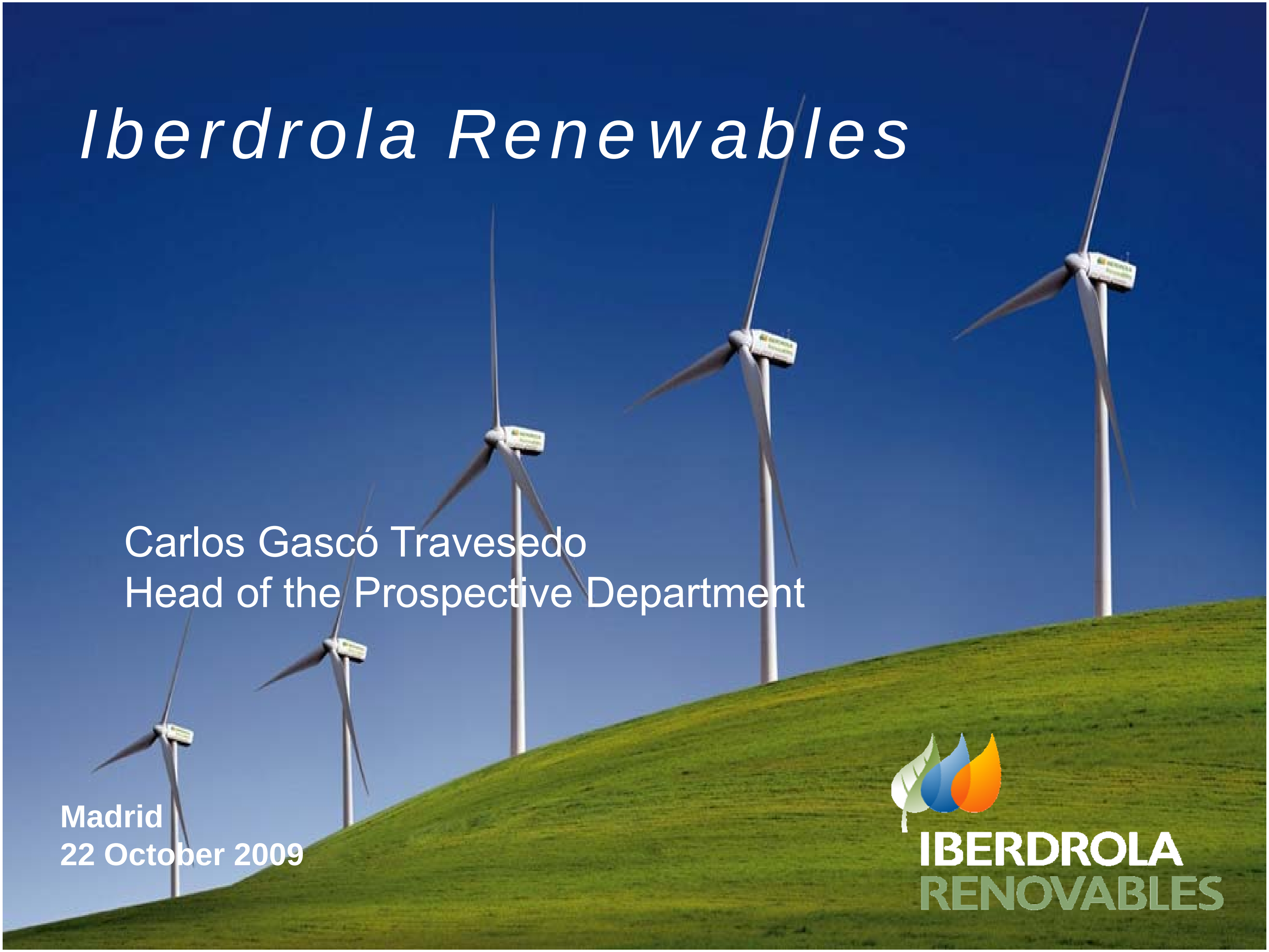

Iberdrola Renewables

Carlos Gascó Travesedo
Head of the Prospective Department

Madrid
22 October 2009

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The Iberdrola Group: a global leader

Installed capacity over 44 GW

Hydro	**10 GW**	**CCGT**	**13 GW**
Wind	**10,5 GW**	**Thermal**	**8GW**
Nuclear	**3 GW**		

Leading wind producer worldwide: 10,5GW installed and a pipeline over 56GW

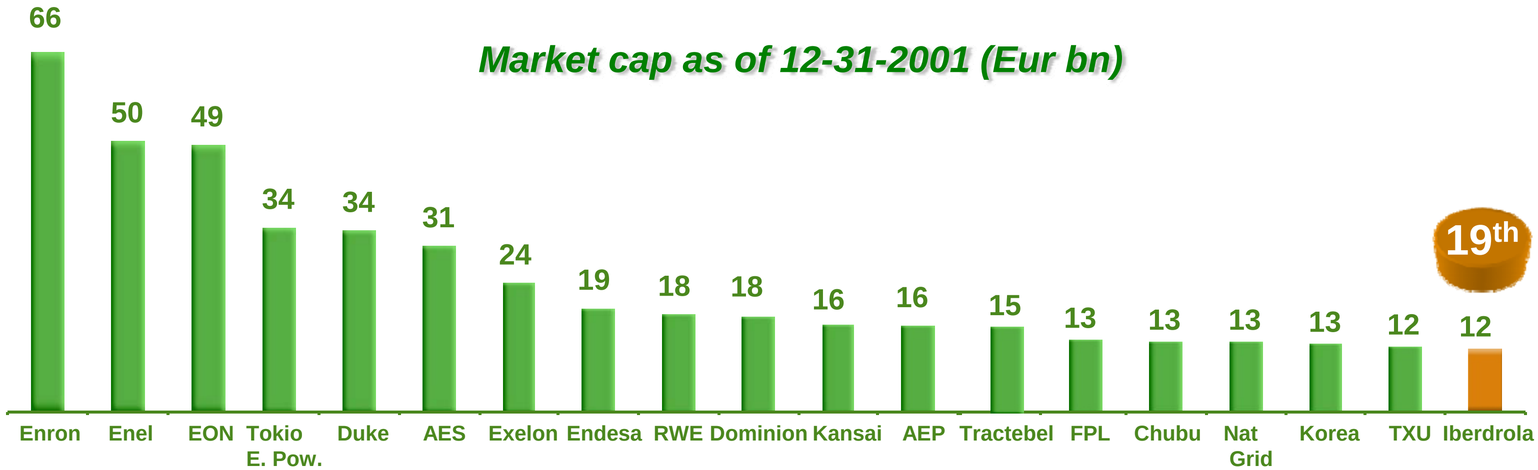
Over 27 million customers

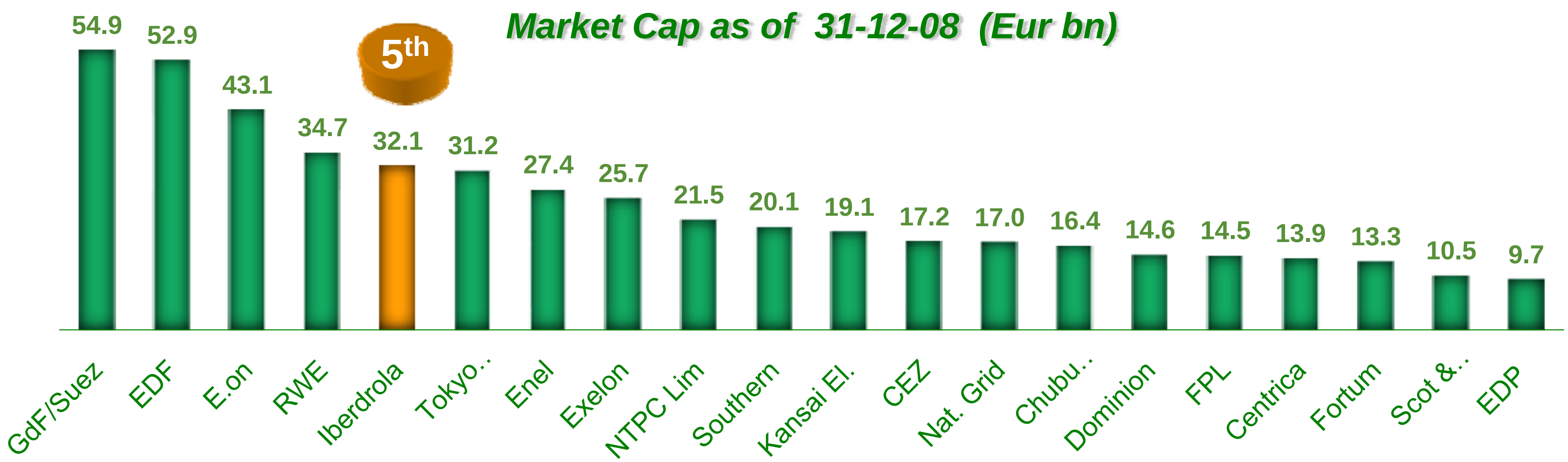
Electricity	**24 MM**	**Gas**	**3 MM**

33.000 employees in more than 30 countries worldwide

The Iberdrola Group

Improving the position of the Company: From being the 19th utility in 2001…





… to being one of the leading utilities worldwide by Market Value

Fuente: Bloomberg

Iberdrola´s Atlantic Strategy

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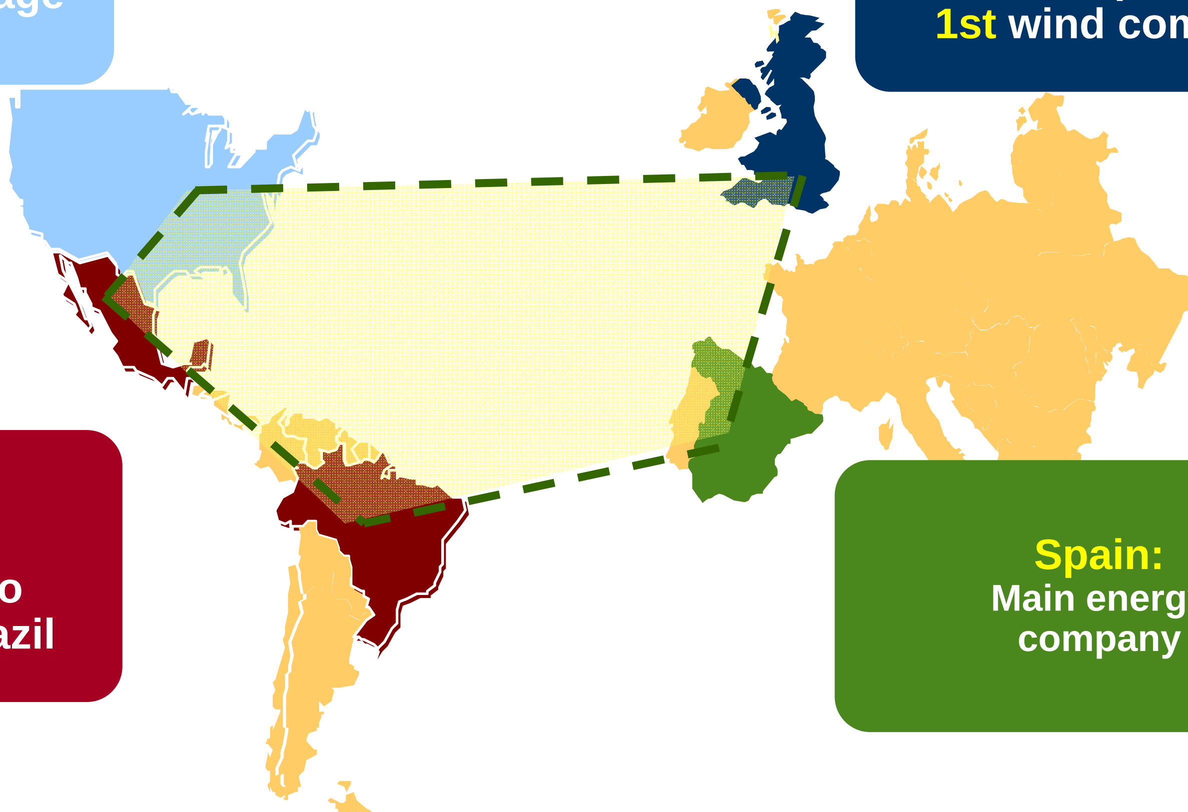
…focused on the Atlantic Area, with four main strategic markets

North America:
2nd wind company
3rd player in gas storage

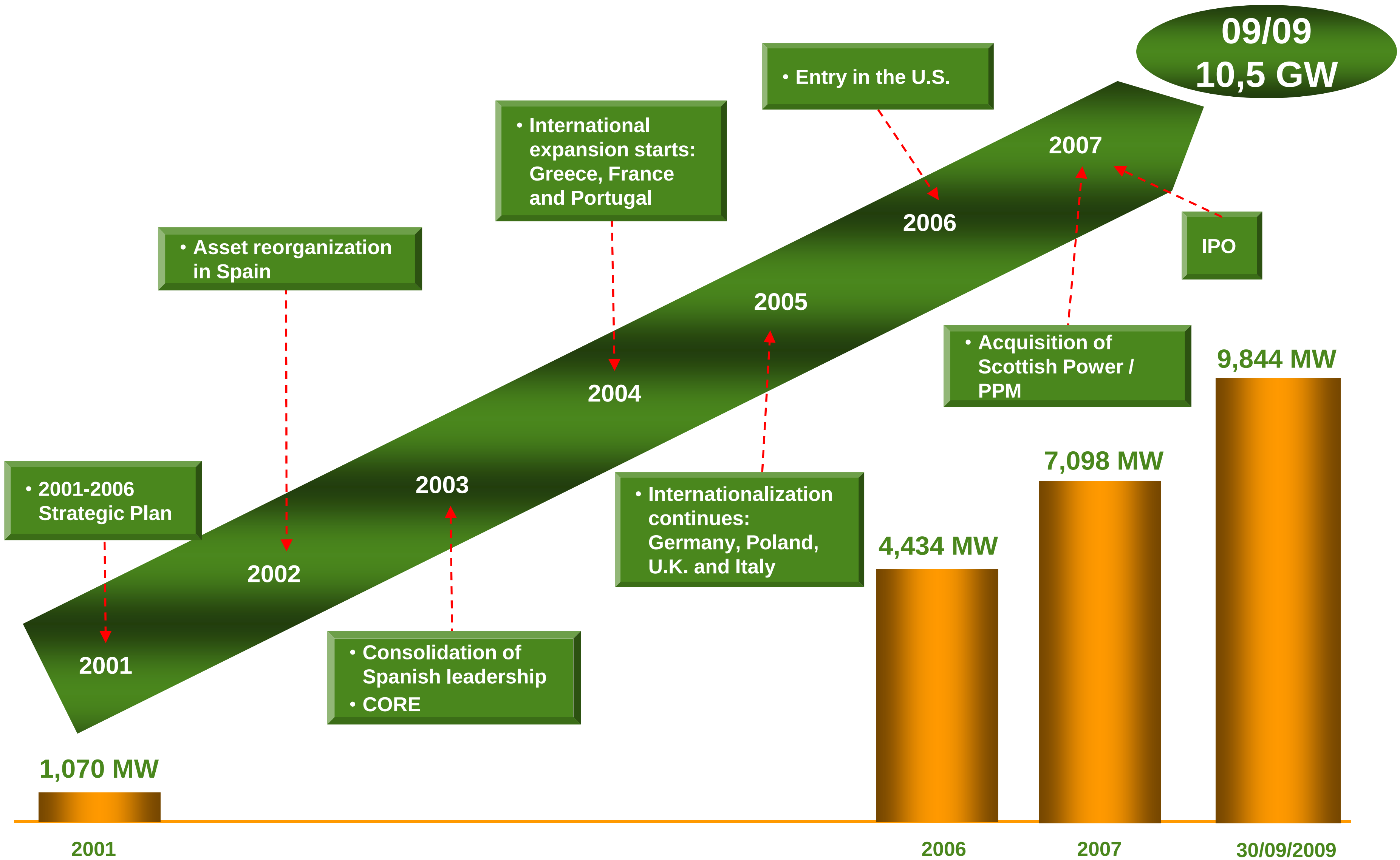
United Kingdom:
3rd distribution company
1st wind company



Latin America:
1st private producer in México
1st distributor in Brazil

Spain:
Main energy company

Iberdrola Renewables



Iberdrola Renewables: The Largest Operating Renewable Asset

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Iberdrola is the world's leader in wind energy, present in the most attractive markets

Note: Endesa Spain includes Portugal

1st Worldwide

1st in Europe

1st in Spain

1st in U.K.

2nd in U.S.

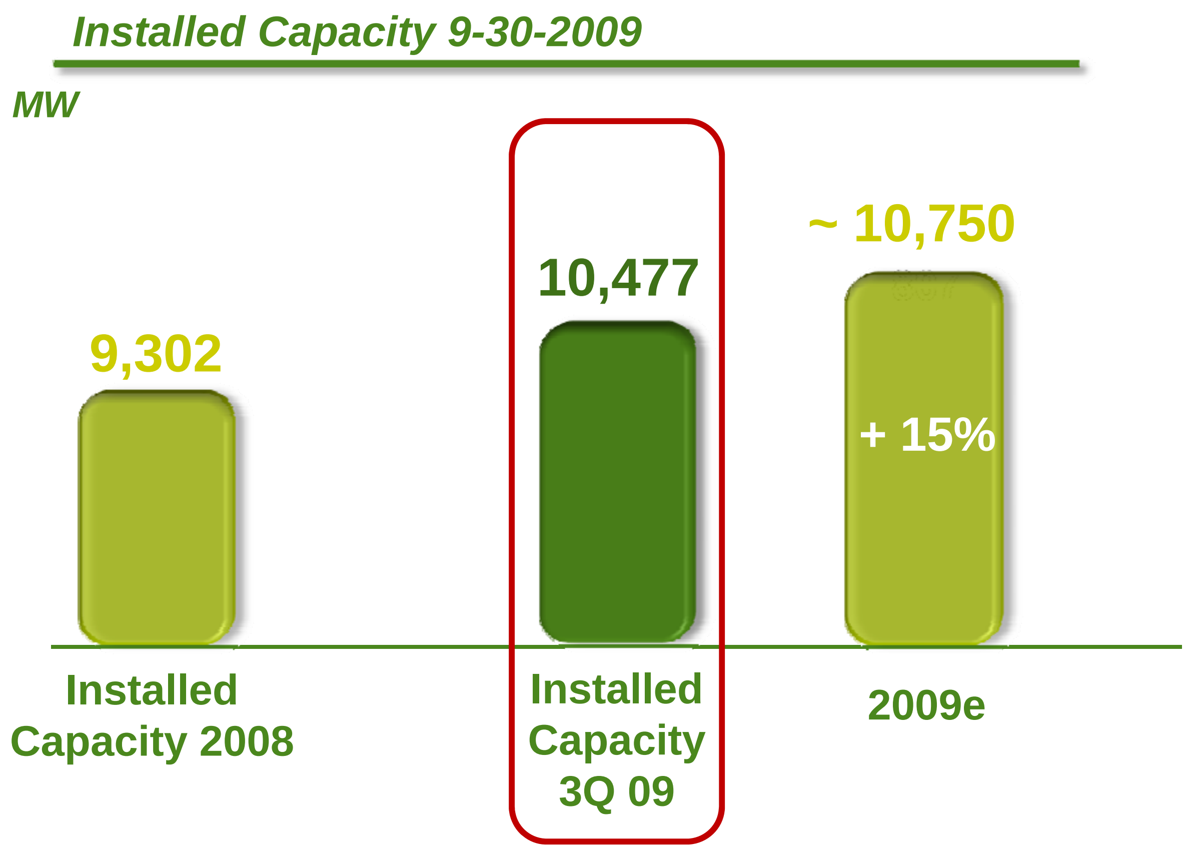
1st in pipeline(1)

Present in 23 countries

Note: As of end 2008, own elaboration
(1) Based on pipelines announced to the markets by competitors

Installed Capacity

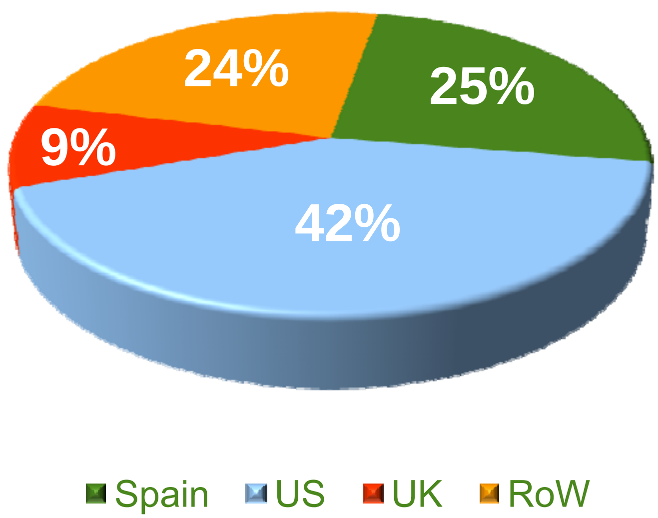
Installed Capacity reaches 10,477 MW…

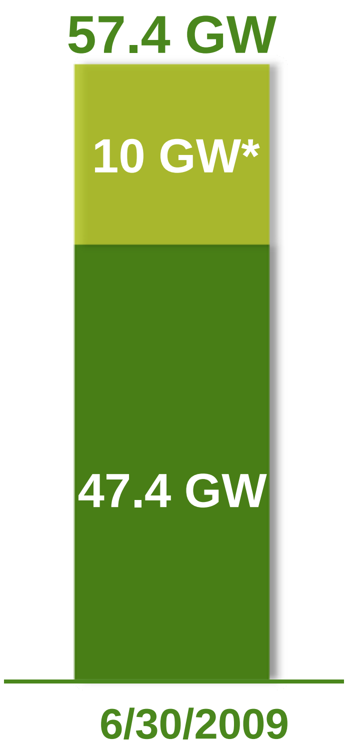


Largest pipeline in the industry

Pipeline increases by 2.8 GW in 12 months, Reaching 57.4 GW*…

Geographic breakdown





… with a strong diversification that supports the flexiblity of the business model

* Includes 10.000 MW of the current contribution from Gamesa under the signed strategic agreement between Iberdrola Renovables and Gamesa Energia.

We have a large international diversification

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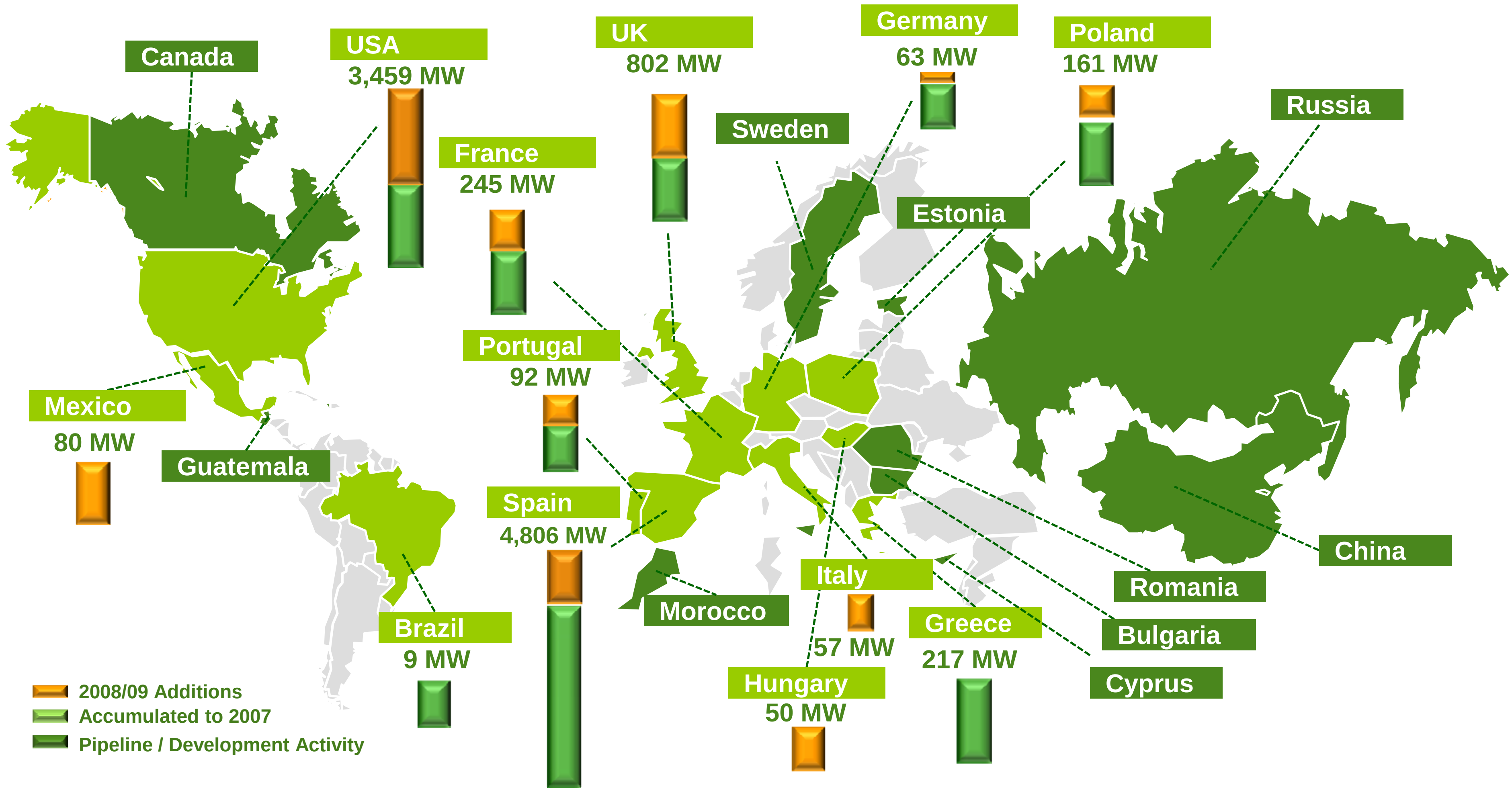
1,900 people present in 23 countries worldwide



… with assets in operation in 11 markets

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Renewable energy reduces energy dependency and vulnerability to increasing prices

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Dependency

Renewable energies are based on indigenous resources (wind, sun…) that reduce the need to import fossil fuels

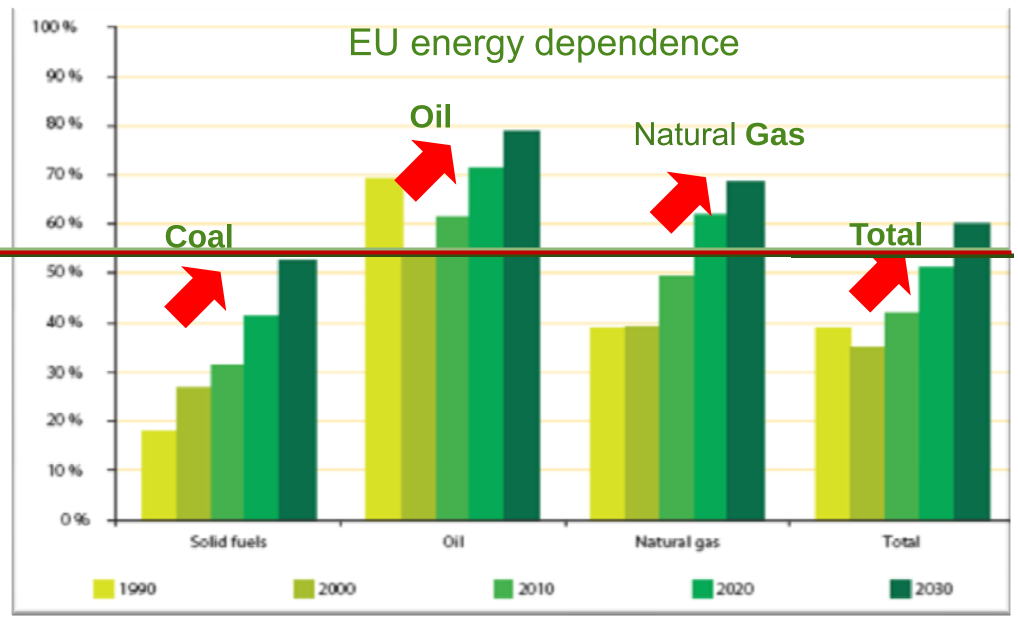
Vulnerability

Renewable energies represent a natural hedge against price risk associated with fossil fuel price volatility

EU

Especially important for the EU

By 2030, the EU could have a 60% energy dependence

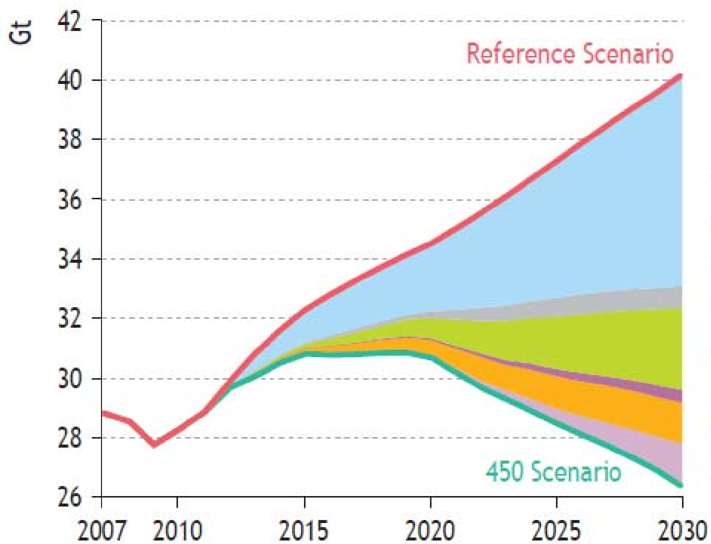


Source: Green paper "Towards a European strategy for the security of energy supply", European Commission

Renewable energy contributes to reduce CO2 emissions

Contribution to CO2 emissions reduction by technology in the 450 ppm scenario 2005-2030

Figure 3: World energy-related CO_2 emissions abatement



	Abatement ($Mt\ CO_2$) 2020	2030
Efficiency	2 517	7 880
End-use	2 284	7 145
Power plants	233	735
Renewables	680	2 741
Biofuels	57	429
Nuclear	493	1 380
CCS	102	1 410

Renewables will contribute to global CO2 emissions savings in a 20%*

- Renewable energies do not generate emissions and contribute to help achieve Kyoto commitments

*Against the Reference Scenario of the AIE

Renewables are a driver for social and economic development

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Social advantages in terms of employment

- More than 2.2 million jobs exist today in the renewable sector worldwide
- Highly qualified jobs

Distributed generation dynamize rural areas

- Creates new jobs in rural areas contributing to the economic and social development of these areas

Creates a new industry

- Represents an opportunity to develope a whole new and domestic industry with high added value

Renewables will strengthen global economy

Need to transform the pattern of power generation towards a more sustainable model

Renewables play an essential role
in the definition of a sustainable energy model….

Advantages		
	Environment	➢No emissions ➢Key driver to reaching Kyoto commitments (2002), Bali (2007)
	Energy security	➢Indigenous energy, inexahustible resource ➢Reduces dependence from risky markets ➢Volatile prices and likely to be higher
	Competitiviness	➢Driver needed to develop the industry and foster job creation ➢Right trend: no fuel costs and investment cost likely to be reduced

Renewables are ready to face the challenges of the current global energy context

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and challenges ...

Challenges

- **Regulatory frameworks: Europe, United States**
- **Competitiveness:**
  - ✓ reduce energy generation cost (MW/h)
- **Integration into the grid and the system:**
  - ✓ Variability: back up power
  - ✓ Grid to accommodate new generation
  - ✓ Interconnections development
- **R&D:**
  - ✓ Further development of technologies with potential: Wind offshore, solar, marine

Policy mechanisms to encourage renewables

1. **Guaranteed purchase of production**

2. **Priority Access to the transmission and distribution Grid**

3. **Economic support:**
    - **based in tariff, *feed in tariff***
    - **based in premiums, *feed in premium***
    - **based in the market, Green certificates system**
    - **tax exemptions or reductions on production/investment**

4. **Other forms of economic support:**
    - Financial support for investment (grants, soft loans...)
    - Other indirect systems: emissions trading systems (EU and Kyoto), Clean Development Mechanism (CDM)

Stable regulatory framework in Spain: RD 661/2007

Regulatory Principles

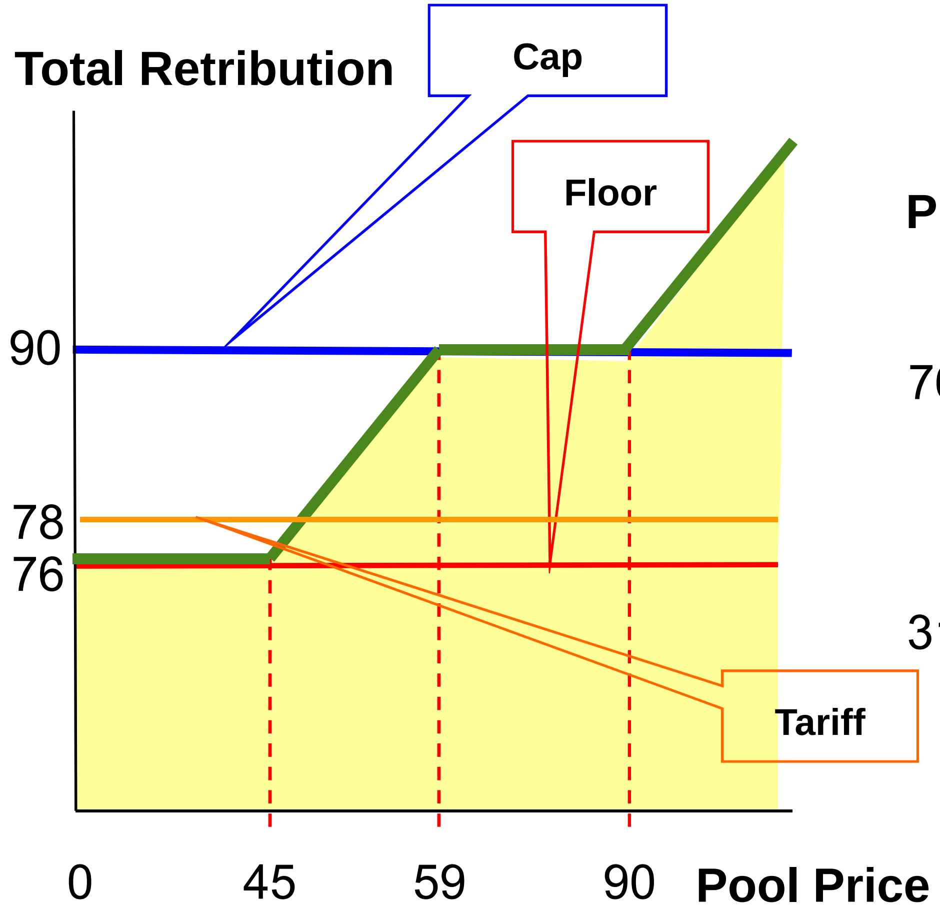
- **Priority Access to the Grid**
- **Feed-in Tariff System**
- **Guaranteed purchase of all generation**

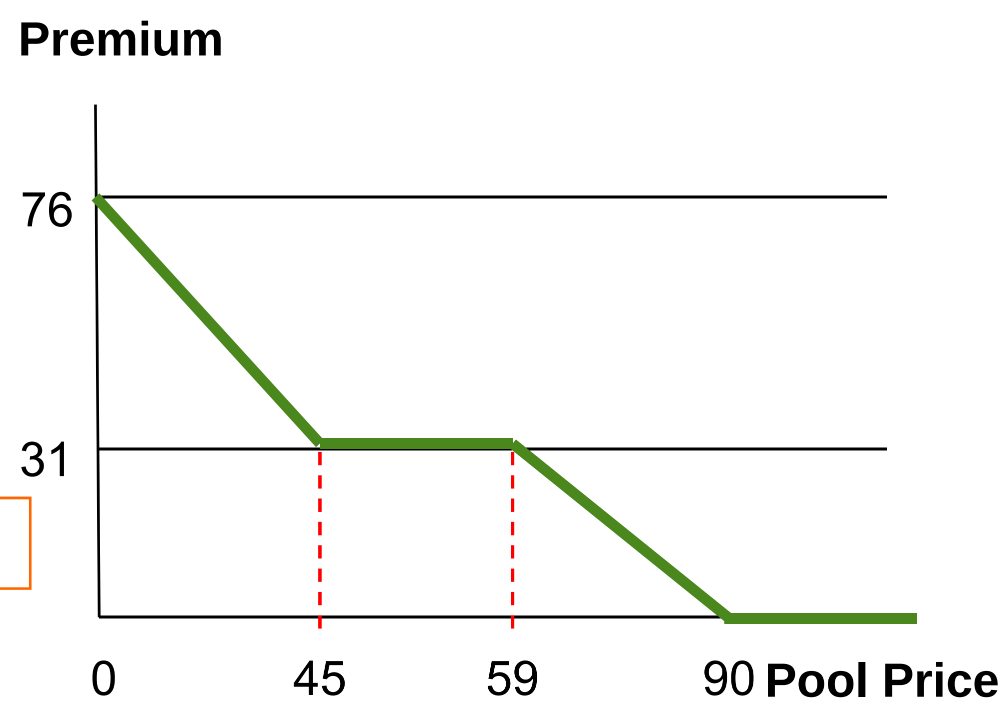
Economic Regime

- **2 retribution options: Tariff or market price + premium**
- **Cap & Floor remuneration limits for market option**
- **Review of remuneration levels every four years, non retroactive**
- **Annual updating of remuneration levels related to CPI**
- **Output prediction and cost of deviations**

Retribution scheme: market option

€/MWh, 2009 prices





- Premium decrease from 76 to 31 €/MWh
- Premium at 31 €/Mwh
- Premium decreases from 31 to 0 €/Mwh
- No premium: only pool price

Renewables Regulation in Spain

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Challenge: sustain a favourable regulation in a maturing market

1994
ROYAL DECREES
- Priority access
- Premium incentive

1997
ELECTRICITY ACT
- 29% of 2010 electricity production to be renewable

1998
R. D. ON "SPECIAL REGIME"
- Basic framework for RES

1999
NATIONAL PLAN FOR RENEWABLE ENERGY
- 200 MW of CSP in 2010

2002
NATIONAL ENERGY PLANNING
- 13.000 MW de parques eólicos en 2011

2004
ROYAL DECREES "436/2004"
- Regulator and stability to achive targets

2007
NEW RENEWABLE ENERGY PLAN
- 500 MW of CSP in 2010

IN 2020 BINDING TARGET OF 20% RENEWABLE ENERGY
- Binding target in Europe

RD"661/2007" APPROVED
- Regulatory stability to achive targets

2008
RENEWABLE ENERGY DIRECTIVE APPROVED

2009/2010
- **Milestones:**
  - **NAP**
  - **Renewable energy law**
  - **Wind RD**

Europe
New legislation in place

New legislation in place… Right steps in the right direction

Europe EU Renewables Directive	The political bet was translated in to the EU Renewables Directive for the promotion of renewable energies ➢20 %of the EU's overall energy consumption from renewable energy sources by 2020, equivalent to >35% of electricity

Yet further steps still needed…

EU: National Action Plans	Renewables Directive has to be mirrored in National Legislations and in the National Action Plans

Europe´s commitment in the promotion of renewables: Directive 20/20

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EU Energy Policy

2020

20% renewable

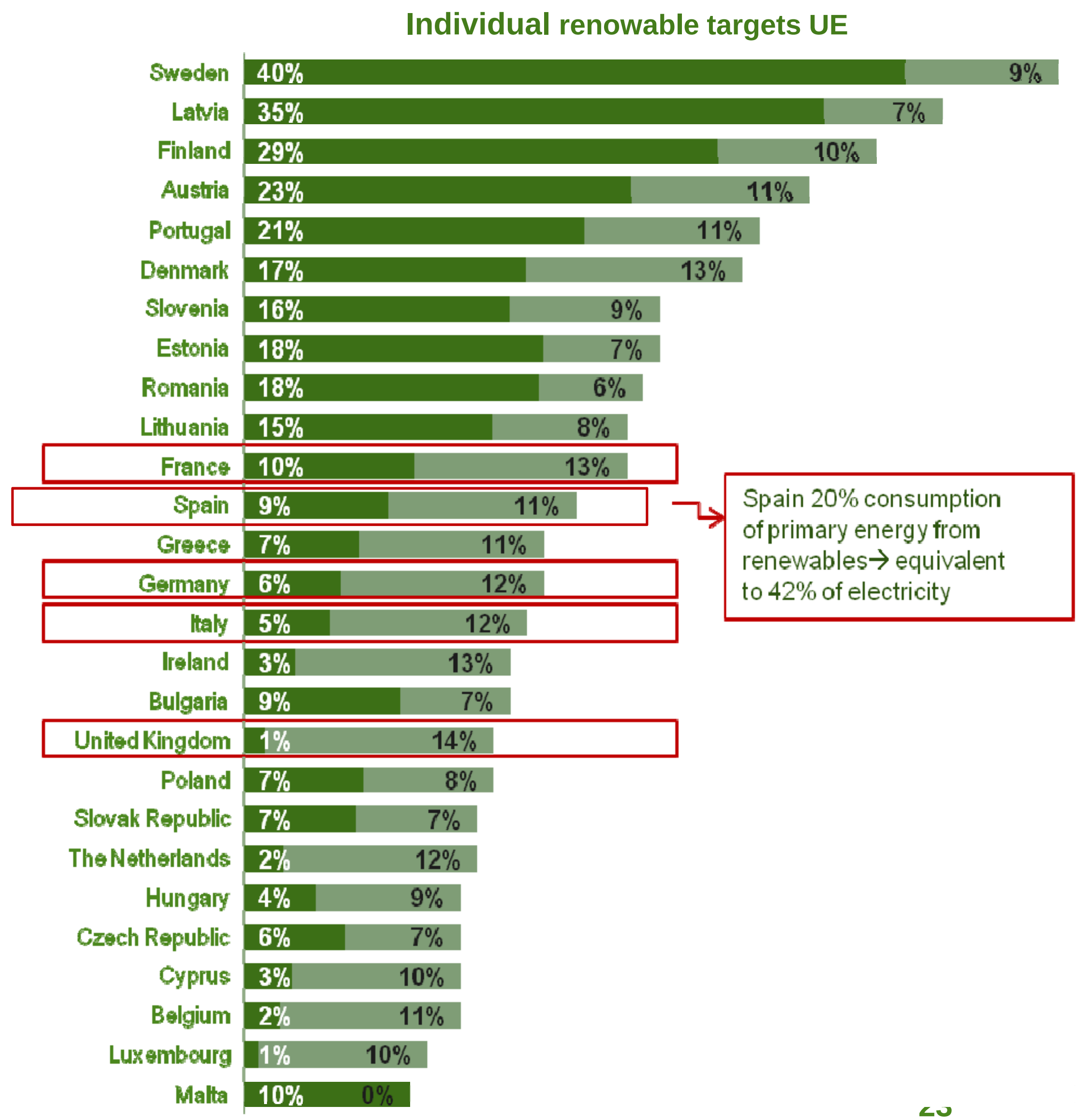
20% efficiency

-20% emissions

Europe renewables Directive

1. European target of 20% renewable energy by 2020
2. Burden sharing: each MS must increase at least 6% its renewable energy. The rest will be distributed according to the GDP per capita
3. MS will have new action plans in 2010
4. Priority access to the grid
5. Flexibility mechanisms

Source: Directive of the European Parlament and of the Council



United States
with improving regulatory conditions

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New legislation in place… awaiting regulation

USA Stimulus bill

Stimulus bill: incentives for renewable energy

- **Three-year extension of PTC (production tax credit)**
- **Access to ITC (investment tax credit), instead of PTC**
- **Monetization of the ITC through a Treasury grant. The grant will be equal to 30% of the eligible investment costs of a project started in 2009 or 2010**

Yet further steps still needed…

US New Energy policy

Two key legislative initiatives:

- **Energy bill: * establishment of a national RPS: the American Parliament is debating the scope of the new law**
- **"Cap & Trade" system for CO_2 emissions, similar to EU ETS ****

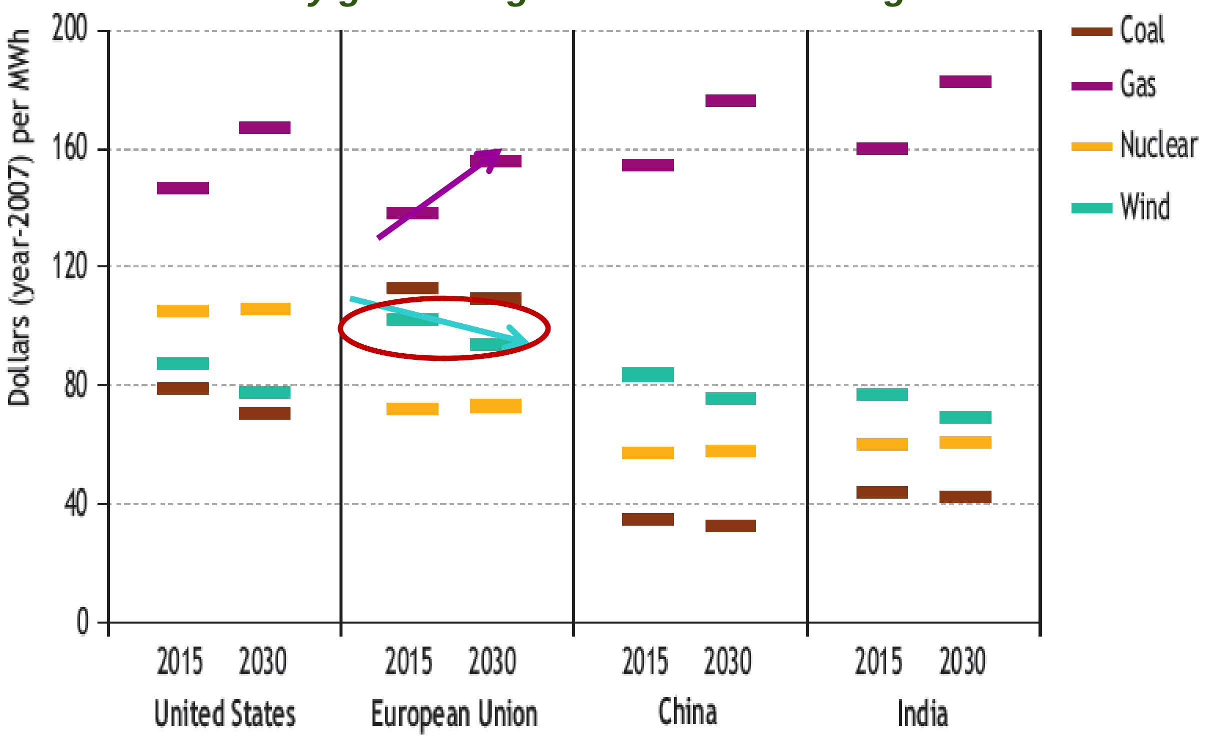
* State level policy mandating the state to generate a percentage of its electricity from renewable sources

** European Union Emission Trading System

Renewable energy, particulary wind, is becoming increasingly competitive compared to conventional energy sources

The reduction in wind power generation costs and the increasing fossil fuel prices reduces the need of economic support mechanisms for this technology.

Electricity generating costs in selected regions



Fuente: WEO 2008, AIE

Seizing an industrial opportunity
The challenge: enhancing competitiveness

Table 2: Wind electricity generation costs (€ per MWh), assuming 27% load factor

Depreciation	28.5
Fuel and carbon cost	0.0
O&M	13.4
Cost of capital (1st year)	42.8
Total	84.7

Source: UBS estimates

Table 3: New entrant cost calculation for fossil and nuclear power

(2010), data in €/MWh	CCGT	Coal	Nuclear
Fuel cost	59.1	33.4	4.8
Carbon	11.0	22.5	0.0
Operating & maintenance	3.9	5.2	14.0
Depreciation	3.4	5.7	7.6
ROIC	10.0	22.0	36.7
Total (€/MWh)	87.3	88.8	63.1

Source: UBS estimates

The industry has the key to enhanced competitiviness

- **R+D: technology for future lower turbine costs**
- **Offshore deployment**
- **System integration**
- **Reduced O& M costs**
- Shortened construction times

The challenge is to increase wind energy integration into the system in an efficient and safe manner

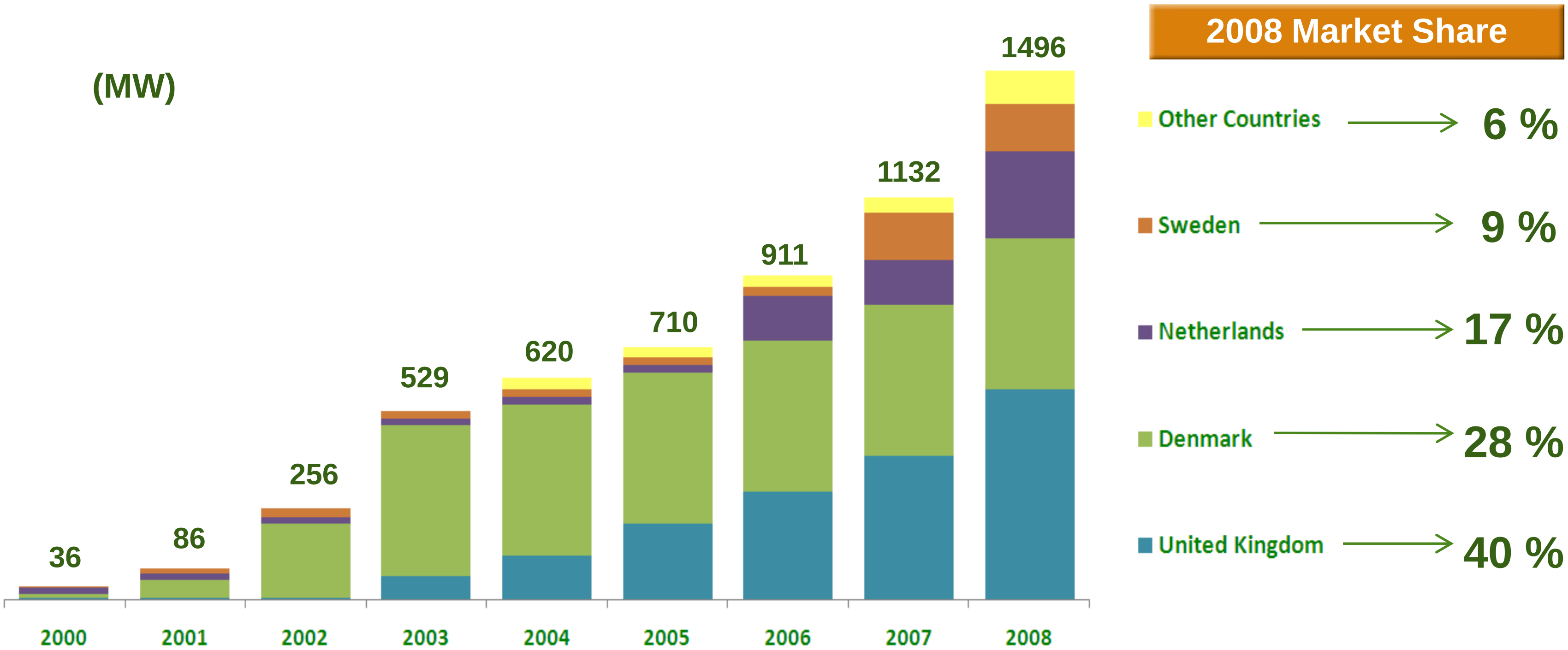
Issues to be addressed:

- ✓best methods of predicting production
- ✓new transmission and distribution grids
- ✓development of international interconnections
- ✓Energy storage and demand side management (electric cars)
- ✓Back-up power required
- ✓Enhanced performance of wind turbines

It is clearly feasible to integrate large amounts of wind energy into the system

Technical challenges: offshore wind

Global Cumulative Offshore Wind Power Capacity (*)



- 1,496 MW installed capacity (≈70% in Denmark and UK). 40GW under development in the world
- Offshore wind projects are just behind onshore wind in cost effective renewable energy production. Estimated investment costs between 2,8 - 3,5 M €/MW

Source: EWEA and Company Data

(*) As of 31st December 2008

Challenges of off-shore wind

challenges

- Availability of reliable tested offshore wind turbines
- Uncertainty due to the scarce experience in Offshore wind O&M
- Vessels scarcity, although some contractors have introduced vessels exclusively designed to be used for offshore wind turbines and foundations
- Current technology (mainly Monopile Foundations) only covers limited water depth (approx. 30meters)

Offshore industry is starting to show relevant developments
Further consolidation of regulatory support and demand incentivizing investments in the supply chain, thus leading to further expansion and cost competitiveness

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Investment drivers

Context

- **Social consensus**
- **Political compromise**

Investment

Regulatory framework

- **Predictability:** remuneration defined for the entire life of the asset
- **Stability:** the legal framework must be based on criteria of non retroactivity.
- **Profitability:** defining a sufficiency scenario

Natural and technical conditions

- **Sufficient resource**

  wind: intermitent resource.

  predictable

- **Suitable grid access**

Utilities approach to renewables

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Utilities´s strategy:

Tech. diversification, cleaner production and lower emissions

Long term experience in the power business

Commercial opportunity, solid regulation, market size

Renewables reaching technological maturity (wind on shore, minihydro)

Technical, financial advantages. Economies of scale

Utilities strenghts

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- **Utilities are more competitive in the promotion and operation of the renewable energies, wind in particular:**

1. **Financial capabilities:** renewables are a capital-intensive activity

2. **Technical capabilities:**

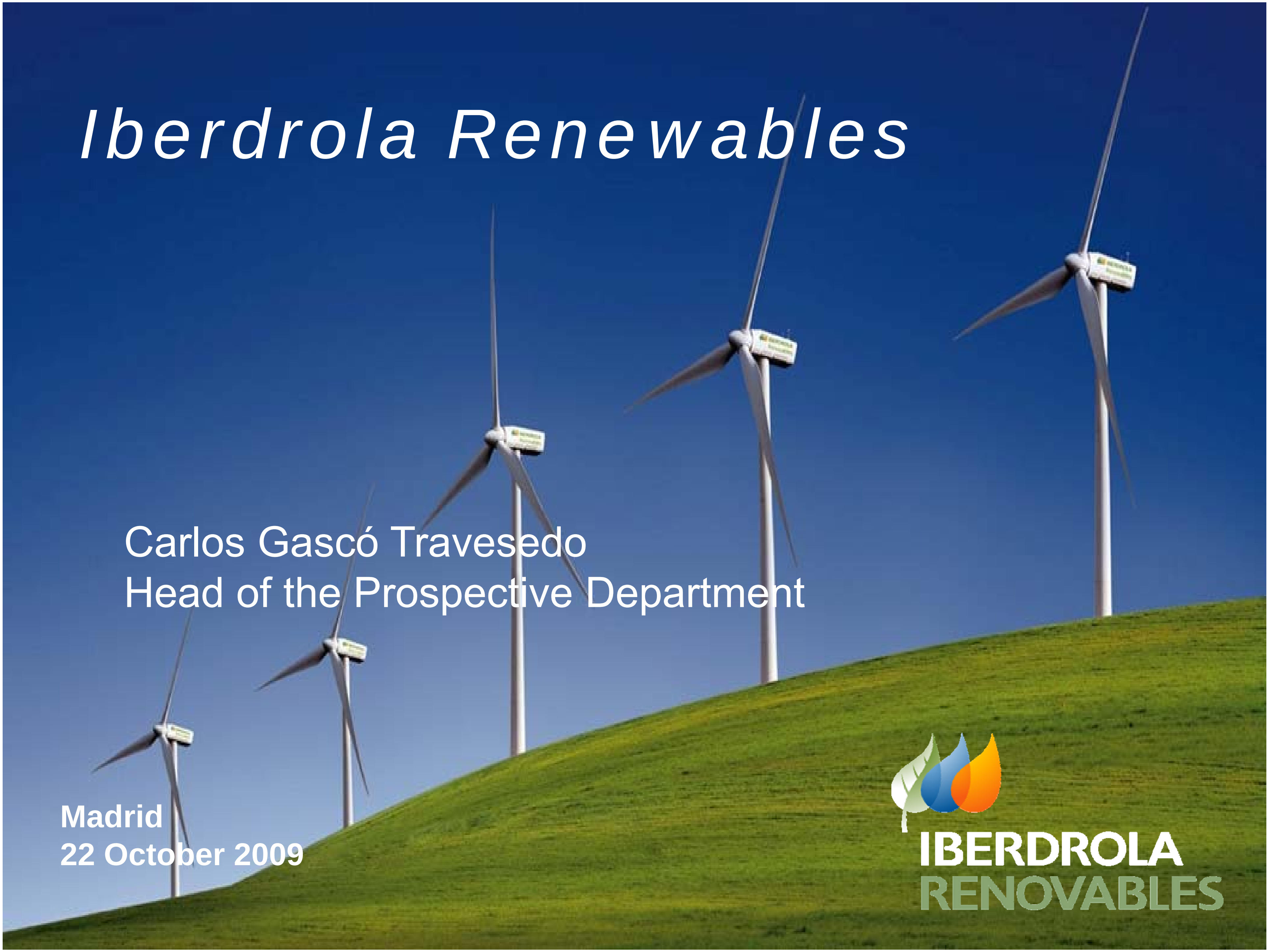
   Economies of scale applied to investment costs

   Higher efficiency in the renewable assets operation. Lower O&M costs

   Large scale integration, transport and distribution.

3. **Experience:** knowledge and management of the power business and regulatory frameworks

European utilities are in an international expansion process: USA, Eastern Europe, some markets in EU, with expectatives in China, India and Latin America.



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