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**wpd AG**

**Experiences of a Project Developer in  
Latin America**

**TERNA Expert Dialogue 2008**

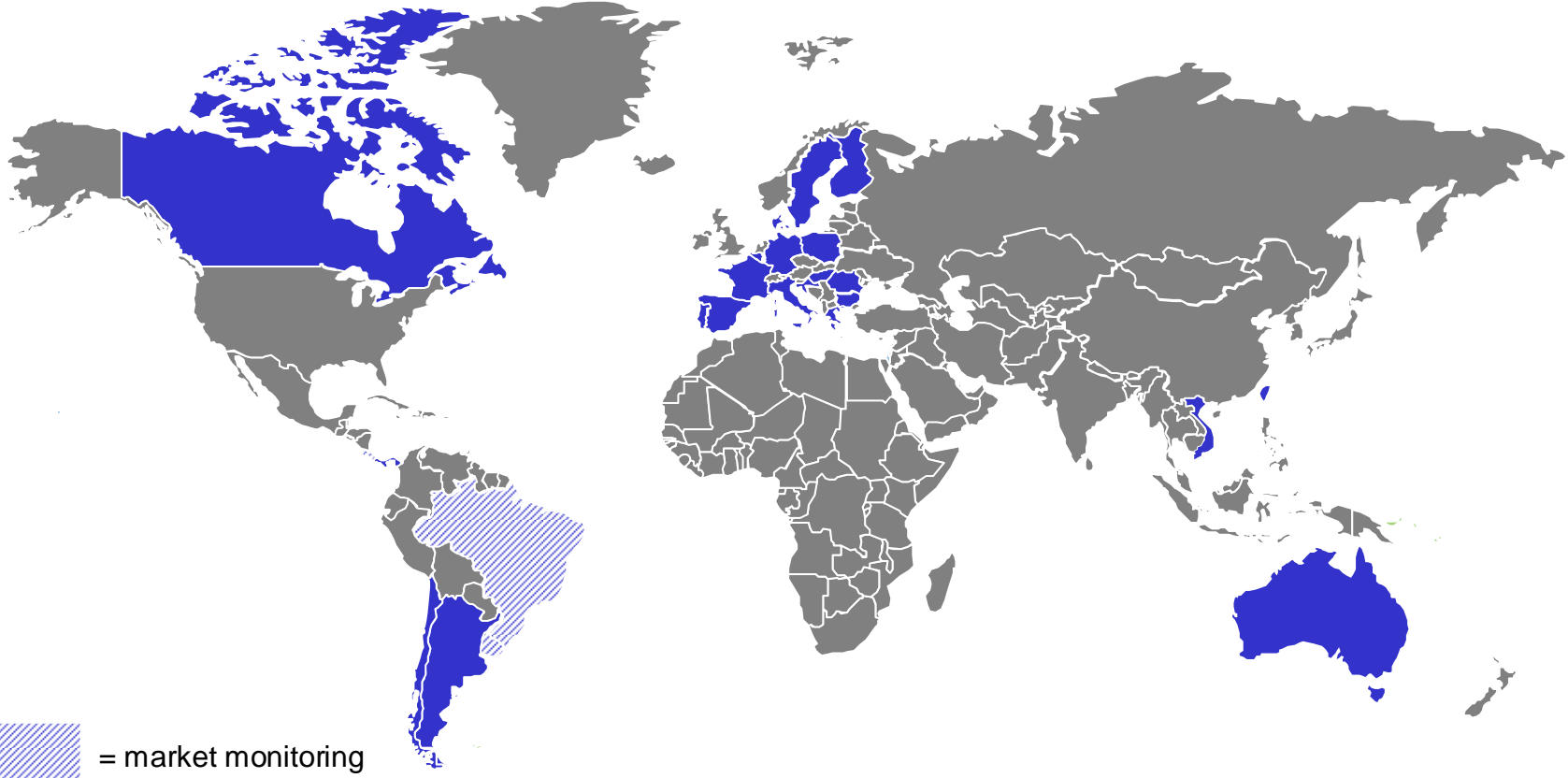
**Berlin, September 18th**

## Company Profile



- Established in 1996, wpd is a worldwide acting Developer, Seller and Operator of wind energy projects.
- wpd offers the complete range of services starting with project development, financing, construction through to operation and management.
- 1,250 wind turbines with a total capacity of 1,750 MW
- More than 300 employees worldwide

# wpd worldwide



 = market monitoring



 = project planning

## wpd in Latin America



- good wind conditions
- strong increase in energy demand
- vast areas

→ Good prospects for wind energy

 = market monitoring  
 = project planning

# Markets in South America

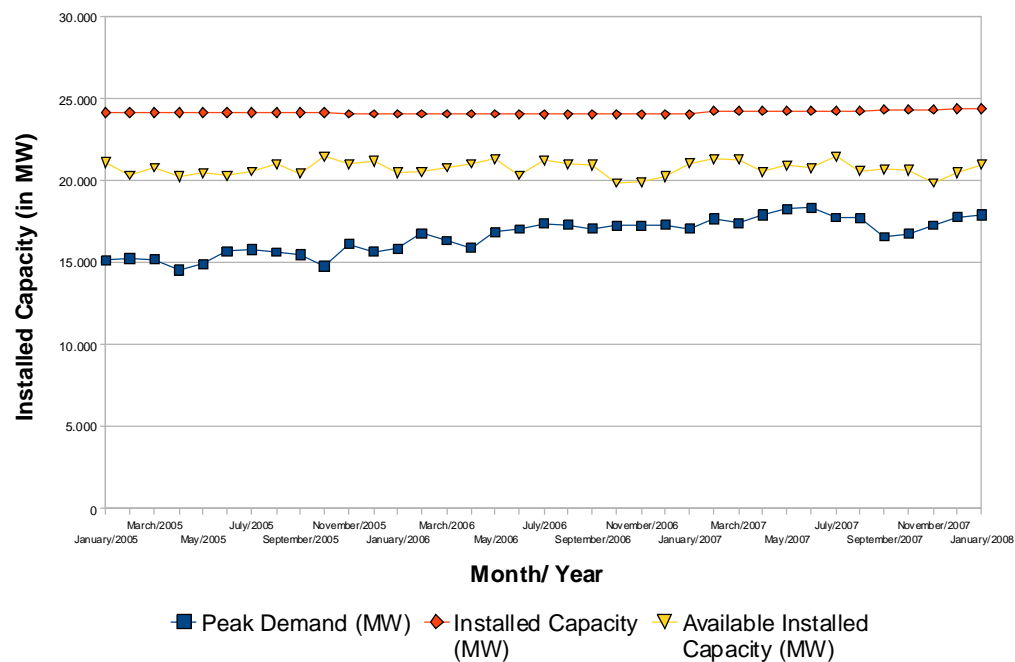


- **Brazil:**
  - hottest market in Latin America due to PROINFA
  - current wind energy capacity: about 250 MW
- **Chile:**
  - on the way to expand renewable energy
  - current wind energy capacity: about 20 MW
- **Argentina:**
  - first efforts for development
  - current wind energy capacity: about 29 MW
- **Uruguay:**
  - request for proposals
  - current wind energy capacity: about 5 MW

# Argentina - electricity



### Installed Capacity vs. Demand



### Electricity Matrix

- Thermal: 54 %
- Hydro: 42 %
- Nuclear: 4 %

➔ Energy shortages are likely in the future

# Argentina - framework



## Political Framework:

- liberalised electricity market
- law 25.019 (1998) and law 26.190 (2006)
  - target: 8% share of renewable energy by 2016
  - tariff: about 5 U\$/MWh on top on revenues
  - tax incentive over 15 years
- in addition, various provincial laws are running or in legislative process

## Price for Electricity:

- 35 U\$/MWh (households)
- 65 U\$/MWh (industry)

## Argentina - grid



Excellent wind regime

but

low infrastructure

## Argentina – current opportunities



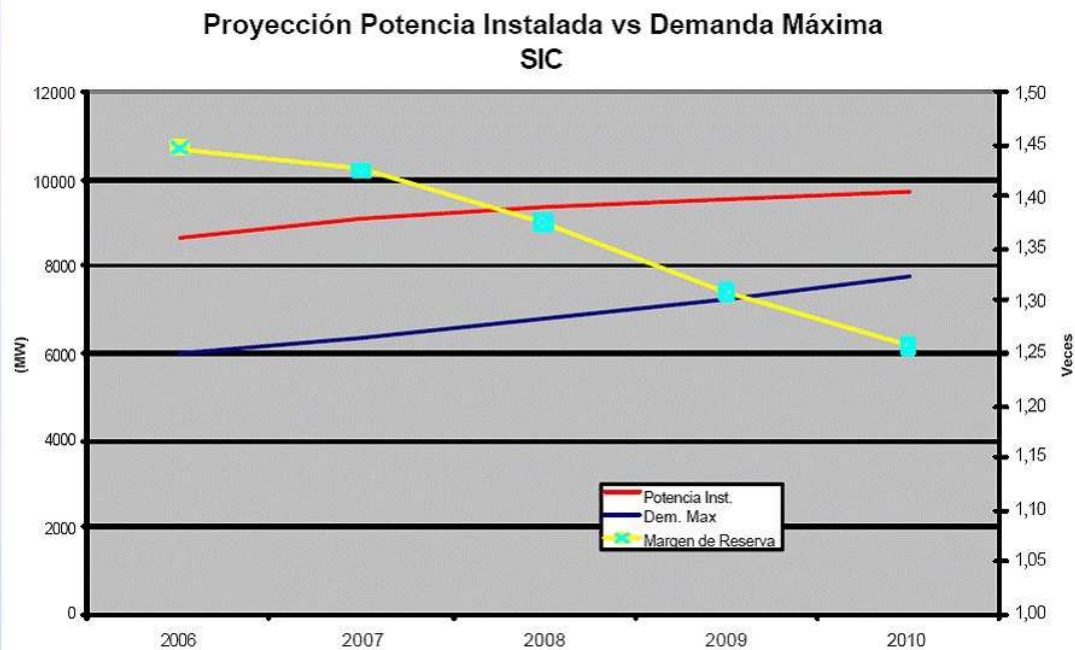
- Increasing political awareness for alternative energy
- Plan “Energía Plus”: penalties for big consumers
- Resolution 269/08: active participation into the electrical market
- CDM (Clean Development Mechanism)

## Argentina – limiting factors



- Short political framework
- Subsidised energy market
- Difficult exploitation of wind spots
- Difficulties in financing

# Chile - electricity



## Electricity Matrix

- Thermal: 60 %
- Hydro: 39 %
- Other: 1 %

➔ Energy shortages are likely in the future

## Chile - framework



### Political Framework:

- liberalised electricity market
  - lowest marginal costs energy sold first.
- law 20.257 (2008) and 19.940 / 2004 “ Ley Corta I ”
  - target: 10% share of renewable energy by 2024
  - tariff: no feed-in-tariff or subsidies for green energy
  - no grid fee if capacity less than 9 MW (20MW)

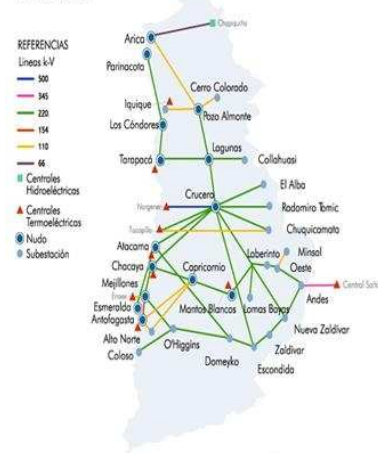
### Price for Electricity:

- 80 - 120 U\$/MWh long term price projections
- 300 U\$/MWh Spot market price in march 2008

# Chile - grid

- Excellent wind regime at the Chilean coast.
- Infrastructure just in few costal regions

Sistema Interconectado del Norte Grande



Sistema Interconectado Central



SING not connected to SIC

## Chile – current opportunities



- Increasing political awareness for alternative energy
- Government funds for alternative energy development
- High energy prices in medium term
- CDM (Clean Development Mechanism)

## Chile – limiting factors



- **Concentrated generation business**
- **Difficult exploitation of wind spots**
- **Difficulties in financing**
- **Few information about alternative energy development funds**

## Summary and Outlook



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Both Argentina and Chile offer one of the greatest potentials for wind energy worldwide.

For a successful and sustainable exploitation of this resource, further efforts should be undertaken:

- Expansion of the existing political framework to a reliable long-term alternative energy market
- Further liberalisation of the energy market
- No subsidies for conventional energy conversion
- Improved investment conditions

**→ Business requires long-term engagement**

**Thank you for your attention!**

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