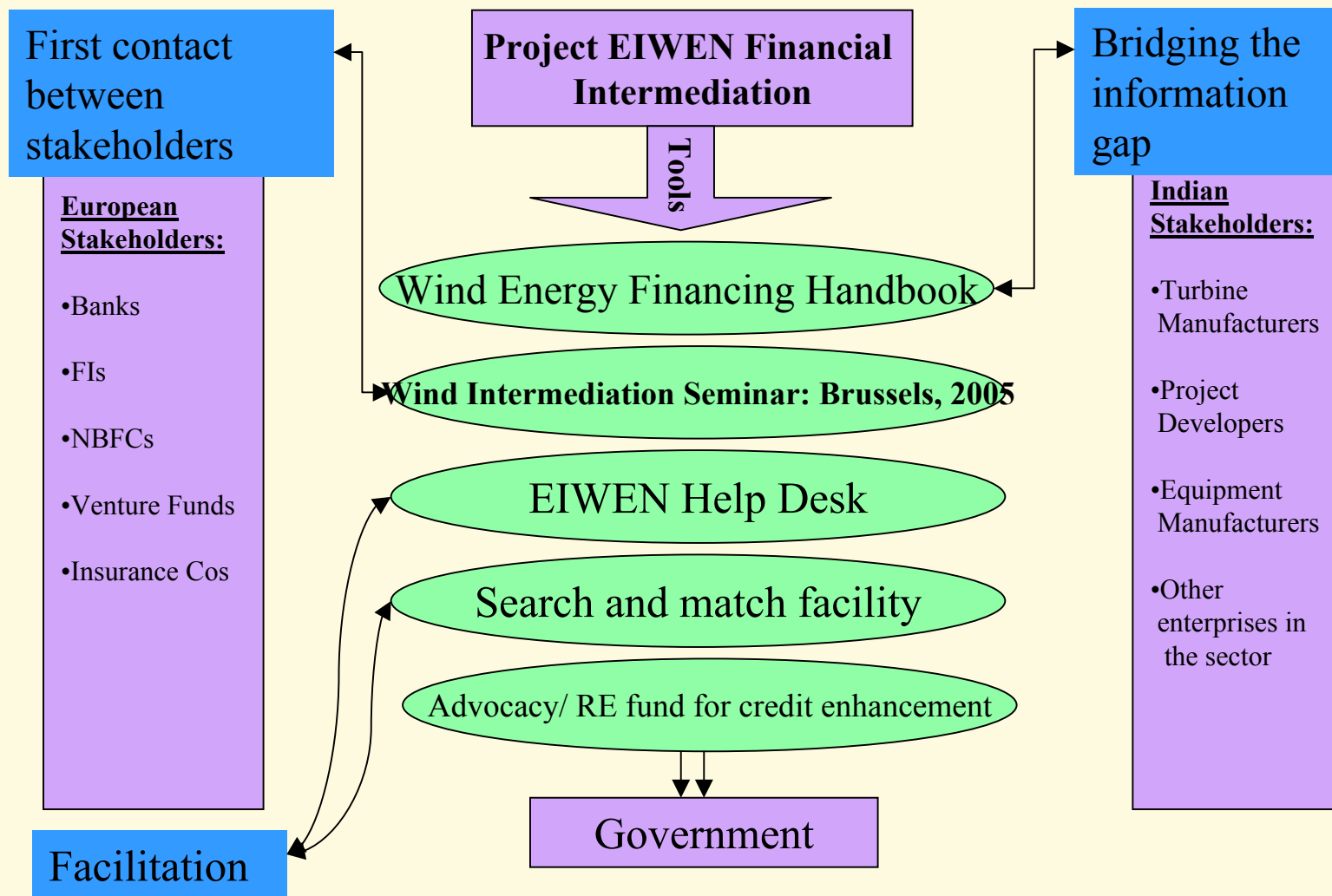
- **REGULATORY RISK**
  - Uncertainty about evolution of tariffs
  - New electricity sector design is unknown
  - Lack of performance incentives
- **PROJECT RISKS**
  - Uncertainty of performance (reliability of wind and turbine output performance)
    - Calibration of anemometers
    - On-site WT performance vis-à-vis certification conditions
  - Construction
  - O&M
  - Grid availability
  - Insurance
- **CREDIT WORTHINESS**
  - Investors
  - Electricity off-taker (SEBs/industrial buyer)

Larger/portfolio of projects more attractive

## Issues involved in assessing country attractiveness by equity investors

- Renewable Infrastructure factors
  - Planning and grid connection issues
  - Access to finance (debt and/or financial markets)
  - Electricity market regulatory risk
  - Power off-take arrangements
- Technology specific factors
  - Current installed base
  - Resource quality
  - Project size
- Others factors
  - Mkt growth potential
  - Tax climate
  - Grants and soft loans availability

# Creating a WIND-WIND proposition between India and Europe



## **Phase III: Establishing a platform for knowledge and information exchange and co-operation**

### **ACTIVITIES**

- Co-operation between European and Indian wind energy association
- Collaborative research and information exchange

# Co-operation between Indian and European Wind Association

- Is needed:
- to act as a forum for the information exchange
- to identify, facilitate and organize capacity building and/or training workshops about the best practices

# Collaborative research and information exchange

- Promotion of collaborative research between Indian and European Universities
- Close association of European Academy of Wind Energy (EAWE) with Indian Research Institutes
- Joint research projects and information exchange

**Thank You**

EIWEN