
# Investor Day

Rome - April 22nd, 2009

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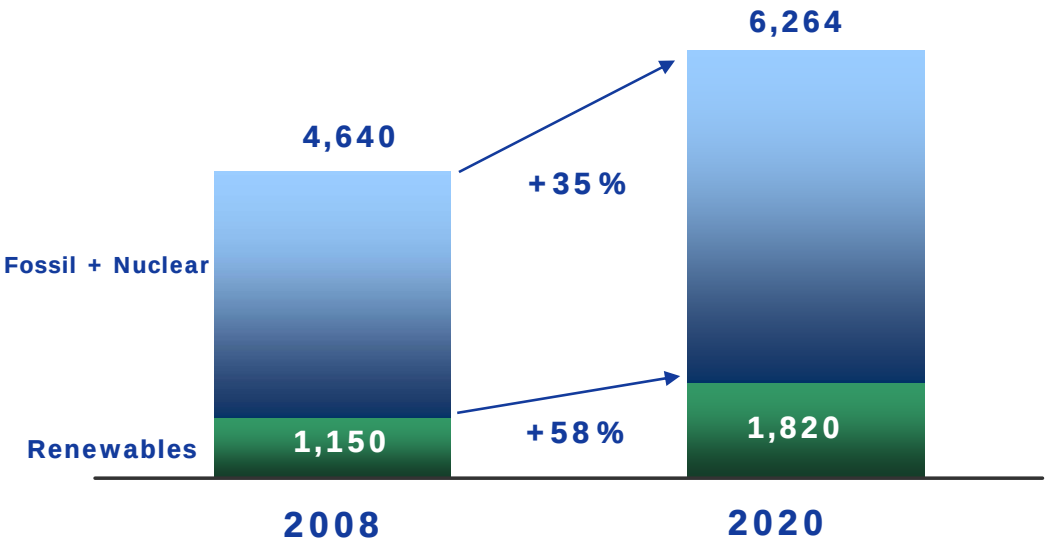
| | |
|---|---|
| • Opening remarks | F. Conti |
| • Enel Green Power: a leading player in renewable energies | F. Starace |
| • Focus on technologies: | |
| • Geothermal | T. Volpe |
| • Hydro | V. Vagliasindi |
| • Focus on technologies: | |
| • Wind | M. Bezzeccheri |
| • Solar Photovoltaic | I. Wilhelm |
| • Business Development Model | R. Deambrogio |
| • Financial highlights | A. De Paoli |
| • Conclusions | F. Starace |

Enel Green Power

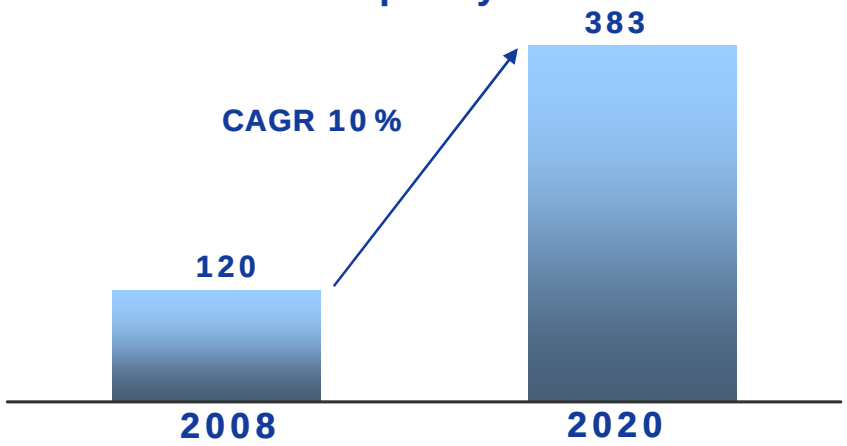
# Global installed capacity

GW

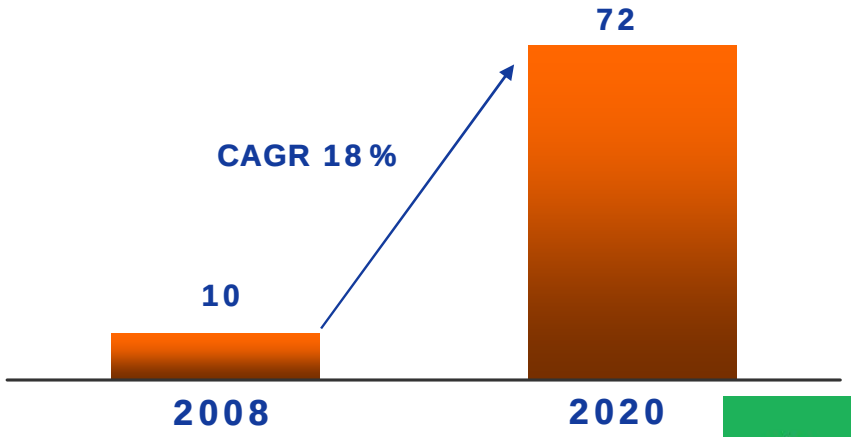
## Global installed capacity[1]




## Wind installed capacity



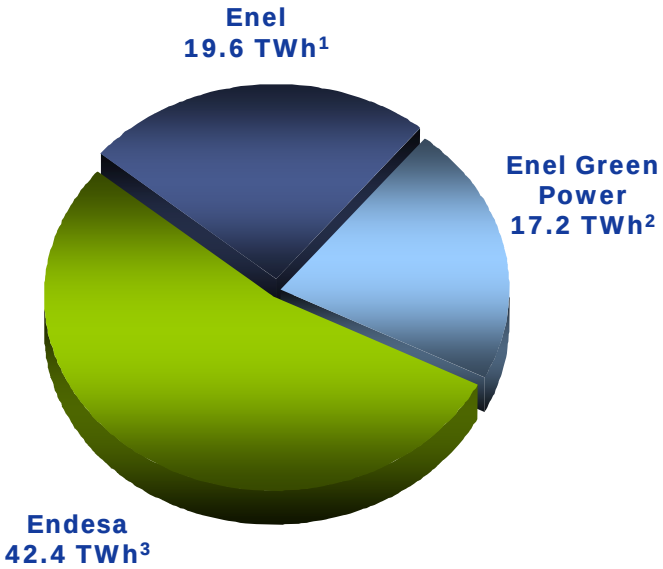

## Solar installed capacity



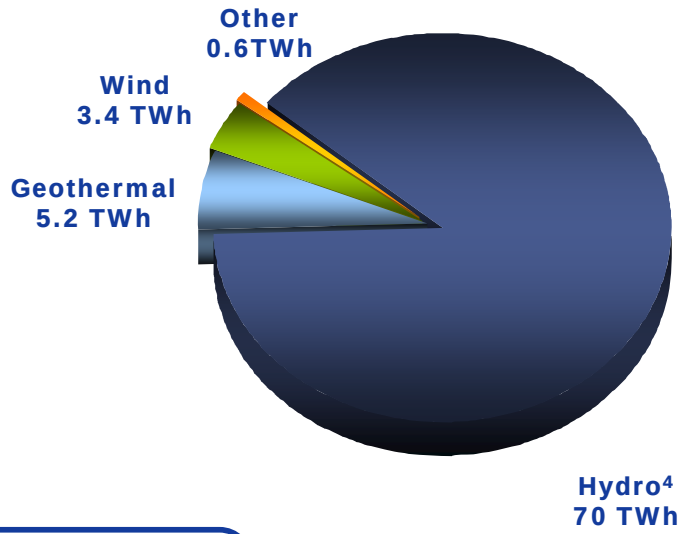

(1) IEA Reference scenario

# Enel Group renewable energy production
2008

## By Company




## By Technology




**Total Enel Group production**
**79.2 TWh[4]**

(1) It includes Slovenske Elektrarne large hydro

(2) Pro-forma 2008

(3) Endesa data consolidated at 100% and net of the agreed transfers to Acciona

(4) Net of pumped storage production

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# Enel Green Power:
# a leading player in renewable energies

Francesco Starace

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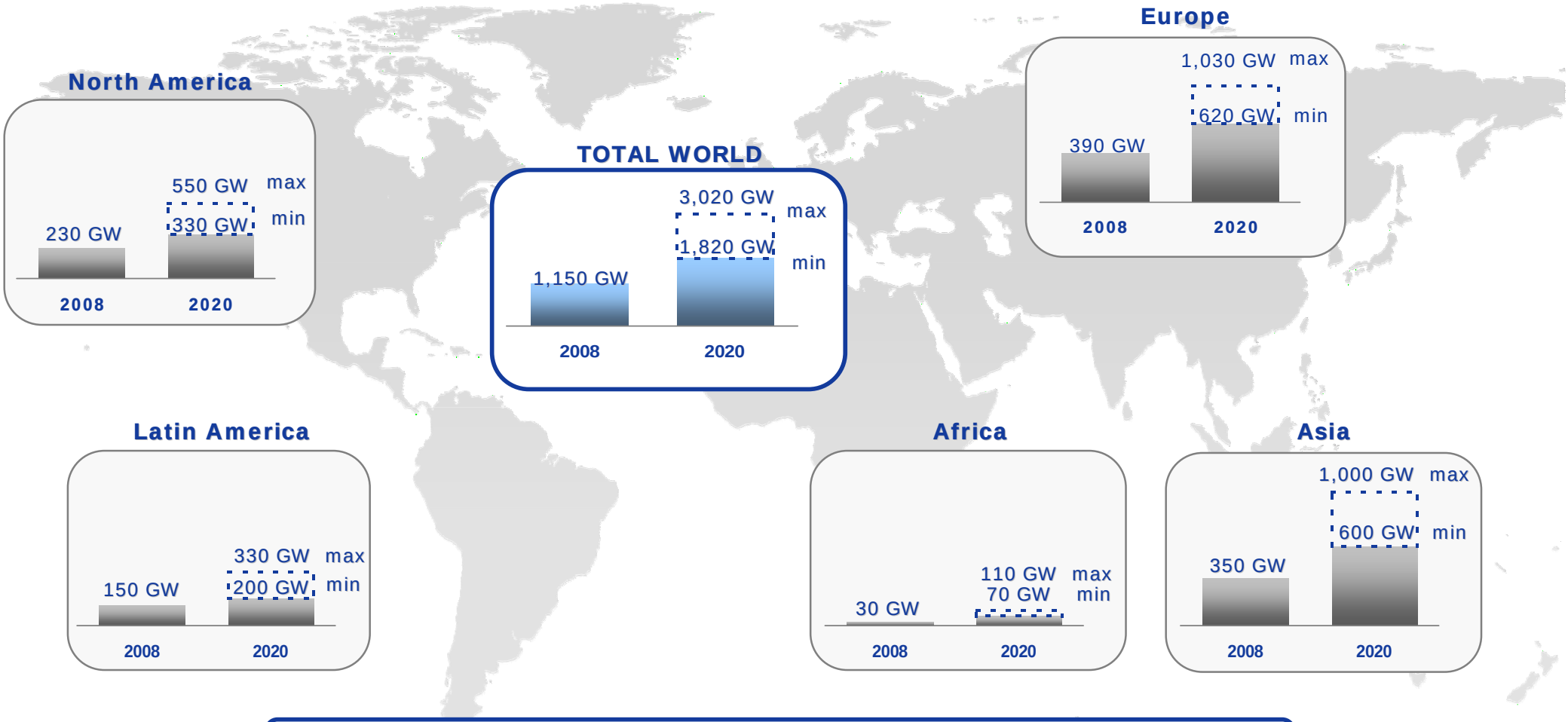
# Renewable energies: strong fundamentals in all geographies

## Estimates of renewables installed capacity, 2008-2020




**Up to 1,900 GW of renewable capacity additions**

Source: Enel estimates based/WEO 2008/GWEC 2008 (2008); WEO 2008 Reference Scenario (2020 min); Industry reports/McKinsey (2020 max)



Enel Green Power

# Renewable energies: strong fundamentals in all technologies

| Technology | Global installed base 2008 | Global installed base 2020 | Δ capacity | CAGR | Technological maturity |
|---|---|---|---|---|---|
| Hydro | 960 GW | 1,280 GW | +320 GW | 2% | Very high (large hydro) |
| | | | | 8% | Very high (small hydro) |
| Biomass | 50 GW | 470 GW | +420 GW | 20% | Very high |
| Geothermal | 10 GW | 30 GW | +20 GW | 10% | High |
| Wind | 120 GW | 800 GW | +680 GW | 17% | High (on-shore)<br>Low (off-shore) |
| Solar | 10 GW | 440 GW | +430 GW | 37% | Medium (c-SI), Low (Thin Film) — Solar PV |
| | | | | | Low — Concentrated solar power |
| **TOTAL** | **1,150 GW** | **3,020 GW** | **+1,870 GW** | **8%** | |

**All technologies have potential for major capacity additions**

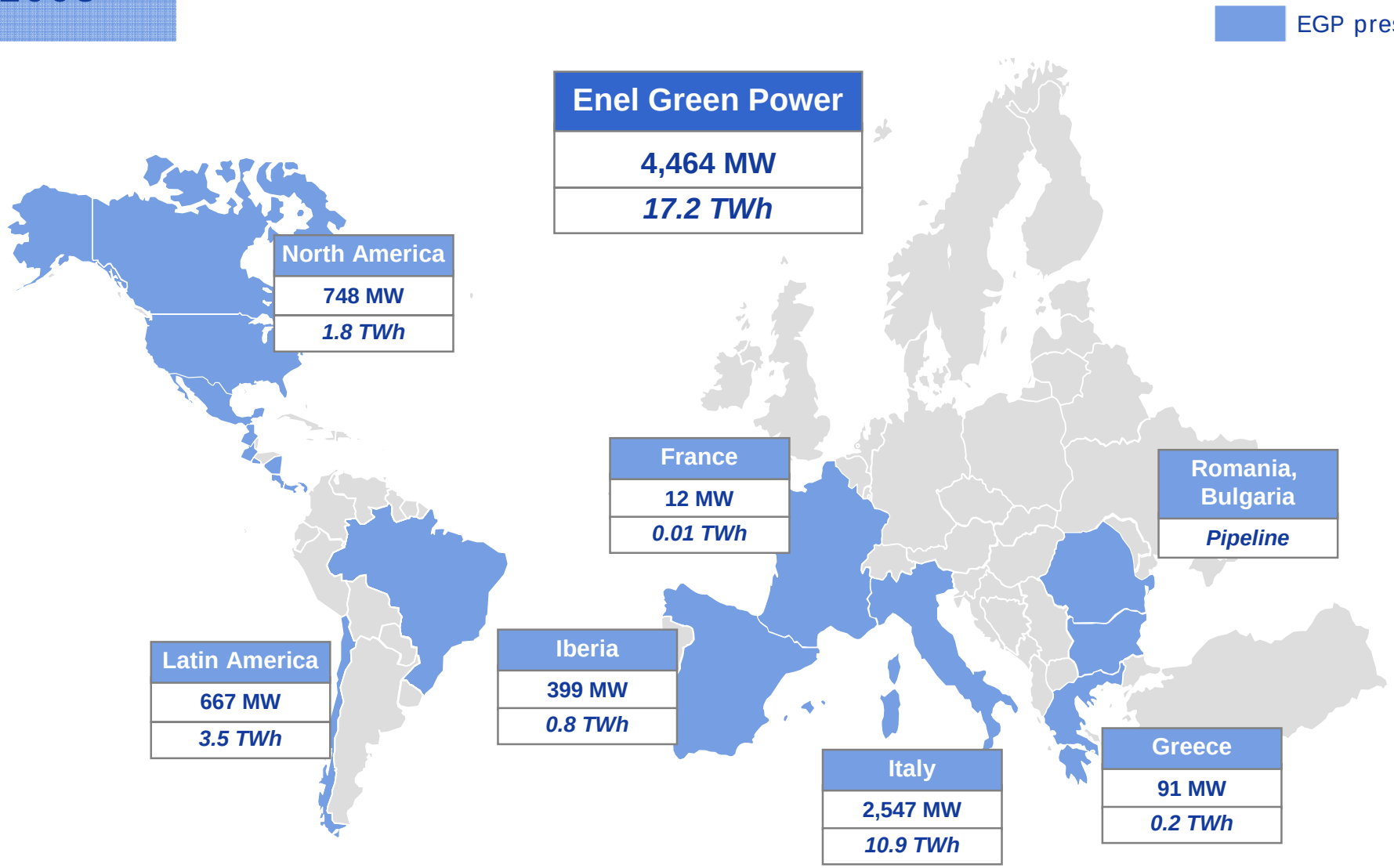
Source: Enel estimates based/WEO 2008/GWEC 2008 (2008); Industry reports/McKinsey (2020)



Enel Green Power

# Enel Green Power: large renewable player well positioned in growth geographies

2008*




* Proforma data

Note: Endesa capacity not included (1,026 MW: 799 MW in Iberia and 227 MW in Latin America)

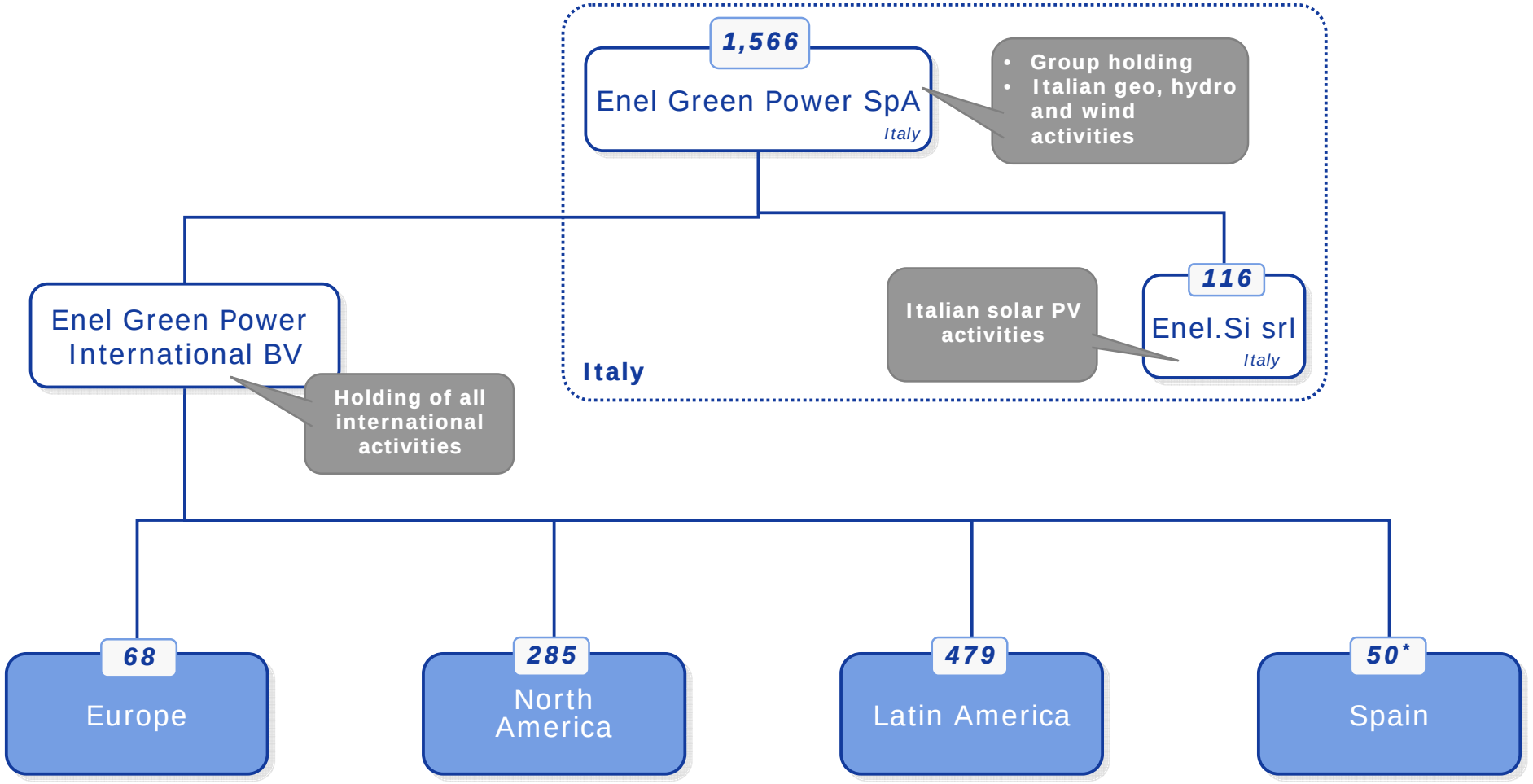
# Enel Green Power: active in all four key technologies

Enel Green Power

| Technology | Net installed capacity 2008 | Net production 2008 | Key areas |
|---|---|---|---|
| Hydro | 2,498 MW | 9.6 TWh | Italy – Iberia – Europe – North America – Latin America |
| Geothermal | 678 MW | 5.2 TWh | Italy – North America |
| Wind | 1,237 MW | 2.1 TWh | Italy – Iberia – Europe – North America – Latin America |
| Solar | 4 MW | n.m. | Italy (retail and module manufacturing) |
| Biomass and other | 48 MW | 0.3 TWh | Iberia – North America |
| **TOTAL** | **4,464 MW** | **17.2 TWh** | |

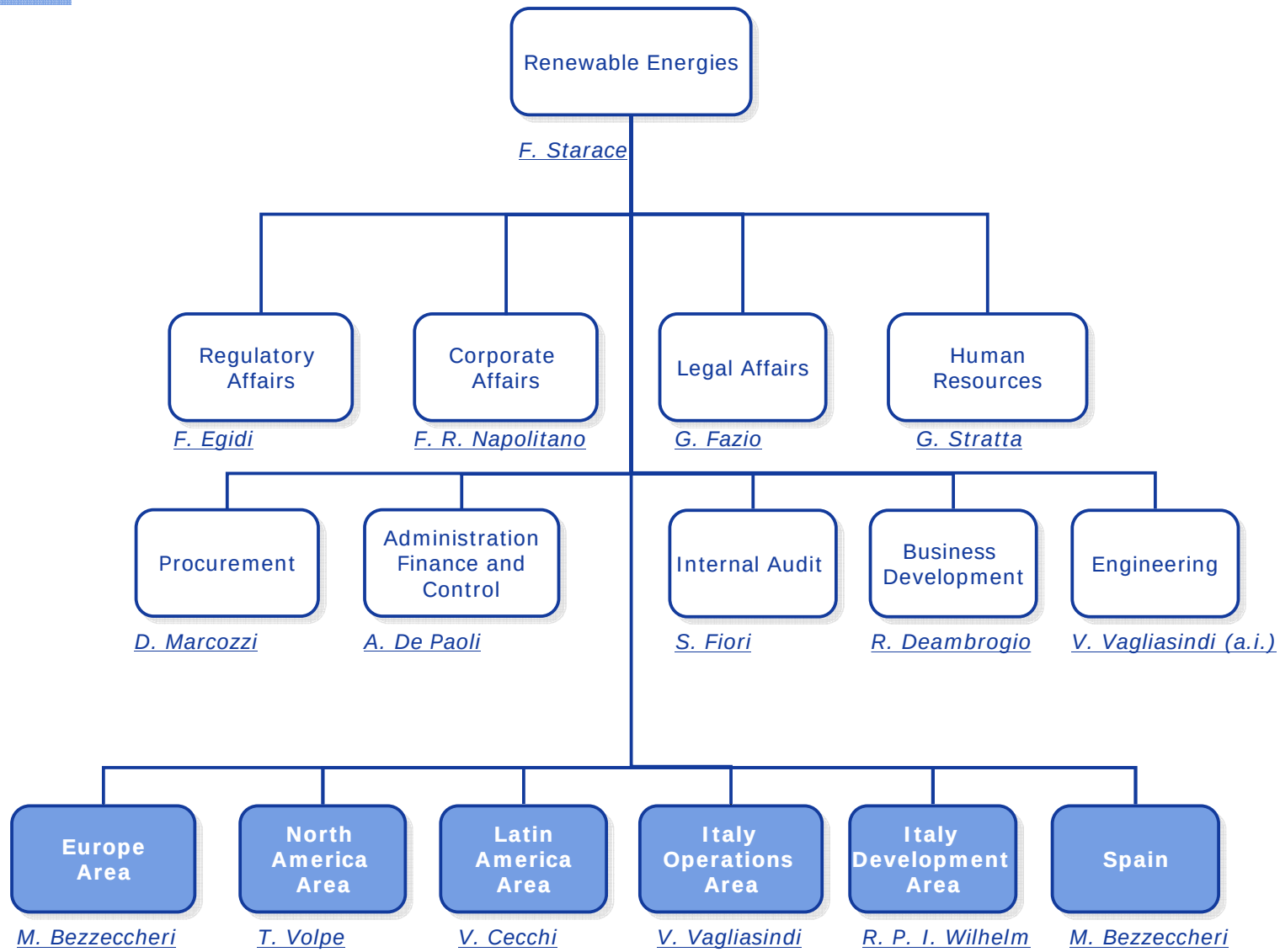
# Company structure

**Tot. 2,564**
*Employees*




* Equivalent to 50% of EUFER

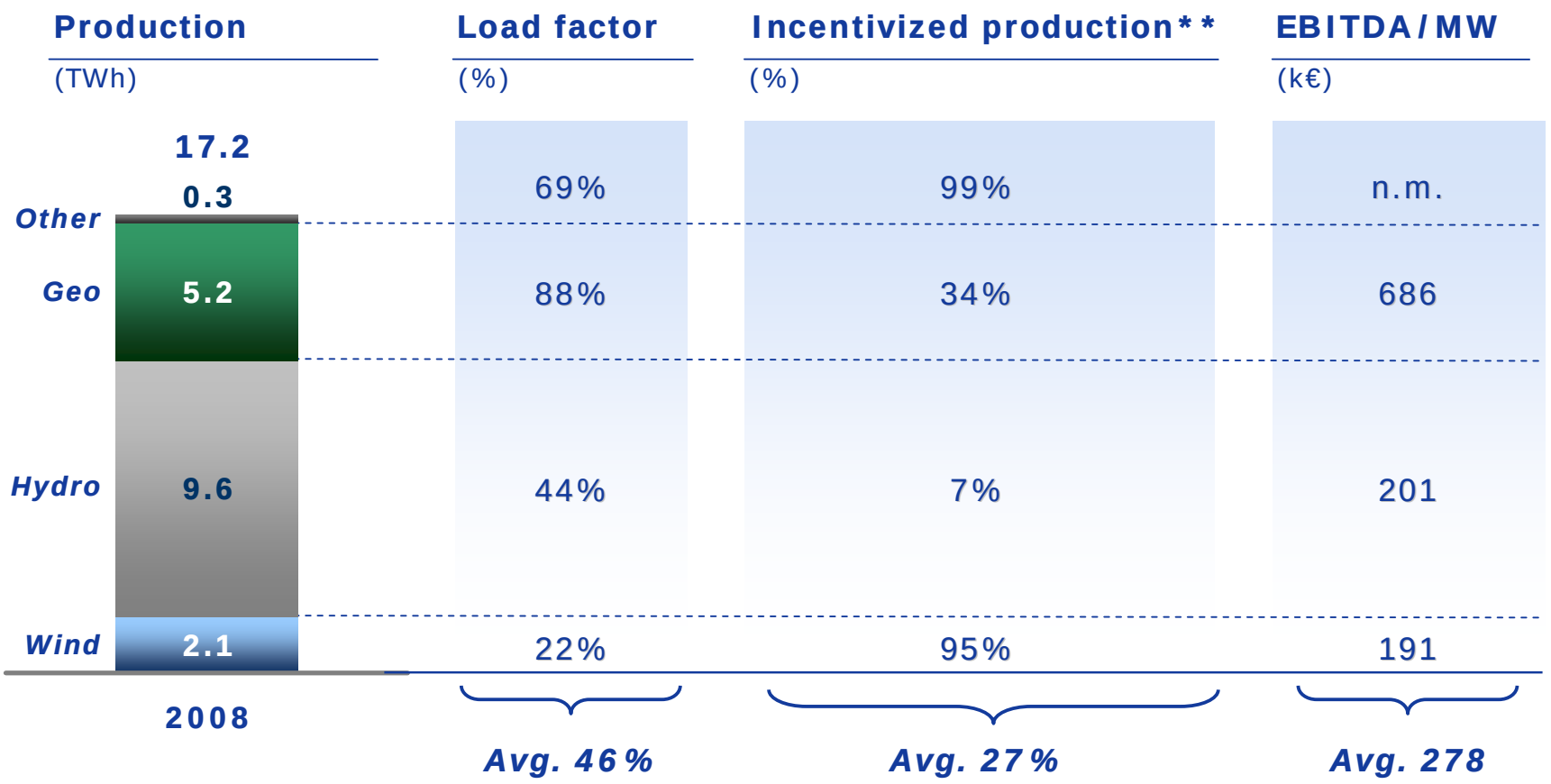
# Organizational model



# Enel Green Power: four pillars to build upon

- Balanced technology mix
- Diversified geographical presence
- Low dependence on incentive schemes
- Growth flexibility

# Balanced technology mix
2008*




**High load factor and low dependence on incentive schemes**

* Proforma data

** Includes production from plants entitled to PTCs (North America)

# Diversified geographical presence
2008[1]

| Country | | Capacity | Incentivized production[2] | Avg. remuneration[3] | Regulatory framework (affecting future projects) |
|---|---|---|---|---|---|
| Italy | | 2,547 MW | 24% | 99 €/MWh | Green Certificates, Feed-in |
| Spain | | 399 MW | 100% | 104 €/MWh | Feed-in, Market +Premium |
| Europe | France | 12 MW | 100% | 89 €/MWh | Feed-in |
| | Greece | 91 MW | 100% | | Feed-in, Grants |
| North America | | 748 MW | 59% | 56 €/MWh | PTC, ITC |
| Latin America[4] | | 667 MW | 0% | 76 €/MWh | Green Certificates, Fiscal Incentives |
| **Total** | | **4,464 MW** | **27%** | **90 €/MWh** | |

**Diversified geographies with low dependence on incentive schemes**

(1) Proforma data
(2) Includes production from plants entitled to PTCs (North America)
(3) Does not include effects of hedging policy
(4) Includes Panama

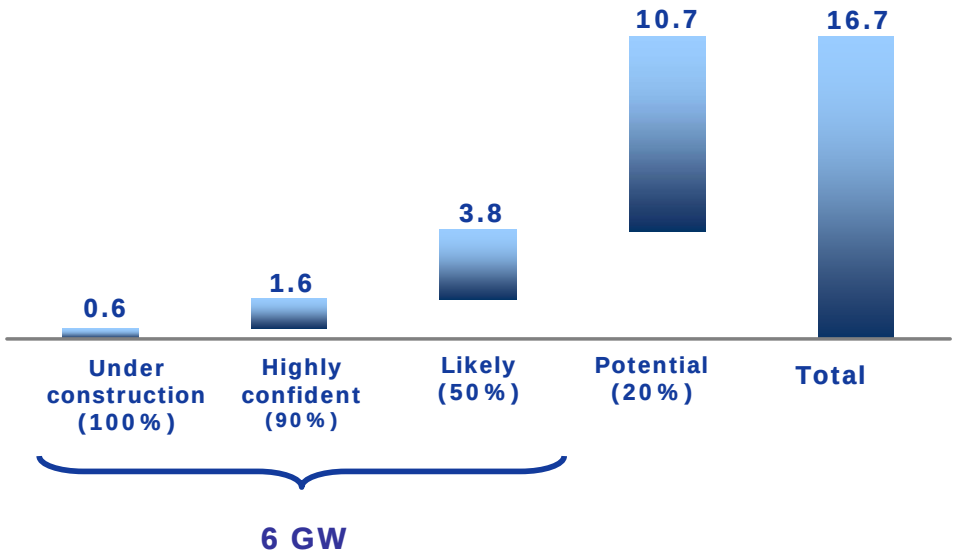


Enel Green Power

# Growth flexibility
## 2008*

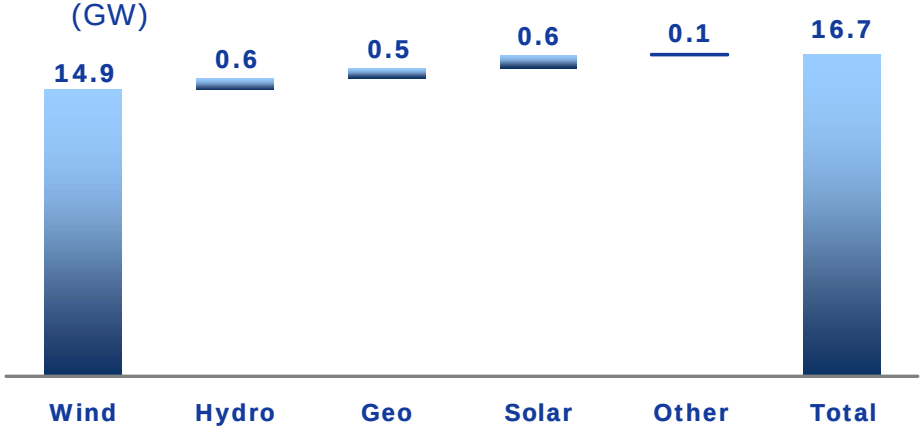
### A solid pipeline…

(GW)




### …with projects in four technologies

(GW)




**6 GW of solid pipeline plus 10.7 GW of additional opportunities**

* Proforma data; Endesa not included (accounting for 12.4 GW in terms of pipeline)

# Development model

**Staff Functions:** ICT, Communication, Corporate, AFC, Regulatory, Legal, HR, Audit, Procurement

| Business Development | EPC / Integration M&A | O&M |
|---|---|---|
| ▪ Project identification<br>▪ Screening<br>▪ Valuation<br>▪ Permitting<br>▪ Approval process<br>▪ CapEx allocation | ▪ Realization of approved projects<br>▪ Integration of acquisitions<br>▪ CapEx expenditure | ▪ Plant operation<br>▪ Production optimization<br>▪ Continuous improvement<br>▪ EBITDA generation |

**Industrial approach to value creation**

Enel Green Power

# Leveraging on competencies

## Hydro

**2.5 GW installed globally**

- Long lasting competencies
- Skills ranging from development to operation and maintenance
- Project pipeline in Italy and Latin America

**Established competencies in development and O&M**

## Geothermal

**0.7 GW installed globally**

- Skills in development, exploration, engineering and construction, O&M
- Development of new projects in Latin America and North America

**Fully integrated geothermal operator**

## Wind

**1.2 GW installed globally**

- Large pipeline, split among geographies to maximize optionality and return on investment
- Flexibility in turbines procurement, taking advantage of industry shake-up (overcapacity, cost reduction)

**Well positioned to take advantage of sector shake-up**

## Solar PV

**Strong position in the fast growing Italian market**

- Leading retail network in Italy (Enel.si)
- Competence Centre (within R&D Division) in Italy
- Upstream integration into cell/module manufacturing (in progress)

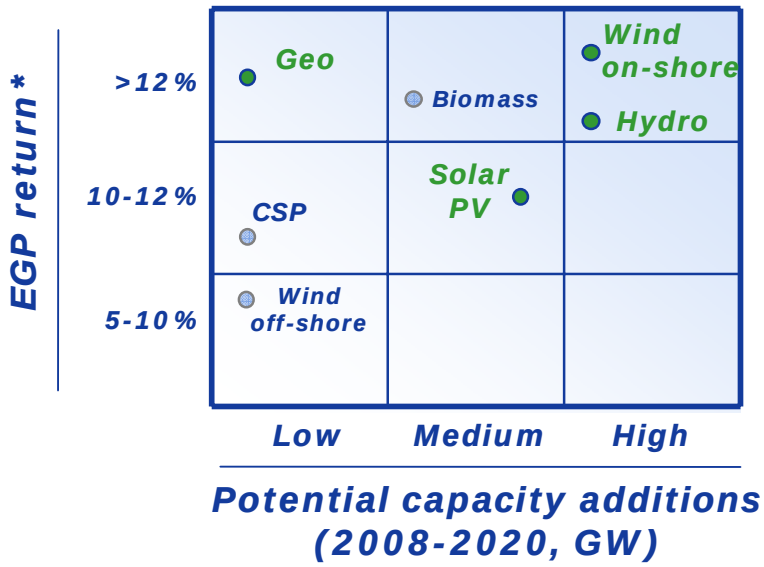
**Unique position in the solar PV value chain**

**Leveraging competencies across all geographies**

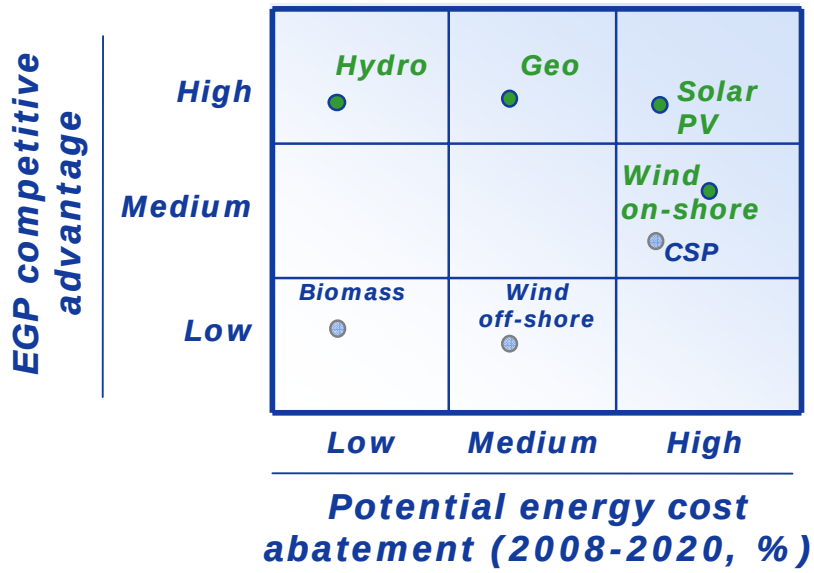
# Balanced growth on multiple technologies

Enel Green Power technologies

## Financial attractiveness…




## …and long-term sustainability




**Maximizing returns and enhancing long-term sustainability**

* Unlevered project IRR after taxes

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# Geothermal power

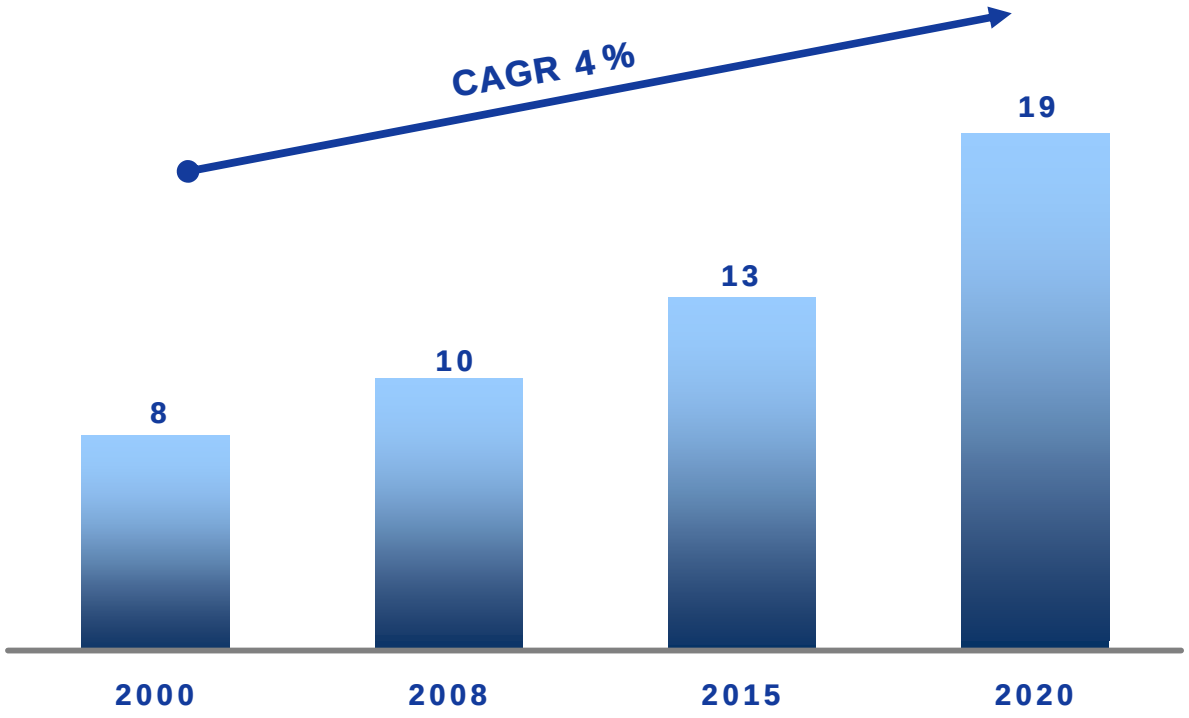
Toni Volpe

Enel Green Power

Rome, April 22, 2009

# Worldwide installed capacity

GW



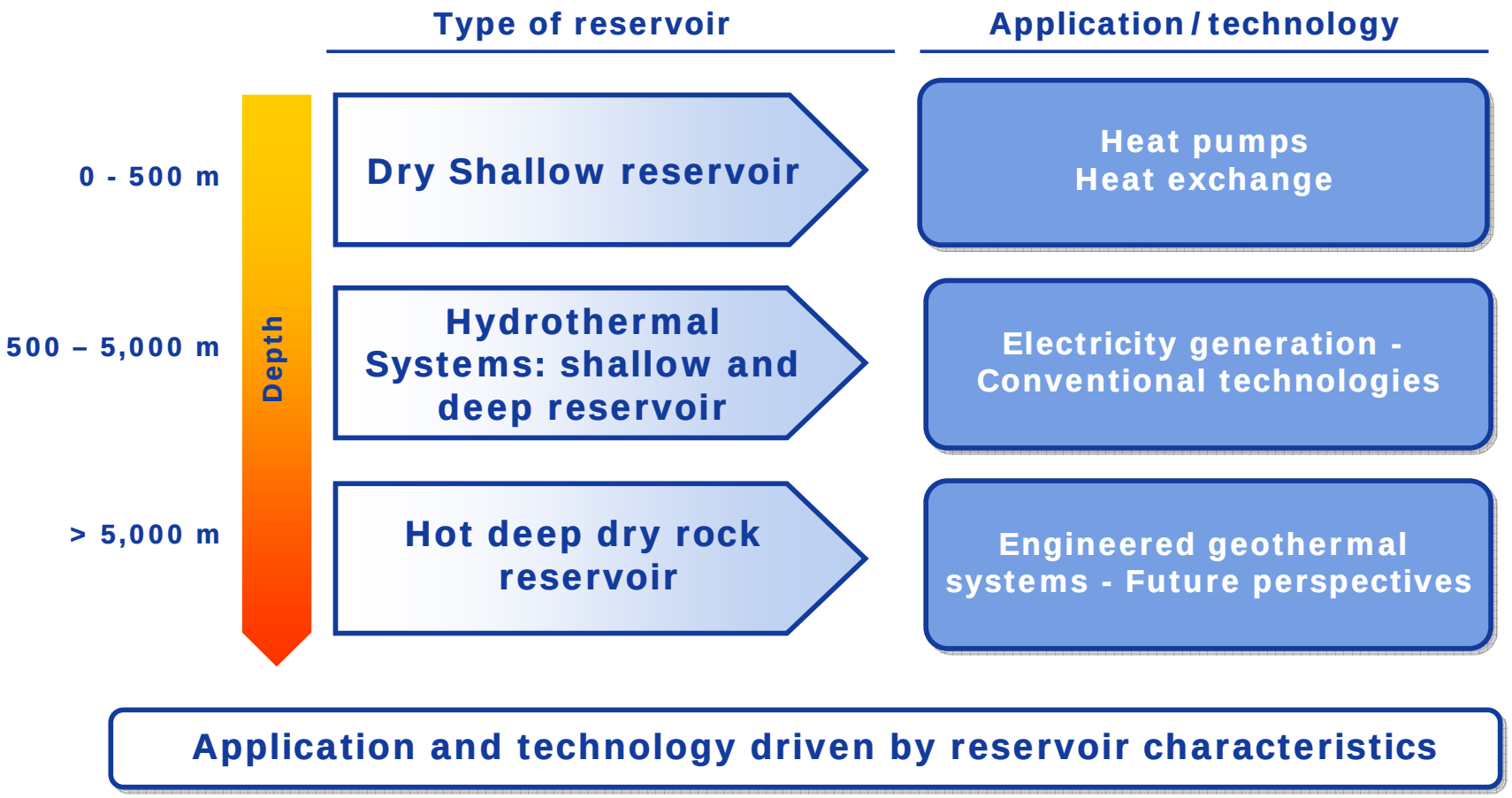

**Slow but constant growth due to scattered resources and long development time**

Source: IEA; IGA; Worldwatch Institute; United Nations; Enel analysis on WEO 2008, industry reports.

# Resource availability

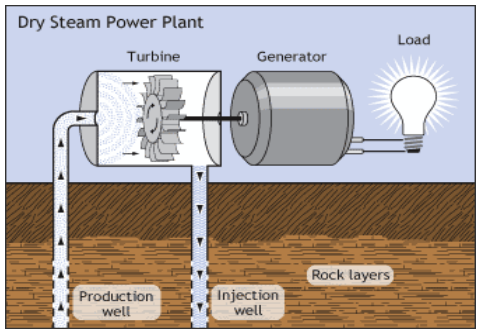
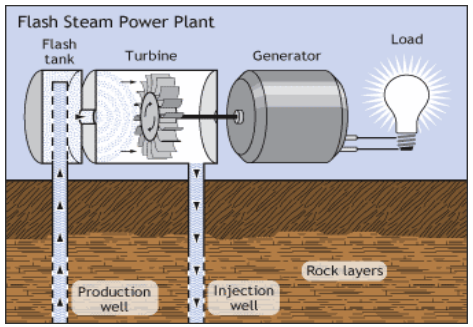
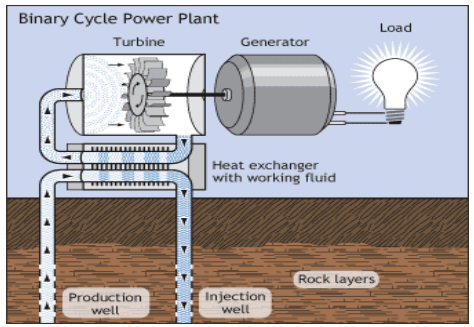
## Geothermal

# Geothermal systems



# Conventional technologies

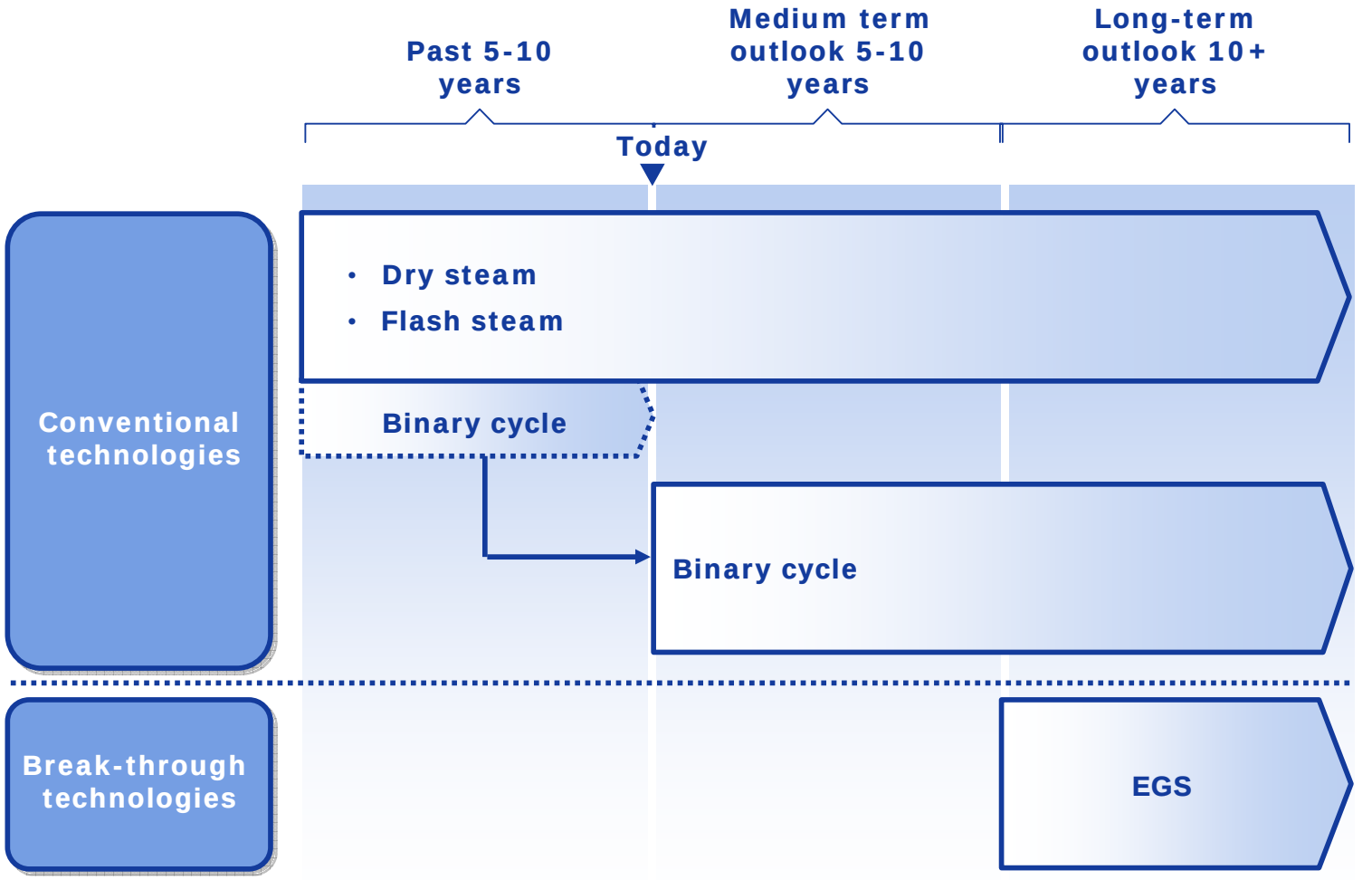
Global Installed capacity 2008

| | Dry steam power plants | Flash steam power plants | Binary cycle power plants |
|---|---|---|---|
| |  |  |  |
| | Dry Steam. | Water with temperatures higher than ~**180°C**. | Water at lower temperatures between ~ **110-180°C**. |
| **Units** | 58 | 195 | 237 |
| **Capacity** (GW) | 2.6<br>Highly cost competitive but geographically limited | 5.6<br>Most dominant in terms of global capacity | 0.8<br>Useful alongside geothermal heating, hot springs, etc |
| **Aver. size** (MW) | ~45 | ~29 | ~3 |



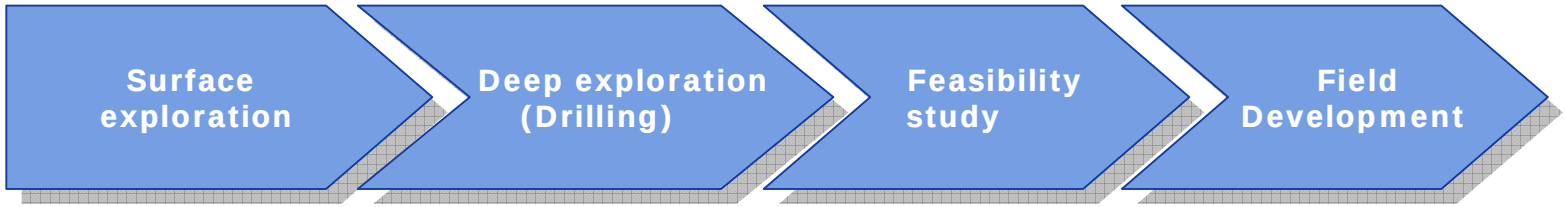
Enel Green Power

# Technological evolution




**Long term break-trough is expected with Engineered Geothermal Systems**

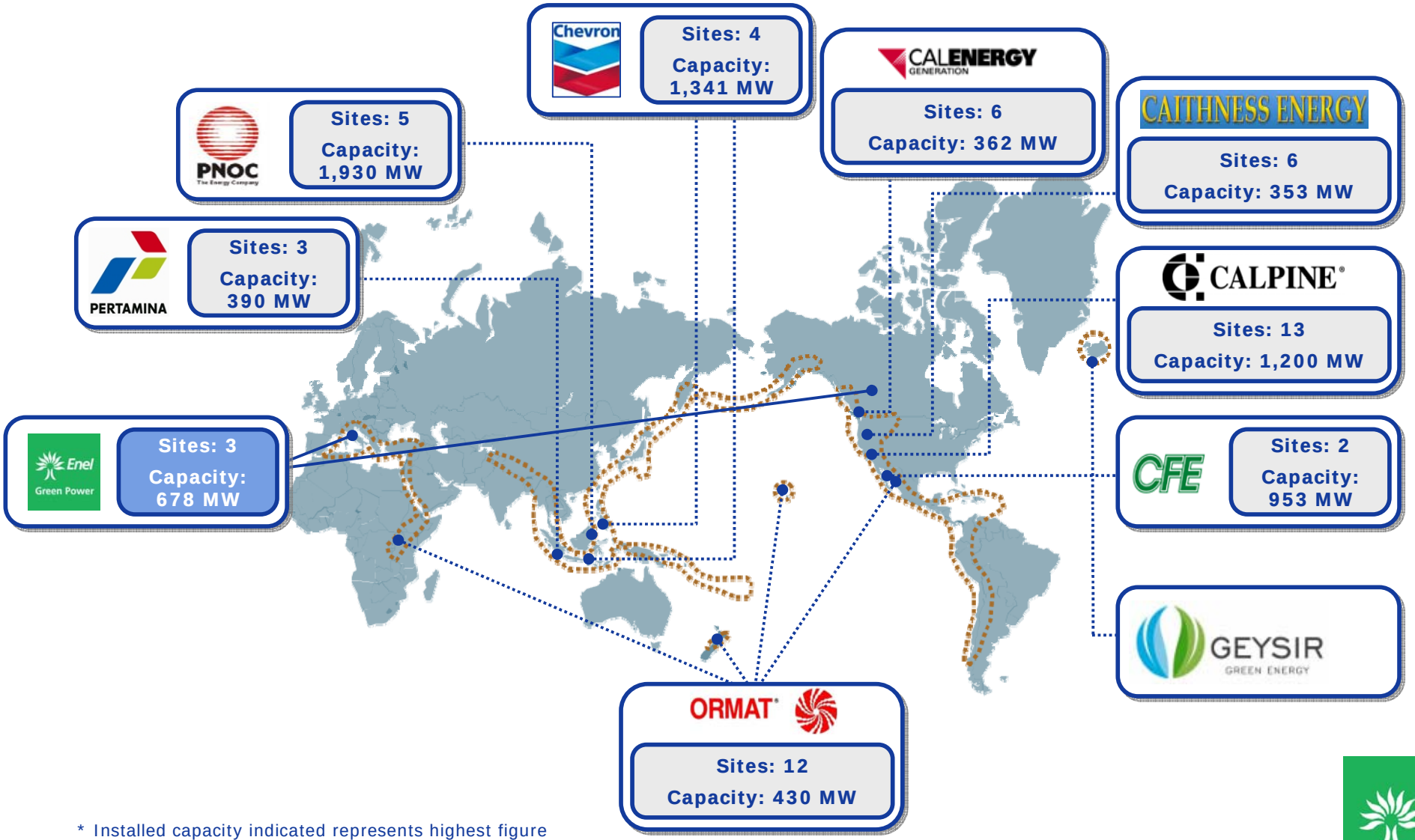
# Typical development process




| | Surface exploration | Deep exploration (Drilling) | Feasibility study | Field Development |
|---|---|---|---|---|
| **Duration (months)** | 4-8 | 10-14 | 10-14 | 24-36 |
| **Description** | • Geological, geochemical and geophysical prospecting<br>• Integration of geo-scientific data and resource modelling | • Permitting and procurement<br>• Well pads and roads design/construction<br>• Well design/planning<br>• Drilling (min. 2 wells) | • Permitting and procurement<br>• Well pads and roads design/construction<br>• Drilling (2-3 additional wells)<br>• Well testing | • Permitting and procurement<br>• Production and reinjection wells (10-15 new wells)<br>• Steam separation and gathering system installation<br>• Power plant and transmission line construction |
| **Key competencies** | • Resource characterization | • Drilling<br>• Resource characterization | • Project design<br>• Project integration | • Project management and integration |

# The industry is mostly local, with only a few players operating supra-regionally

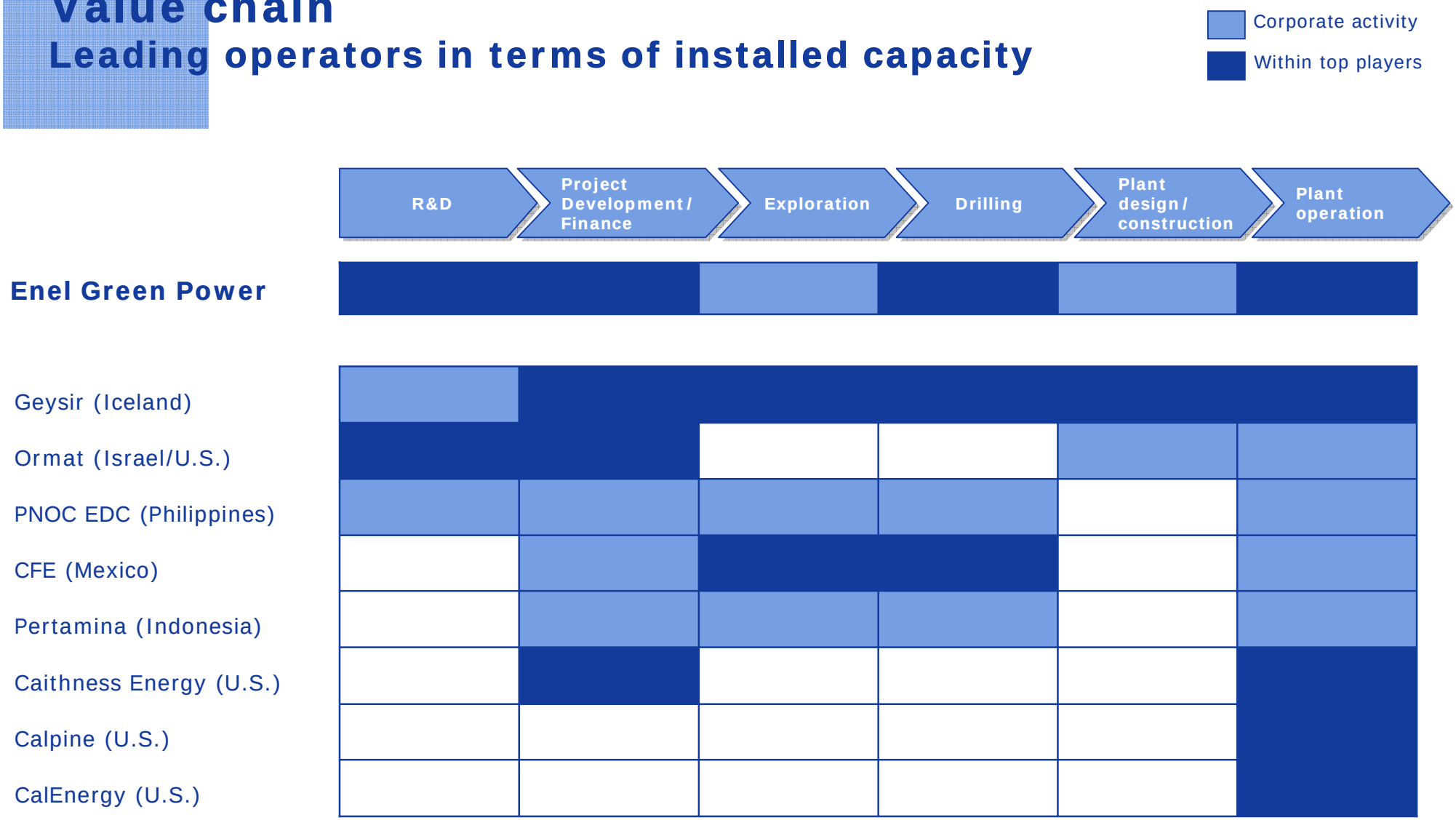
Installed capacity* - 2008, GW




* Installed capacity indicated represents highest figure between field and plant capacity

Source: Company Web sites, press releases, team analysis

# Value chain
## Leading operators in terms of installed capacity




**The industry is highly fragmented along the value chain**

# Typical project economics for a new entrant
## Example Italy

Key drivers

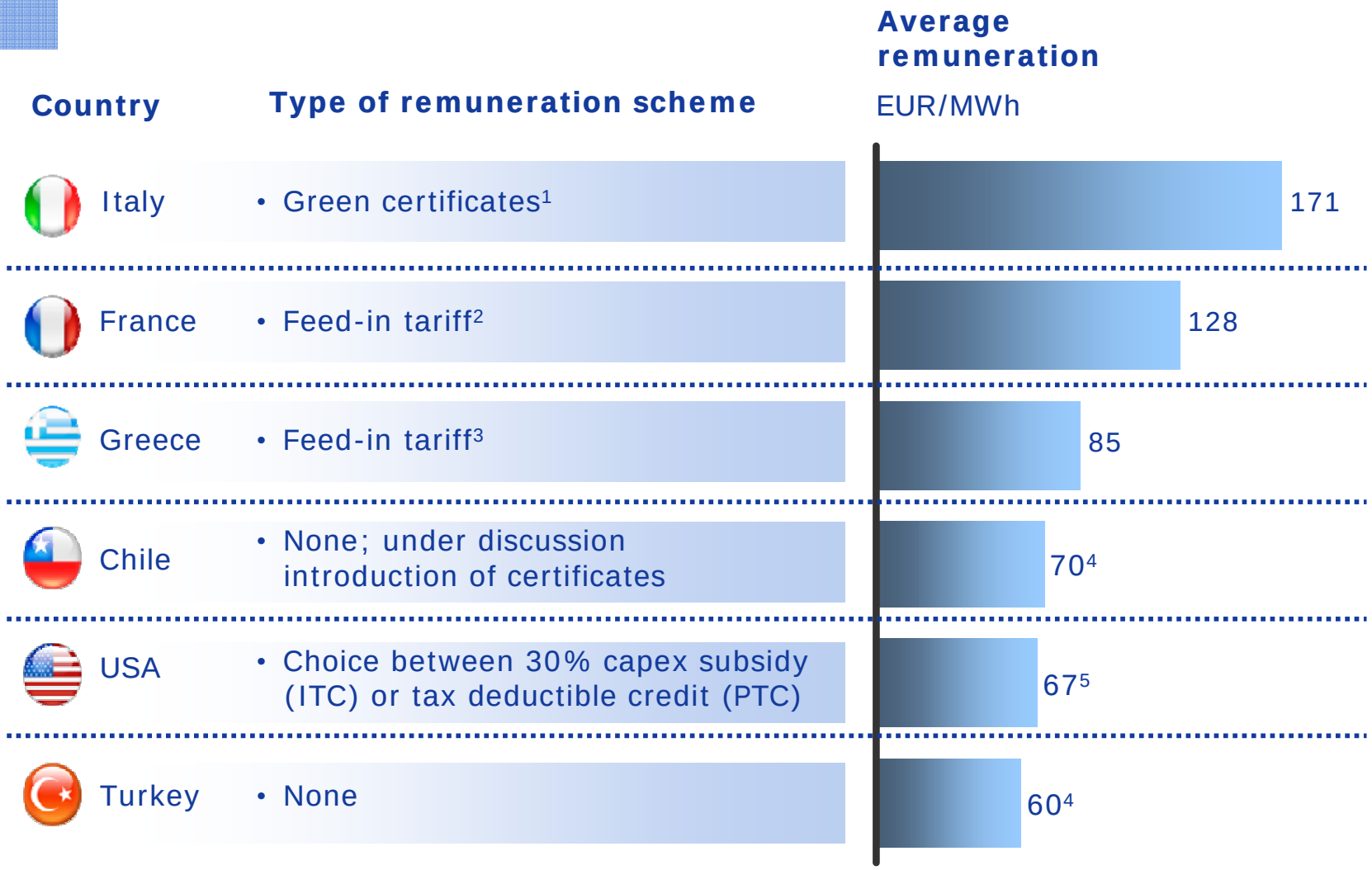
| Drivers | | Values | |
|---|---|---|---|
| | | 2008 | 2020 |
| Investment | • CapEx[1] | • EUR 4.00 million/MW | • EUR 3.50 million/MW |
| | • OpEx | • EUR 50,000/ MW | • EUR 45,000/ MW |
| Operating | • Load factor | • 8,000 hours | • 8,200 hours[2] |
| | • Useful life | • 30 years | • 30 years |

(1) Highly variable and subject to site characteristics
(2) At same natural conditions, higher load factor achieved thanks to improved plant operations from better plant components (e.g., separator)



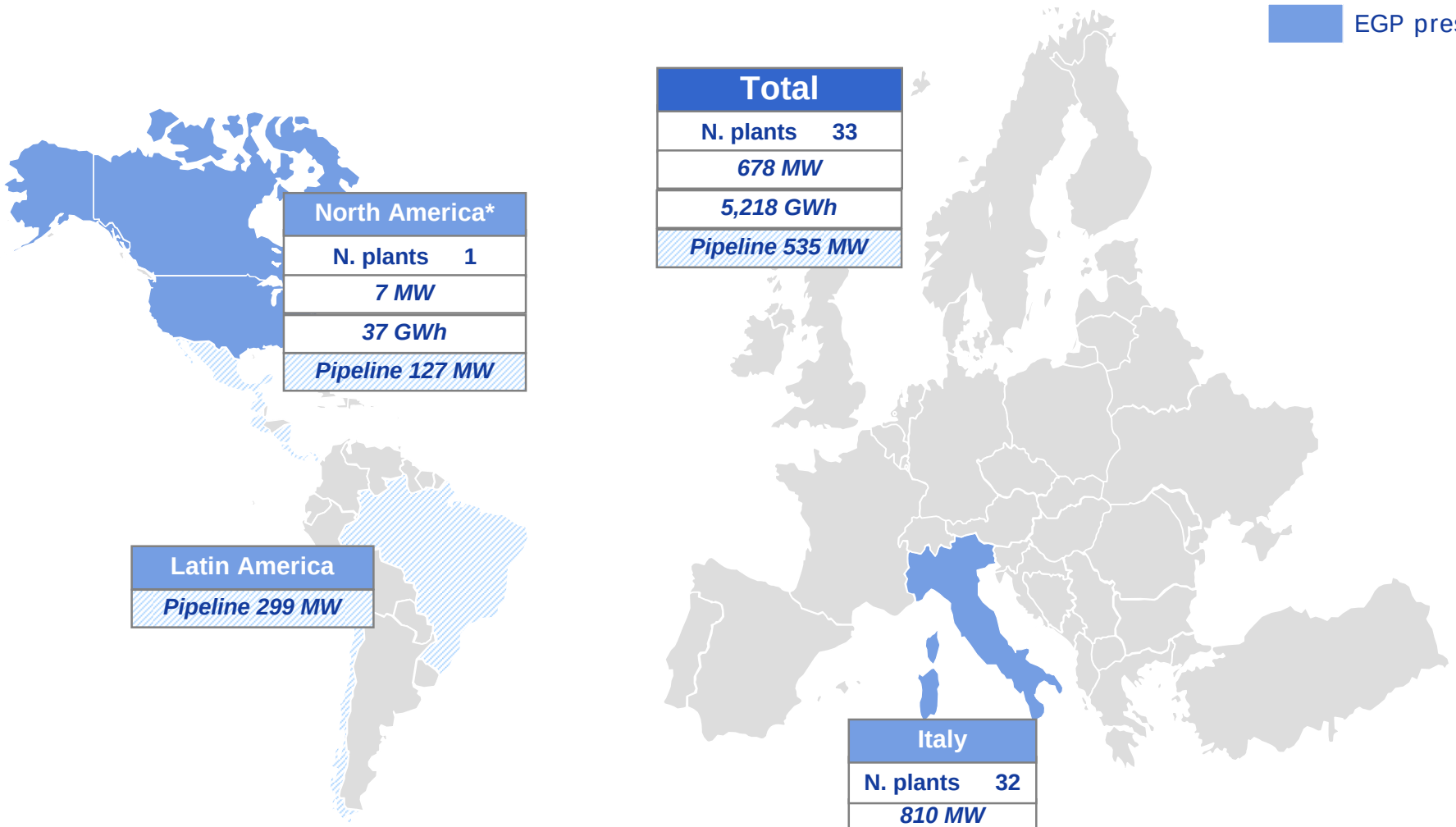
Enel Green Power

# Remuneration scheme by country



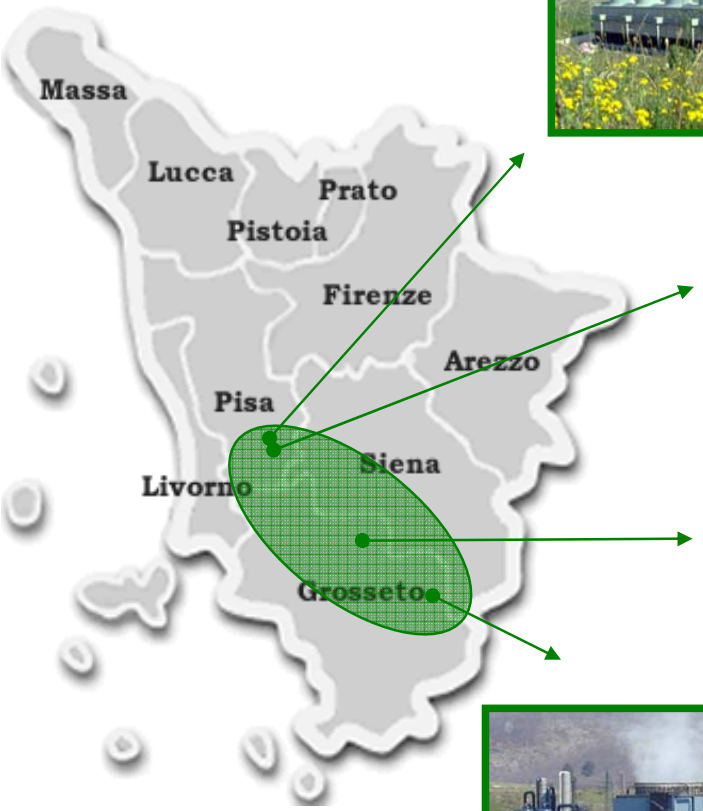

(1) Assuming 0.9 green certificates (in addition to wholesale price)
(2) In addition, accelerated depreciation allowed
(3) In addition, 30% CapEx subsidy awarded
(4) Wholesale price
(5) Assuming wholesale price of 50 EUR/MWh + tax deductible credit equivalent to 17 EUR/MWh

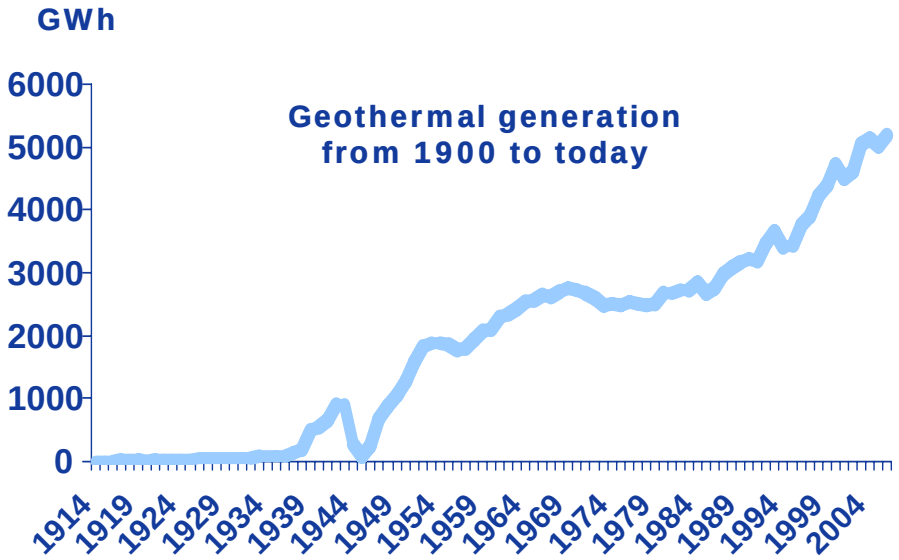
# Enel Green Power installed base and pipeline 2008




* As of 15/04/2009, an additional 65 MW of gross geothermal capacity have become operational

# Focus on Italy geo plants
## Enel Green Power Key competencies




**Continuous growth of production for over 100 years thanks to our field cultivation expertise**

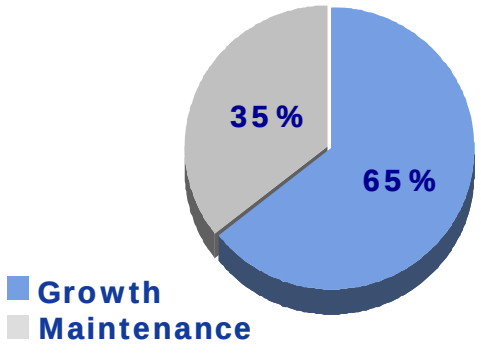
Enel Green Power

# Enel Green Power's strategy on geothermal

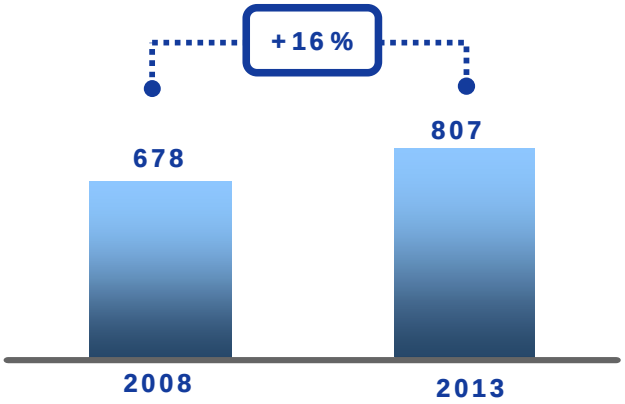
- Leverage our unique competencies
- Selectively develop capacity in North America and Latin America

## CapEx (m€)

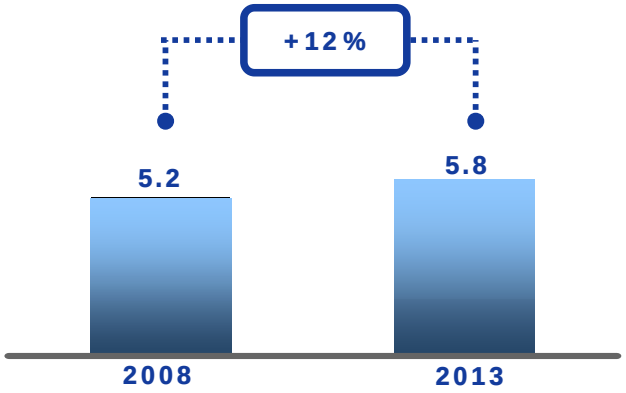
Total 09-13 = 652 m€




## Installed capacity (MW)




## Energy production (TWh)



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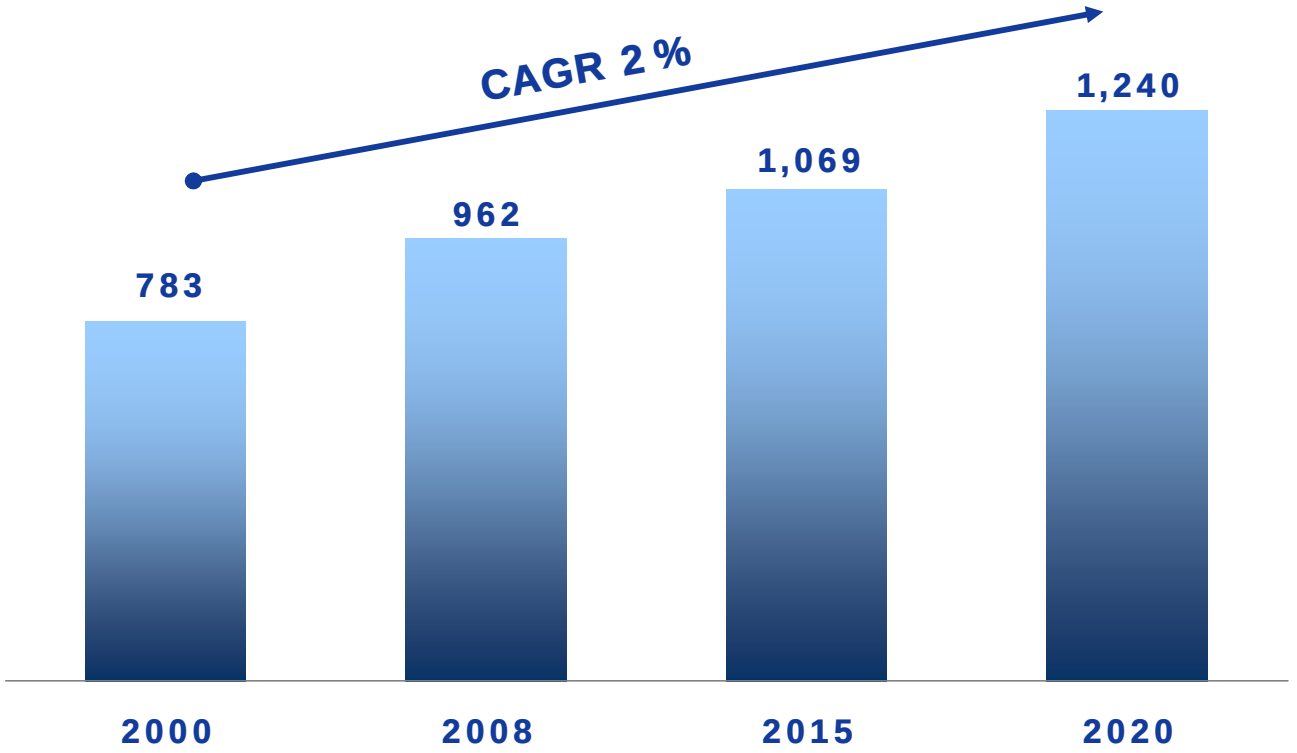
# Hydroelectric power

## Vittorio Vagliasindi


Rome, April 22, 2009

# Worldwide installed capacity

GW

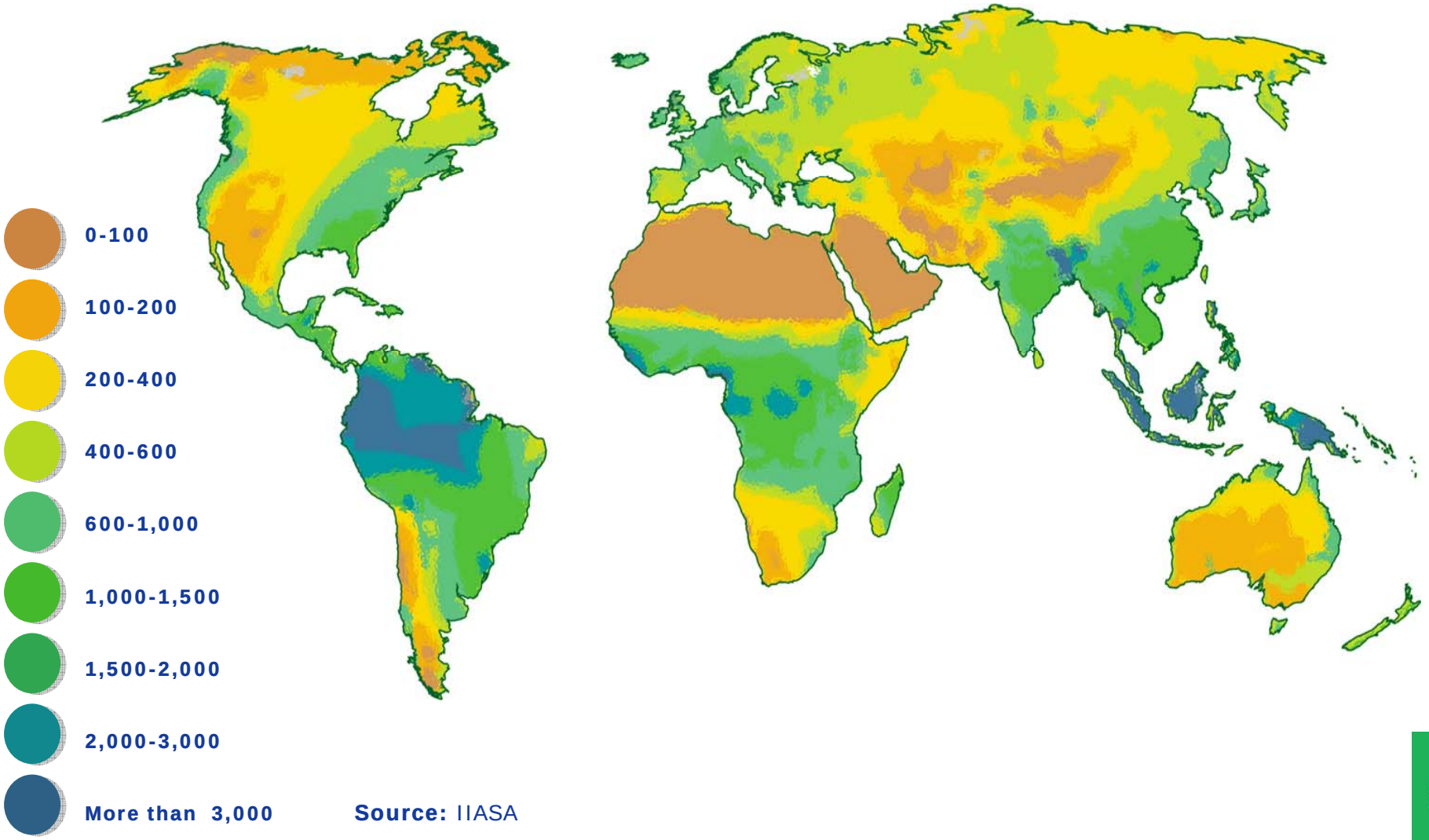



**The most important "traditional" renewable energy**

Source: REN21, UDI database; McKinsey; Enel analysis on WEO 2008, industry reports.

# Resources availability

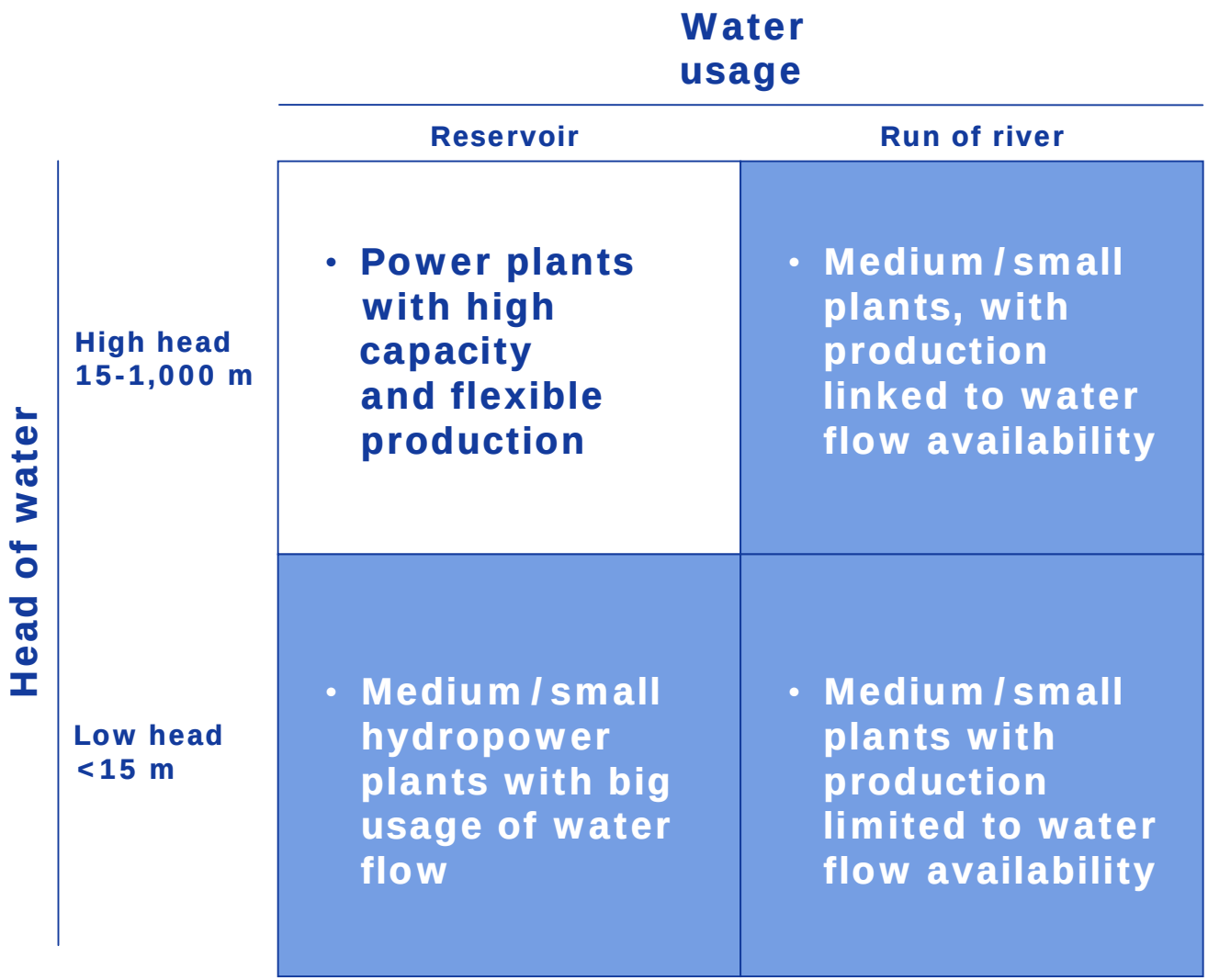
## Average Annual Precipitation (Millimeters)



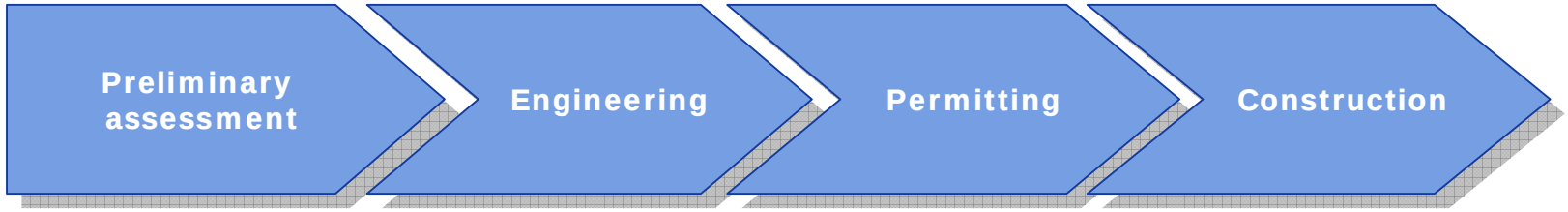

**Source:** IIASA

# Hydropower technology can be classified according to usage and water head

Enel Green Power technologies



# Typical development process




| | Preliminary assessment | Engineering | Permitting | Construction |
|---|---|---|---|---|
| **Duration (years)** | 1-2 | 1 | 1-2 | 1-7 |
| **Description** | • Site investigation<br>• Hydrological studies<br>• Head measurements | • Planning of civil, electromechanical and electrical works<br>• Grid connection | • Water diversion license<br>• Environmental impact evaluation;<br>• Construction authorization | • Civil works (dams, penstock, building) and hydrological works<br>• Machinery and turbines assembly<br>• Electrical works and connections |
| **Key competencies** | • Resource evaluation | • Design optimization<br>• Project integration | • Relationship management with Local Authorities | • Project management |

# Typical project economics for a new entrant
## Example Italy

Key drivers

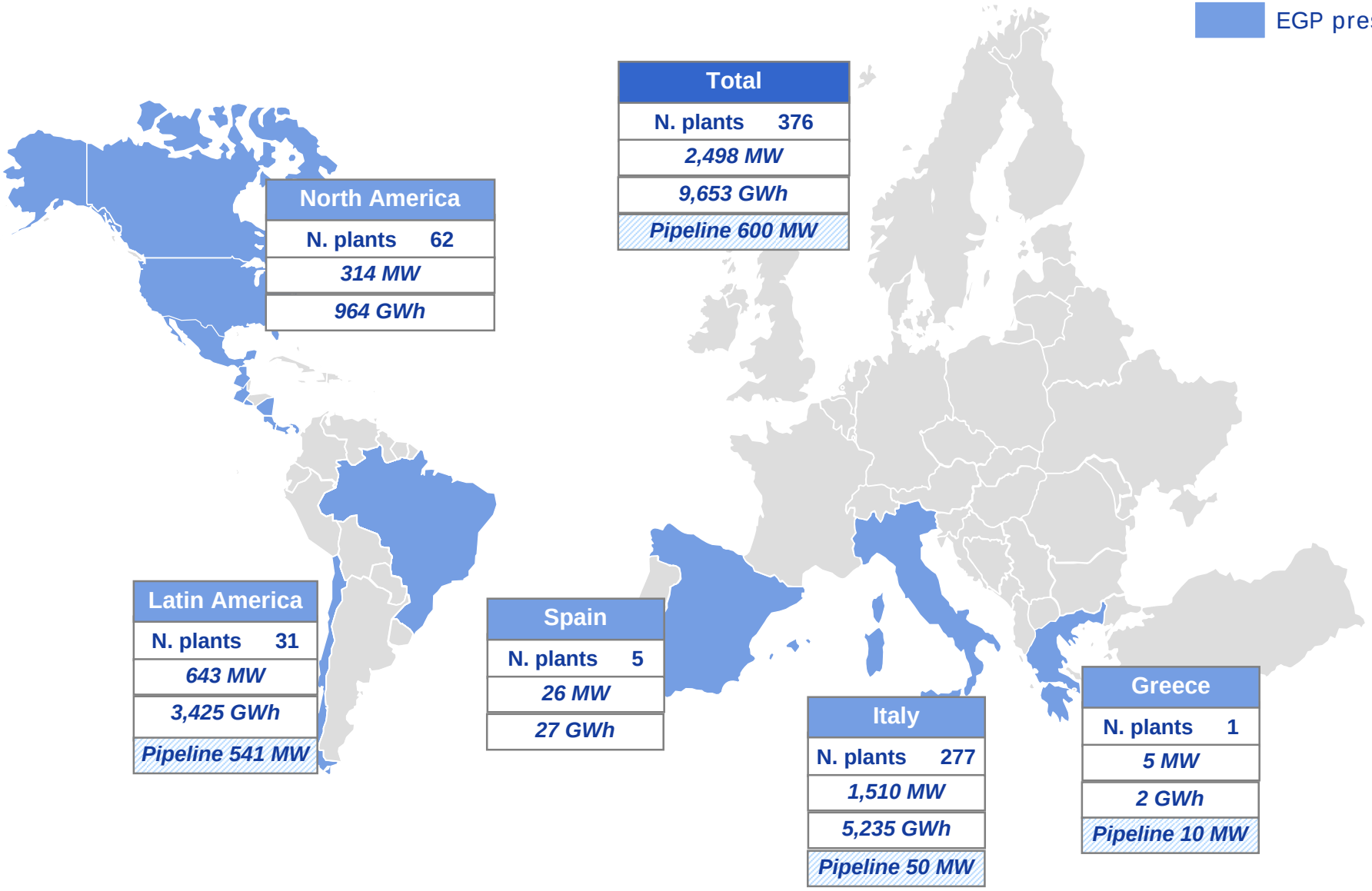
| Drivers | | Values | |
|---|---|---|---|
| | | 2008 | 2020 |
| Investment | • CapEx | • EUR 2.20 million/MW | • EUR 2.20 million/MW |
| | • OpEx | • EUR 28,000/MW | • EUR 25,000/MW |
| Operating | • Load factor | • 3,500 hours | • 3,500 hours |
| | • Useful life | • 30 years | • 30 years |

# Remuneration scheme by country

| Country | Type of remuneration scheme | Average remuneration EUR/MWh |
|---|---|---|
| Italy | • Green certificates | 180 |
| Spain | • Feed-in tariff or wholesale + premium[1] | 89 |
| Greece | • Feed-in tariff[2] | 80 |
| France | • Feed-in tariff[3] | 78 |
| Portugal | • Feed-in tariff | 76 |

(1) Operator can choose preferred remuneration scheme. A cap is defined by the regulation
(2) In addition, 30% CapEx subsidy awarded
(3) In addition, accelerated depreciation allowed

# Enel Green Power installed base and pipeline
2008

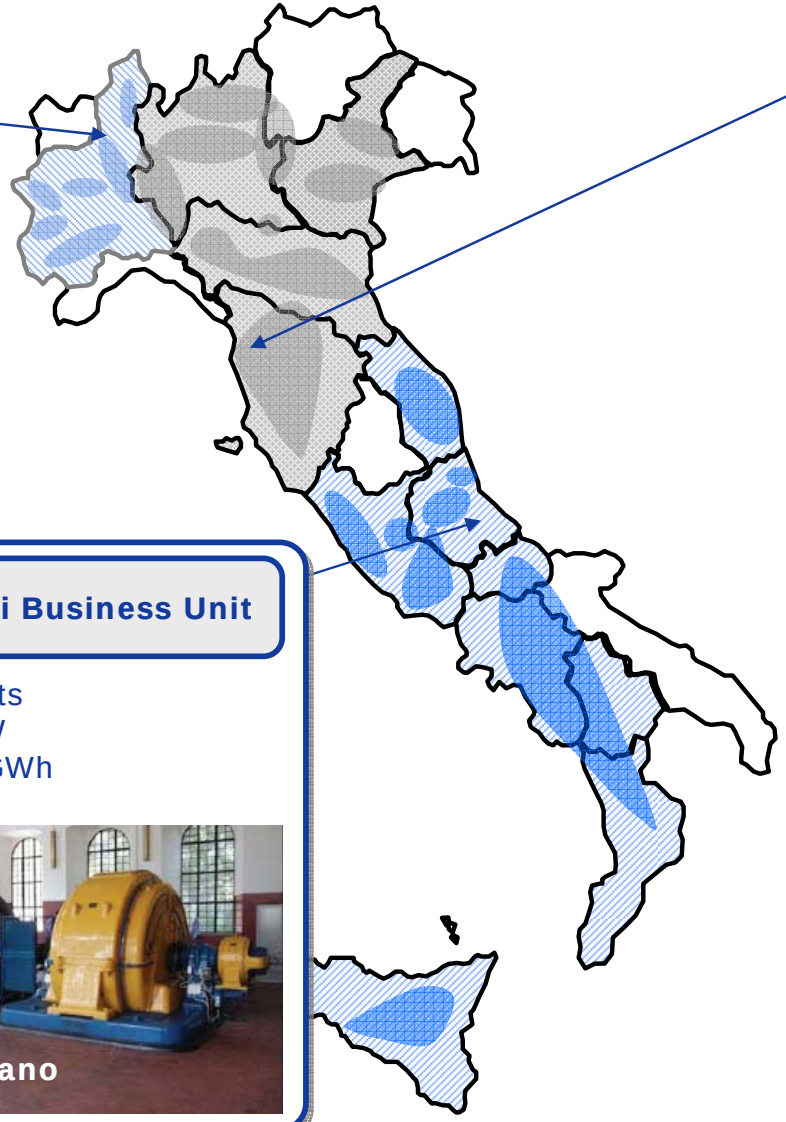



* Endesa hydro assets (221 MW) and hydro pipeline (0.6 GW) not included

# Focus on Italy hydroelectric power plants

**Domodossola Business Unit**

70 Plants
493 MW
1,971 GWh

**Napoli Business Unit**

83 Plants
430 MW
1,631 GWh

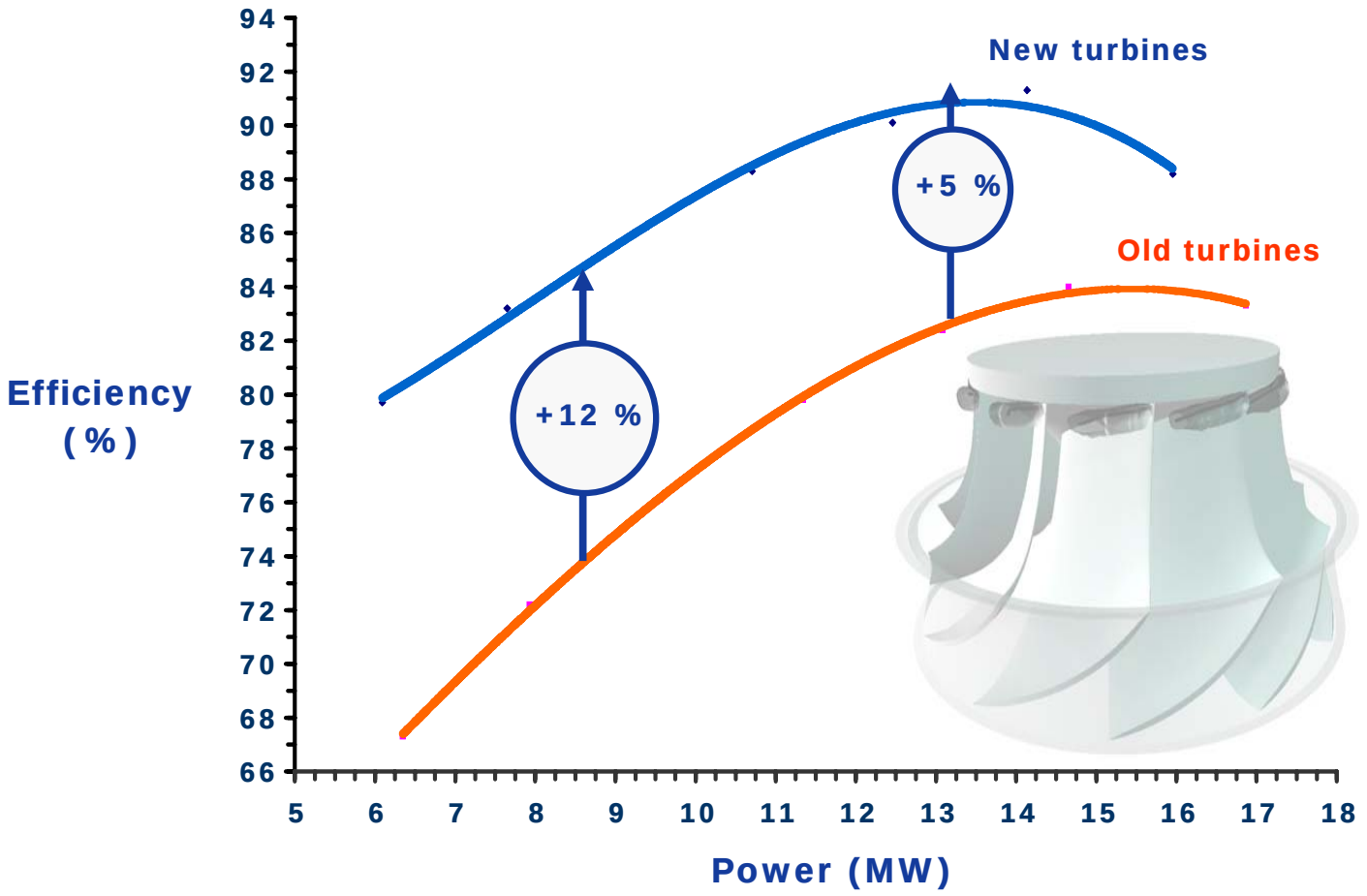



**Bergamo Business Unit**

124 Plants
587 MW
2,943 GWh


Enel Green Power

# Italy: re-powering of hydroelectric plants



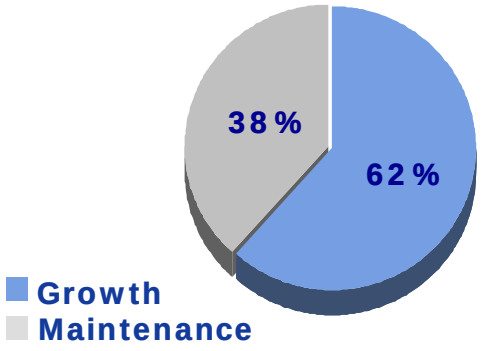

**More energy with same water**

# Enel Green Power's strategy on hydroelectric

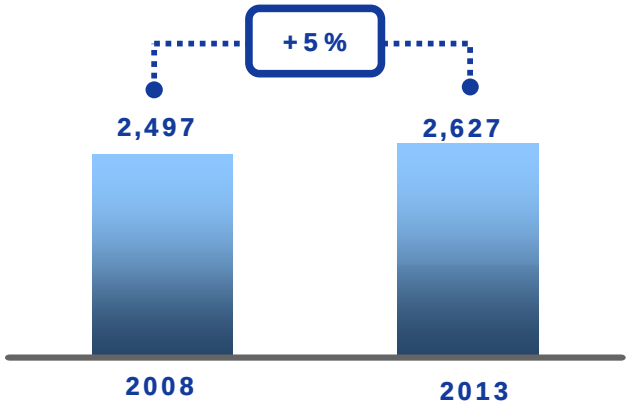
- Leverage EGP's unique long-standing competencies
- Selectively develop capacity in North America and Latin America

## CapEx (m€)

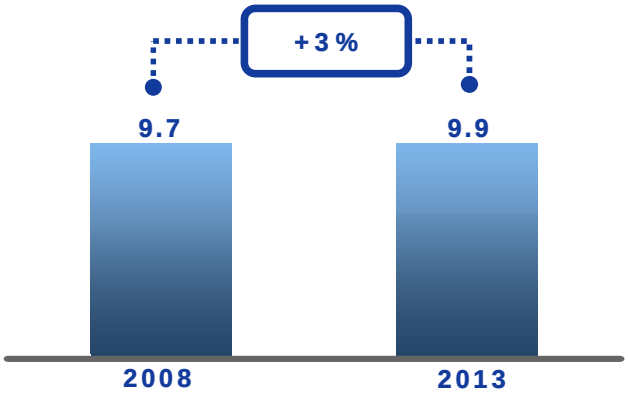
Total 09-13 = 520 m€




## Installed capacity (MW)




## Energy production (TWh)



# Investor Day

Rome - April 22nd, 2009

| | |
|---|---|
| • Opening remarks | F. Conti |
| • Enel Green Power: a leading player in renewable energies | F. Starace |
| • Focus on technologies: | |
| • Geothermal | T. Volpe |
| • Hydro | V. Vagliasindi |
| • Coffee break | |
| • Focus on technologies: | |
| • Wind | M. Bezzeccheri |
| • Solar Photovoltaic | I. Wilhelm |
| • Business Development Model | R. Deambrogio |
| • Financial highlights | A. De Paoli |
| • Conclusions | F. Starace |
| • Lunch (Q&A) | |

Enel Green Power

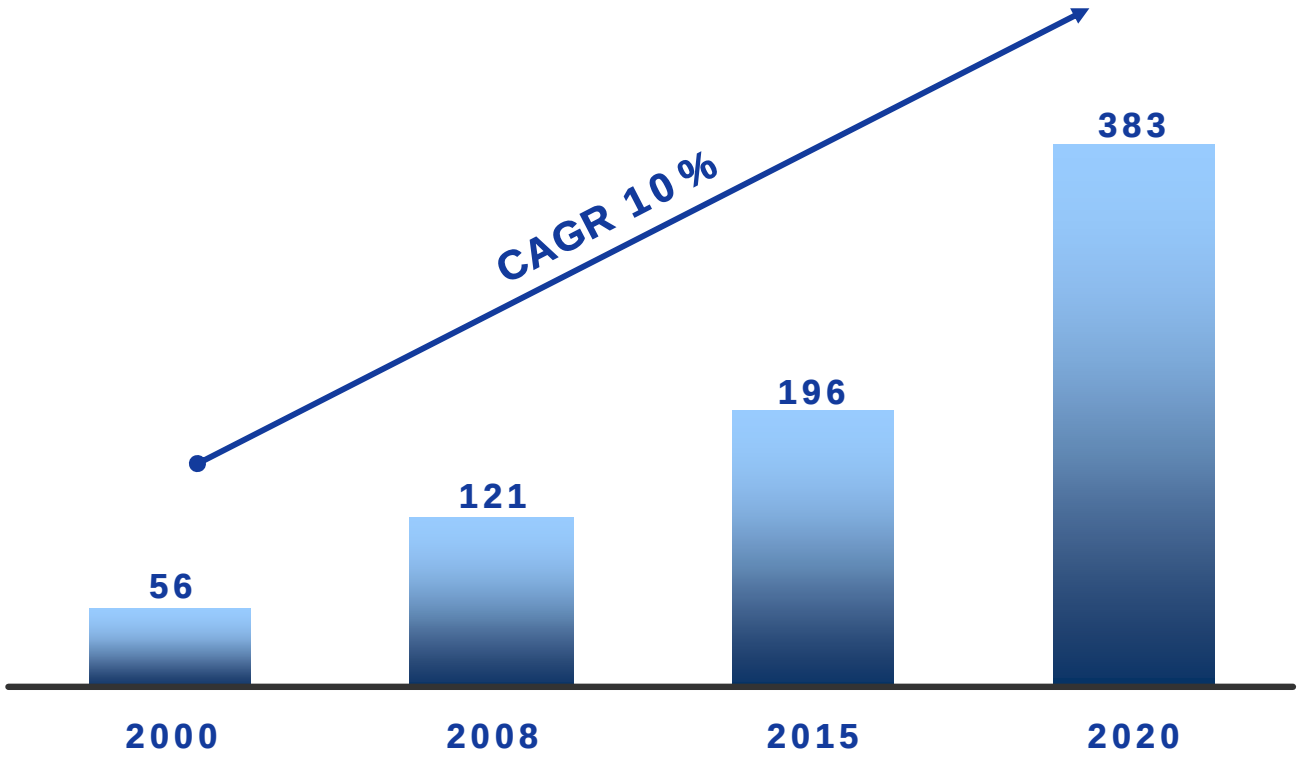
# Wind power

Maurizio Bezzeccheri


Rome, April 22, 2009

# Worldwide installed capacity

GW

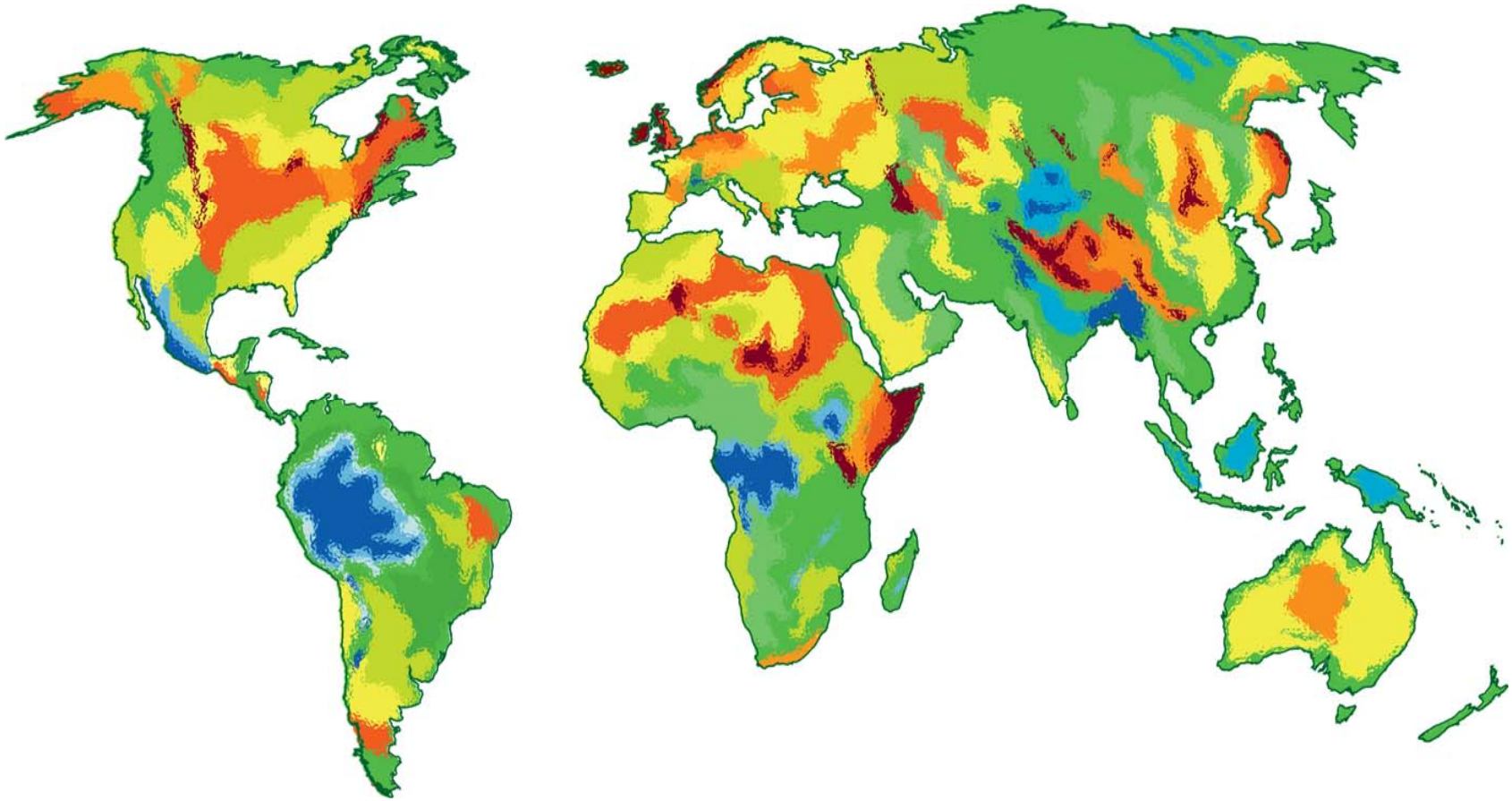



**Very strong growth expected worldwide**

Source: Enel analysis on WEO 2008, GWEC 2008, industry reports.

# Resource availability

## Wind *(Intensity)*

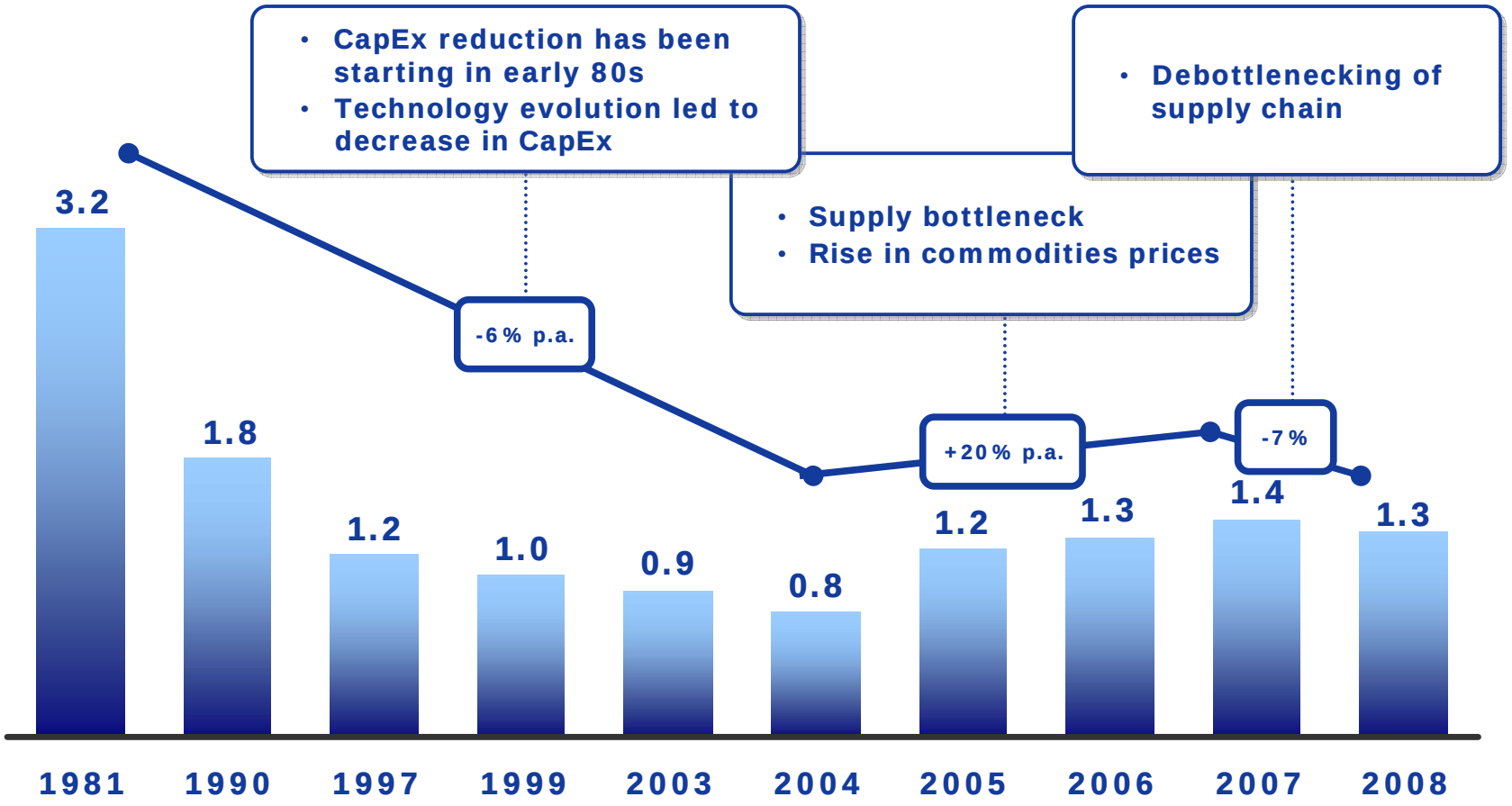


Wind speed over land

3 6 9 m/s

Enel Green Power

# Technology overview
## Average turbine price*, m€/MW




**Long-term technology evolution resulting in improved wind economics**

* BoP (Balance of Plant) not included

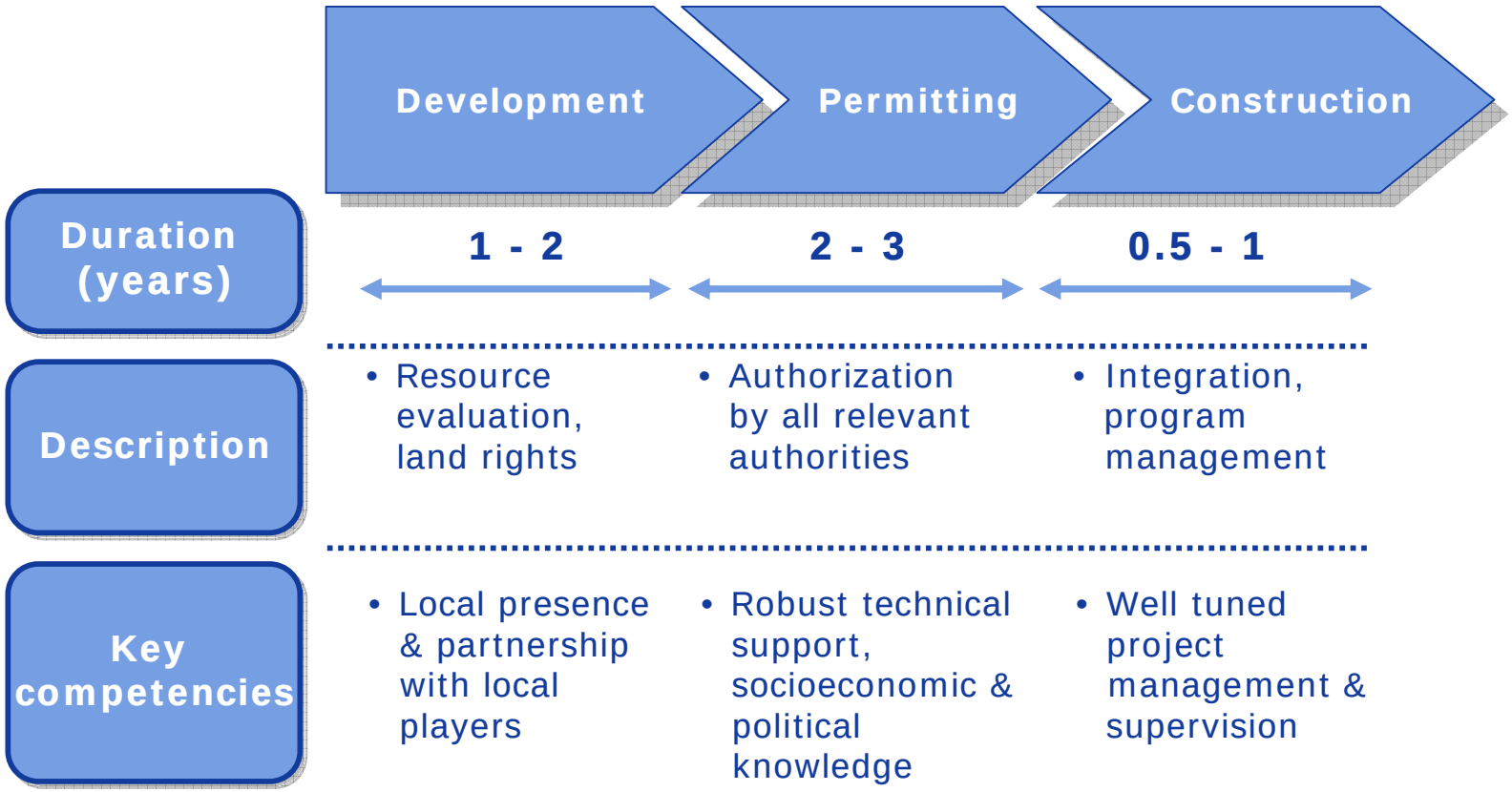
# Value chain dynamics

| Driving factors | Description | Stakeholder affected |
|---|---|---|
| **Easing out of supply constraints** | • New manufacturing capacity (key components)<br>• Internalization of components manufacturing by OEMs<br>• Better planning/ management along the value chain | • OEMs: reduced margins<br>• Operators: increased negotiation power, improved project economics |
| **More difficult financing** | • Decreased availability of attractive financing<br>• Difficulties in finding financial partners in countries with tax-based incentives (e.g. USA) | • Small developers: most projects are being postponed or monetized<br>• Large operators: interesting opportunities for pipeline acquisition |
| **Learning effects in O&M** | • Wind-farm operators are moving from contracted O&M to in-house O&M | • Industrial operators: value creation thorough excellence in O&M |

**"Power shift" along the value chain will benefit large, integrated operators**

Enel Green Power

# Typical development process




**Full lifecycle management of project is key for success**

# Future landscape

| Key elements | Key evidence |
|---|---|
| **Wholesale grid parity widely reached** | • Wholesale grid parity already reached in some countries (e.g. Portugal, UK, Ireland)<br>• Wholesale grid parity reached in the very short-term (by 2012) in several other countries (e.g. Morocco, Spain) |
| **New geographies emerging** | • Europe expected to retain largest share of total installed capacity by 2020 (~40%), together with USA<br>• New geographies emerging thanks to significant growth rate (e.g. China, India and Brazil) |
| **Repowering of old assets** | • Growth in mature markets (e.g. Germany) driven by repowering of existing infrastructure |

# Typical project economics for a new entrant
## Example Italy

Key drivers

| Drivers | | Values | |
|---|---|---|---|
| | | 2008 | 2020 |
| Investment | • CapEx | • EUR 1.60 million/MW | • EUR 0.80 million/MW |
| | • OpEx | • EUR 30,600/MW | • EUR 19,800/MW |
| Operating | • Load factor | • 2,000 hours | • 2,480 hours[1] |
| | • Useful life | • 20 years | • 20 years |

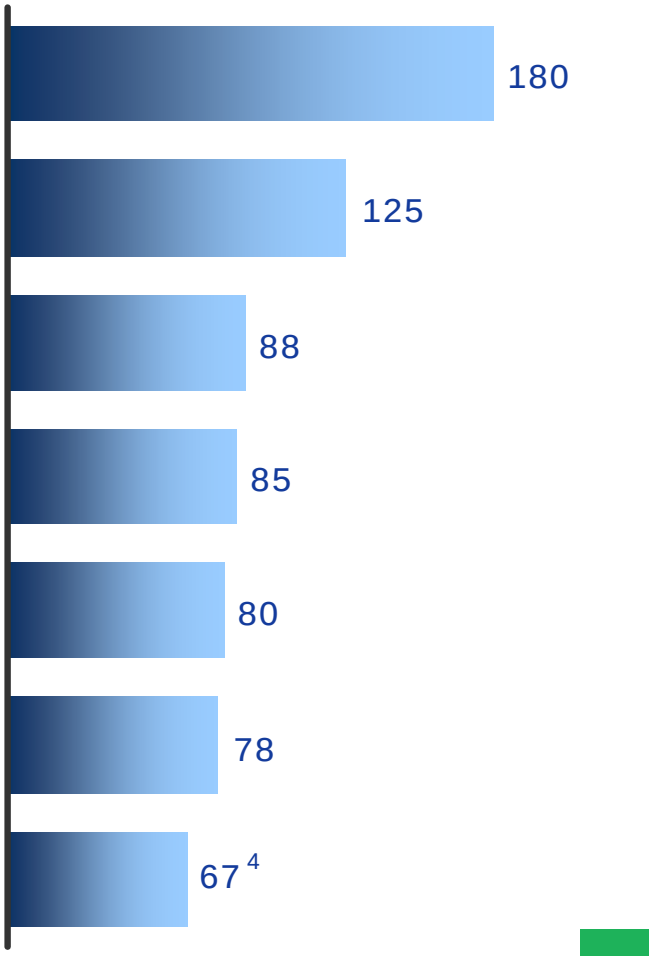
(1) At same natural conditions, higher load factor achieved due to more efficient turbines

# Remuneration scheme by country

| Country | Type of remuneration scheme |
|---|---|
| Italy | • Green certificates |
| Romania | • Green certificates (1.5x for wind) |
| Spain | • Feed-in tariff or wholesale + premium[1] |
| France | • Feed-in tariff[2] |
| Greece | • Feed-in tariff[3] |
| Portugal | • Feed-in tariff |
| USA | • Choice between 30% CapEx subsidy (ITC) or tax deductible credit (PTC) |

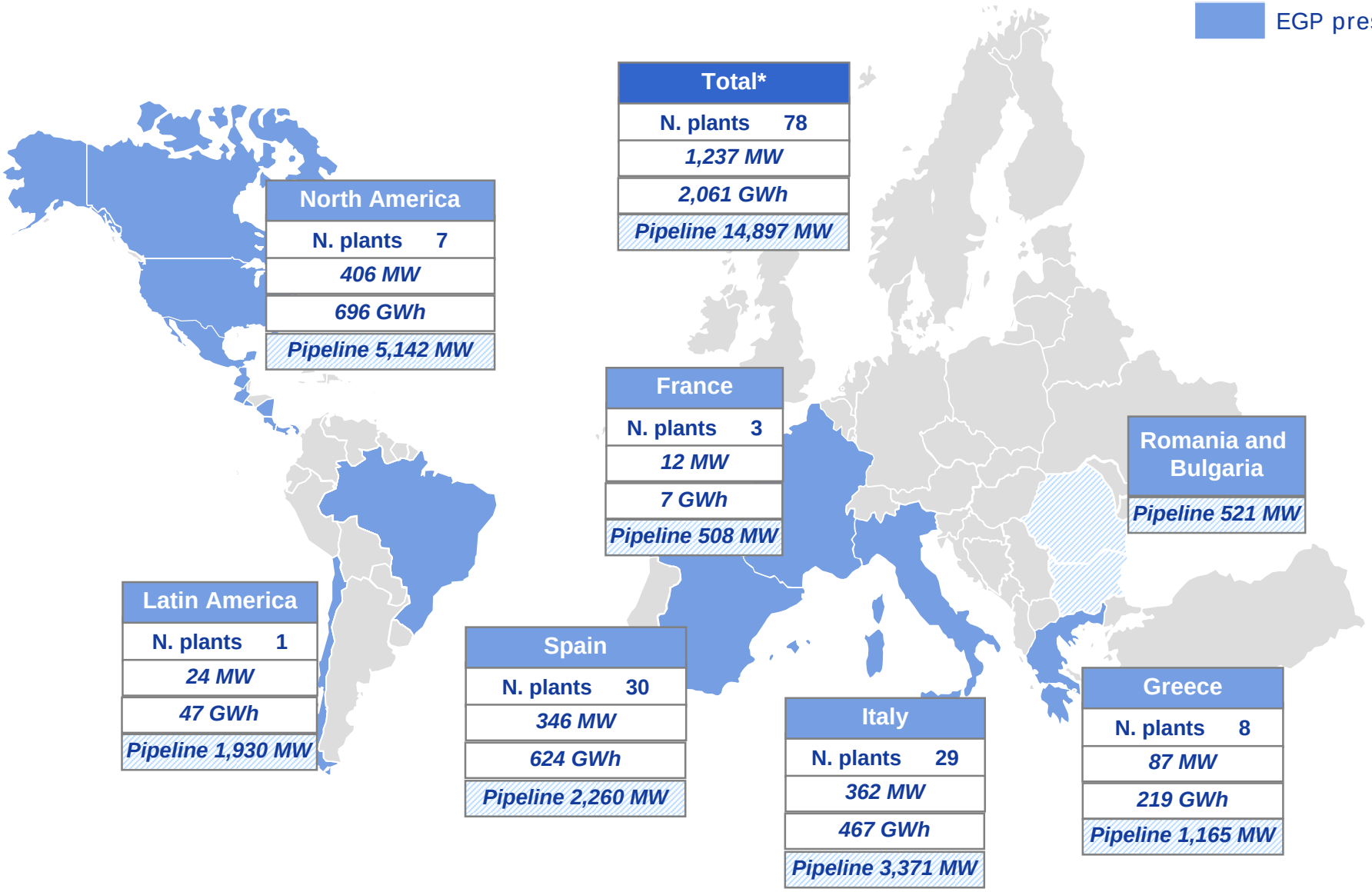
**Average remuneration**

EUR/MWh



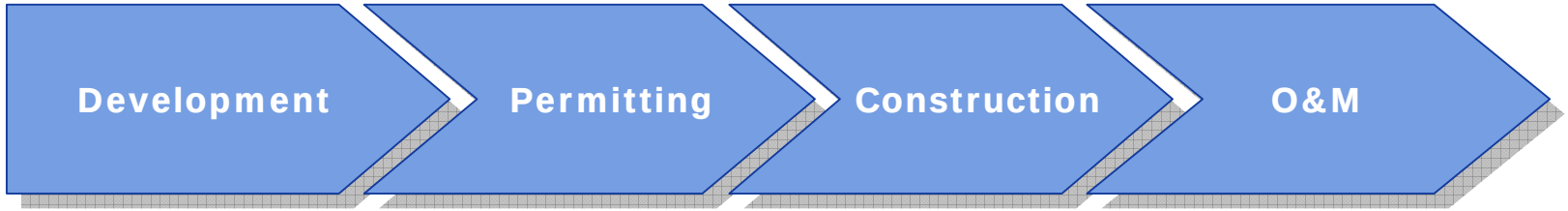

(1) Operator can choose preferred remuneration scheme. A cap is defined by the regulation
(2) In addition, accelerated depreciation allowed
(3) In addition, 30% CapEx subsidy awarded
(4) Assuming wholesale price of 50 EUR/MWh + tax deductible credit equivalent to 17 EUR/MWh

# Enel Green Power installed base and pipeline
2008




* Endesa wind assets (731 MW) and wind pipeline (11.3 GW) not included

# Enel Green Power positioning along the value chain




- Large, high quality and diversified pipeline
- Local presence to catch best opportunity
- International network

- Focused on building public acceptance
- Proactive cooperation with local authorities
- Capability to manage a wide pipeline

- Leverage on Enel skills and experience
- Lean and effective organization
- Standardized processes and reports to meet budget and schedules

- Maximization of plant availability
- Sustainable cost reduction
- Implementation of data management systems improve effectiveness
- High-quality O&M standards

**Strongly positioned in O&M,**
**key to maximizing value of wind investments**

# Centre of expertise to leverage on technological competencies

## SCADA (Supervisory Control And Data Acquisition)

- Real time and historical data collection
- Supervision and telecontrol
- KPI tracking
- Fast response to grid events

## TCP/IP METERING (GPRS modem)

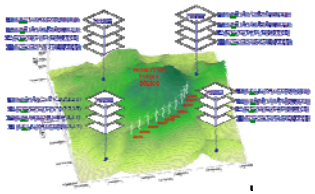
- Hourly updated
- Reliability and fast communication.
- Improvement of short time forecasting models

## TCP/IP METERING (GPRS modem)

- Data exchanged with different Market/Transport Operators
- Systems upgraded to new standards
- Centralized database

## TCP/IP METERING (GPRS modem)

- Meteorological models
- Short time real-data-based models

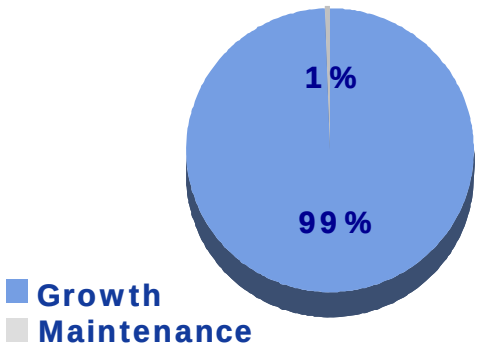


# Enel Green Power's strategy on wind

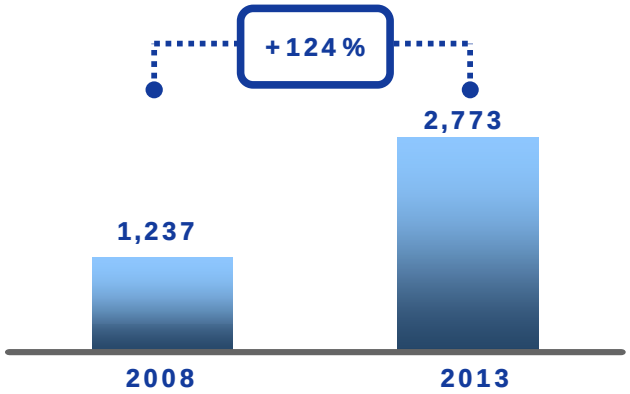
- Develop growth options in core markets
- Maintain a diversified geographical presence
- Mixed development model
- Capture opportunities in equipment procurement

## CapEx (m€)

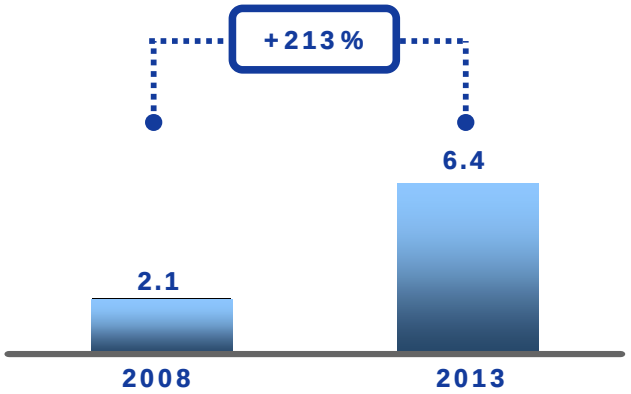
Total 09-13 = 2,194 m€




## Installed capacity (MW)




## Energy production (TWh)



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Rome - April 22nd, 2009

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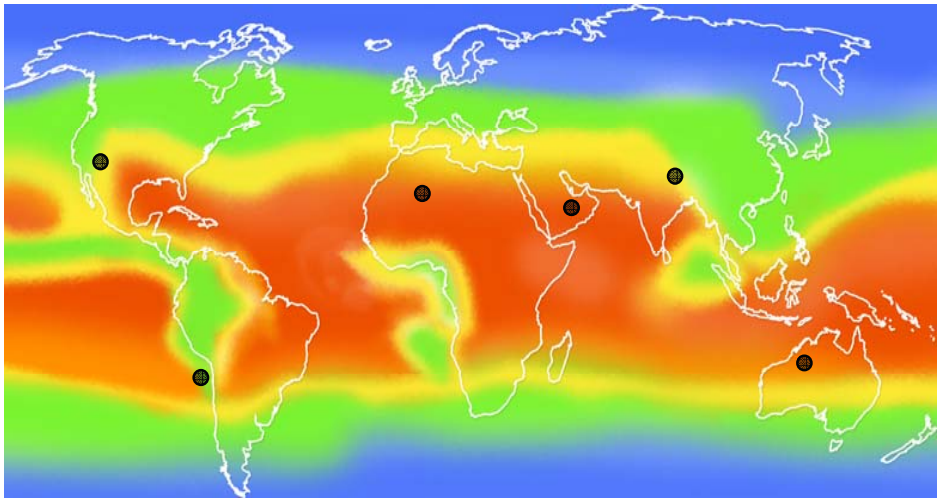
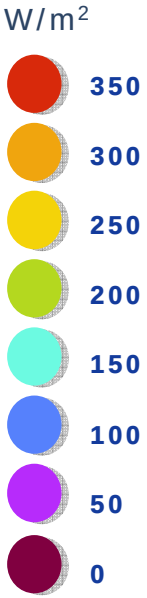
| • Conclusions | F. Starace |


Solar power
Ingmar Wilhelm
Enel
Green Power
Rome, April 22, 2009

# The Market: solar energy world-wide

## Irradiation






**Source:** NASA 2008

- **All major renewable energy sources such as hydro, wind, and obviously photovoltaic power ultimately come from the sun**
- **Total solar energy absorbed by the Earth is 3,850,000 EJ (exajoules) per year**
- **Total Wind energy on Earth is 2,250 EJ and total Biomass energy is 3,000 EJ per year**
- **Total Human Primary Energy use is some 500 EJ per year (of which electricity some 12%)**

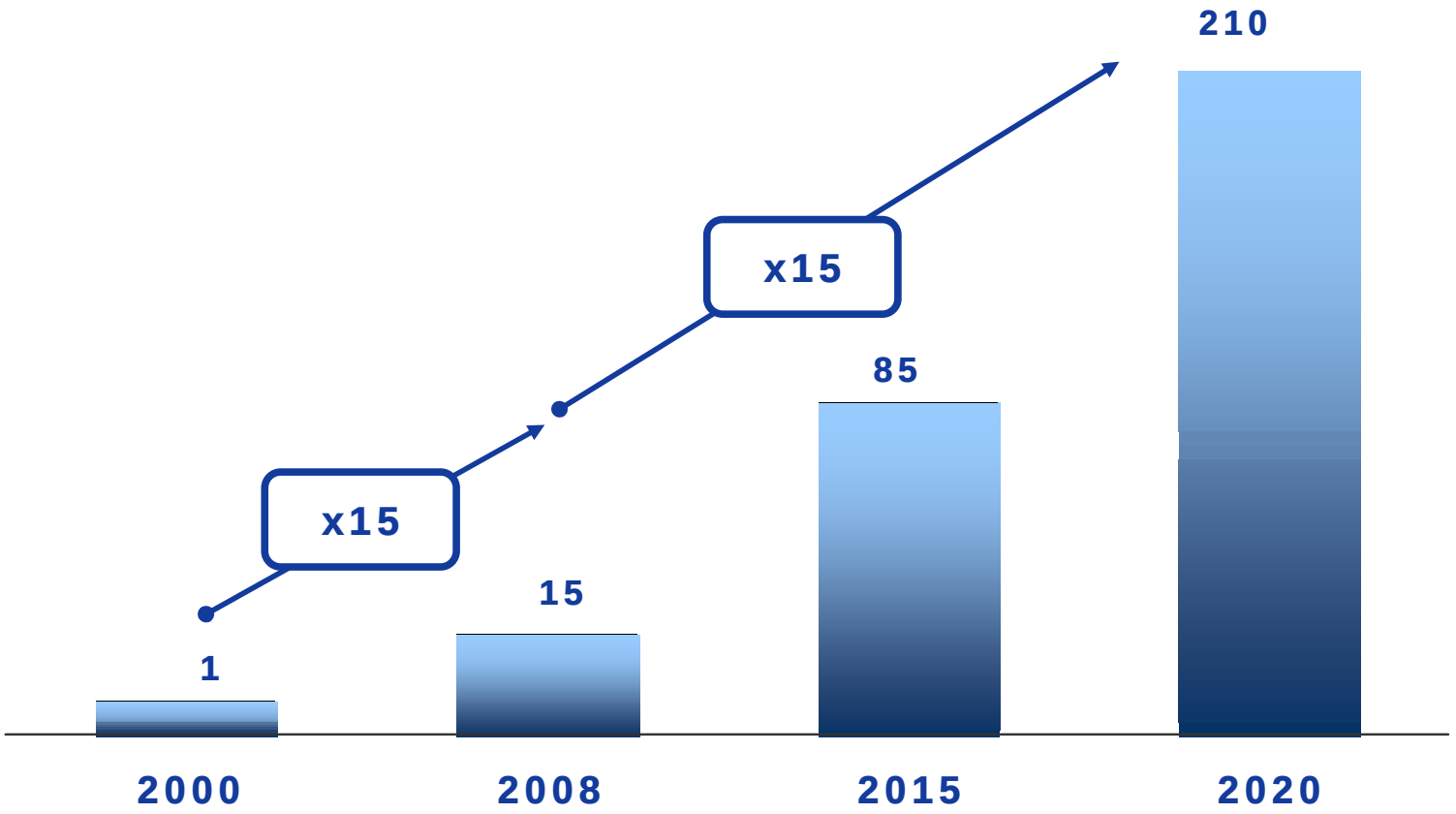
The map shows average irradiation on Earth.

The black spots represent the space necessary to replace the world's primary energy supply with solar electricity.

18 TWe equals 568 EJ.

# Worldwide installed Photovoltaic Capacity

Cumulative Power in GW




- Capacity growth rates of photovoltaic power above 15% per year
- In 2008 worldwide capacity increased by over 5,000 MW

Source: Enel analysis on WEO 2008, industry reports

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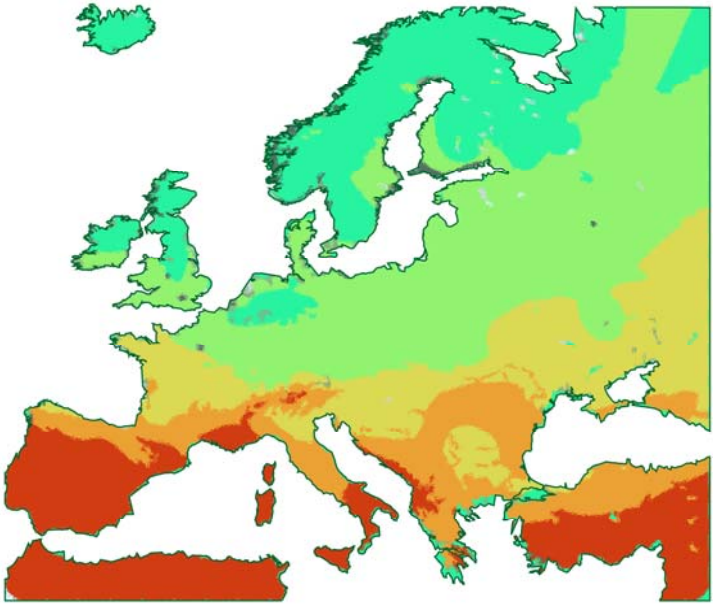
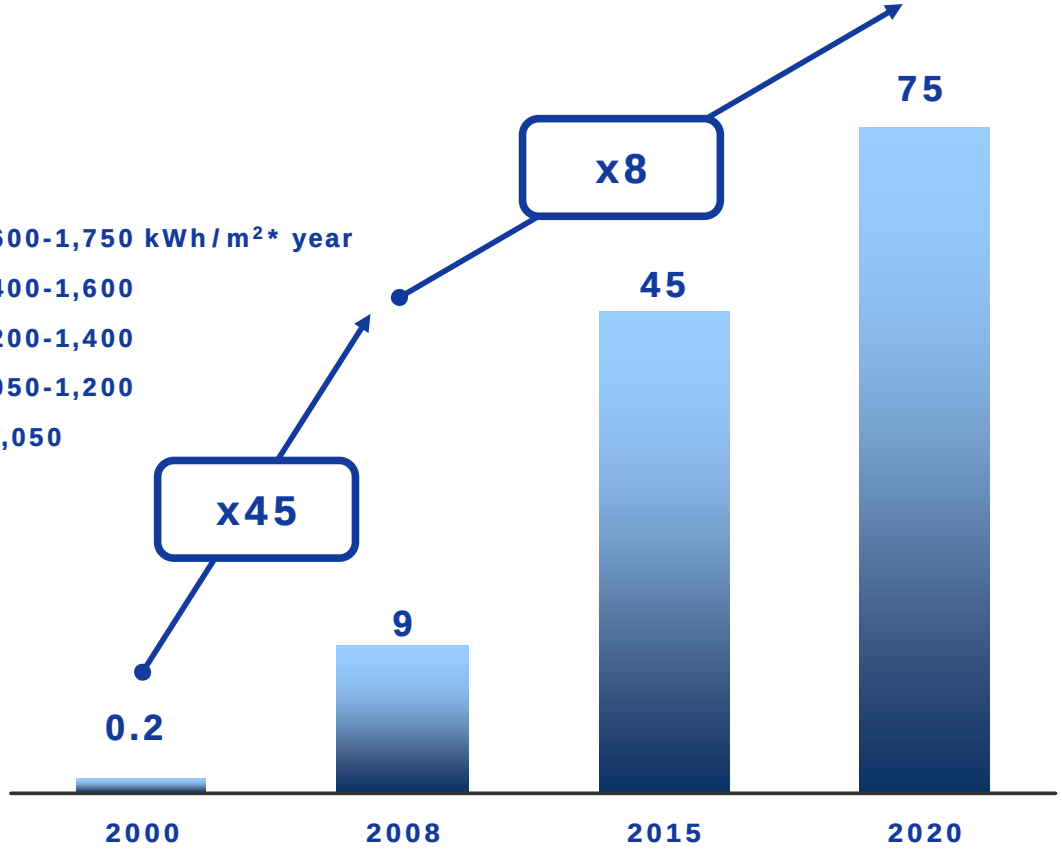
# The Market: Europe

## Irradiation



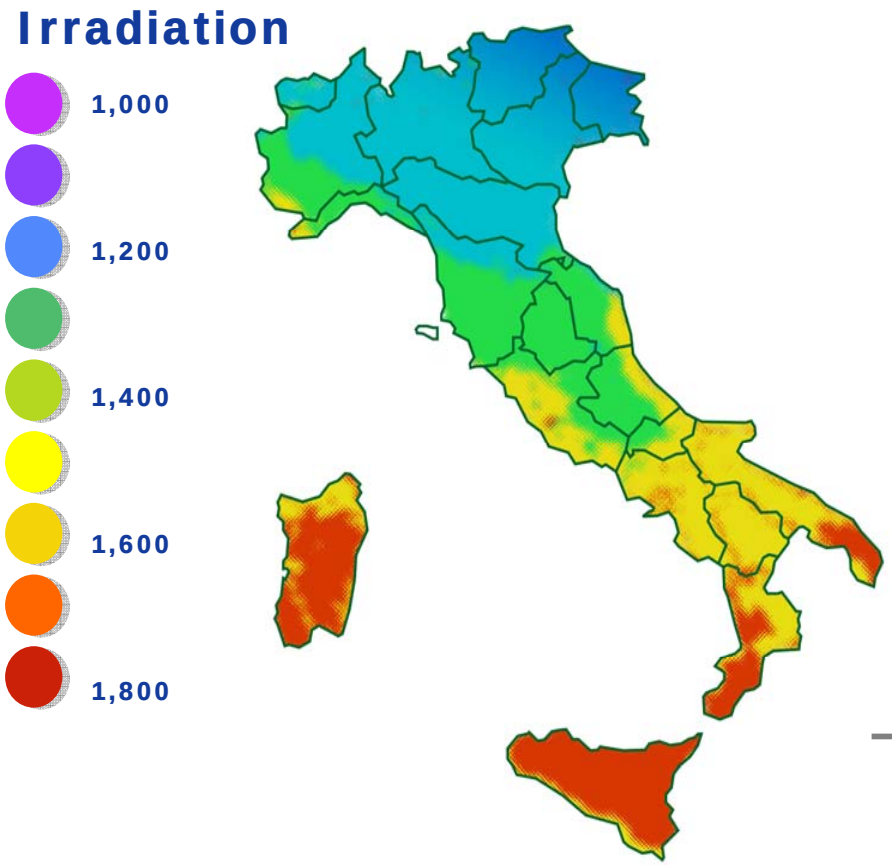
1,600-1,750 kWh/m²* year
1,400-1,600
1,200-1,400
1,050-1,200
<1,050

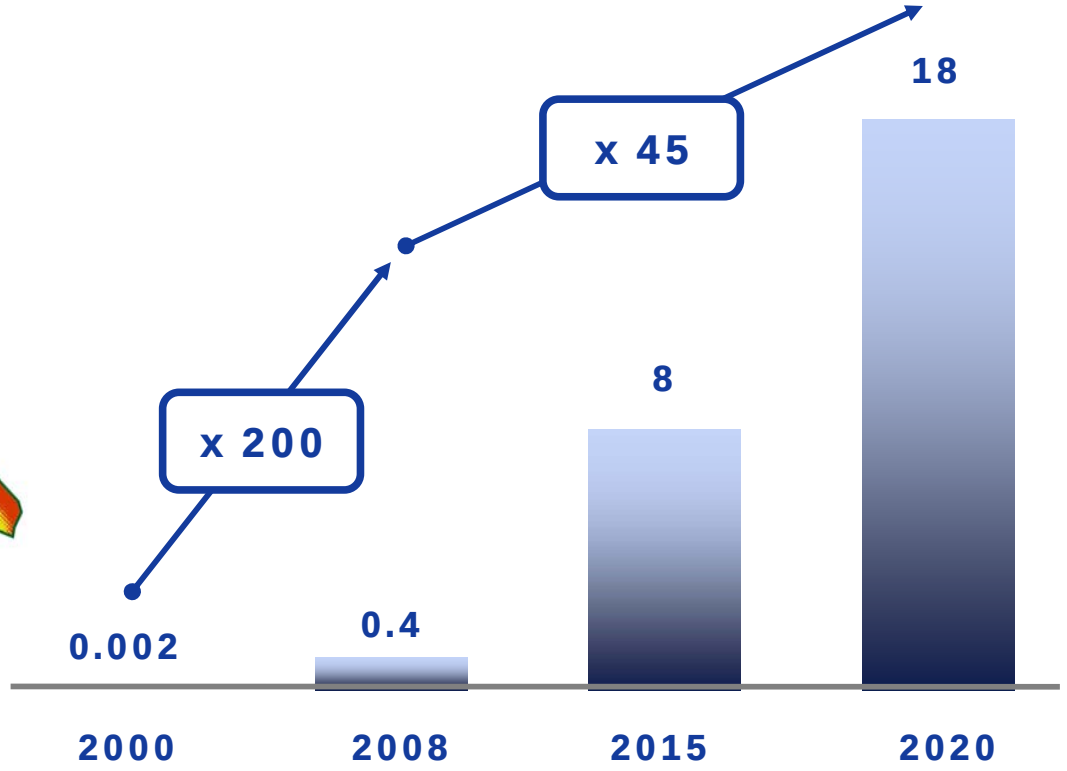



- Europe's installed photovoltaic capacity today is over 9,000 MW
- Very high irradiation levels around the Mediterranean basin

Source: EPIA Policy driven Scenario, Enel analysis

# The Market: Italy



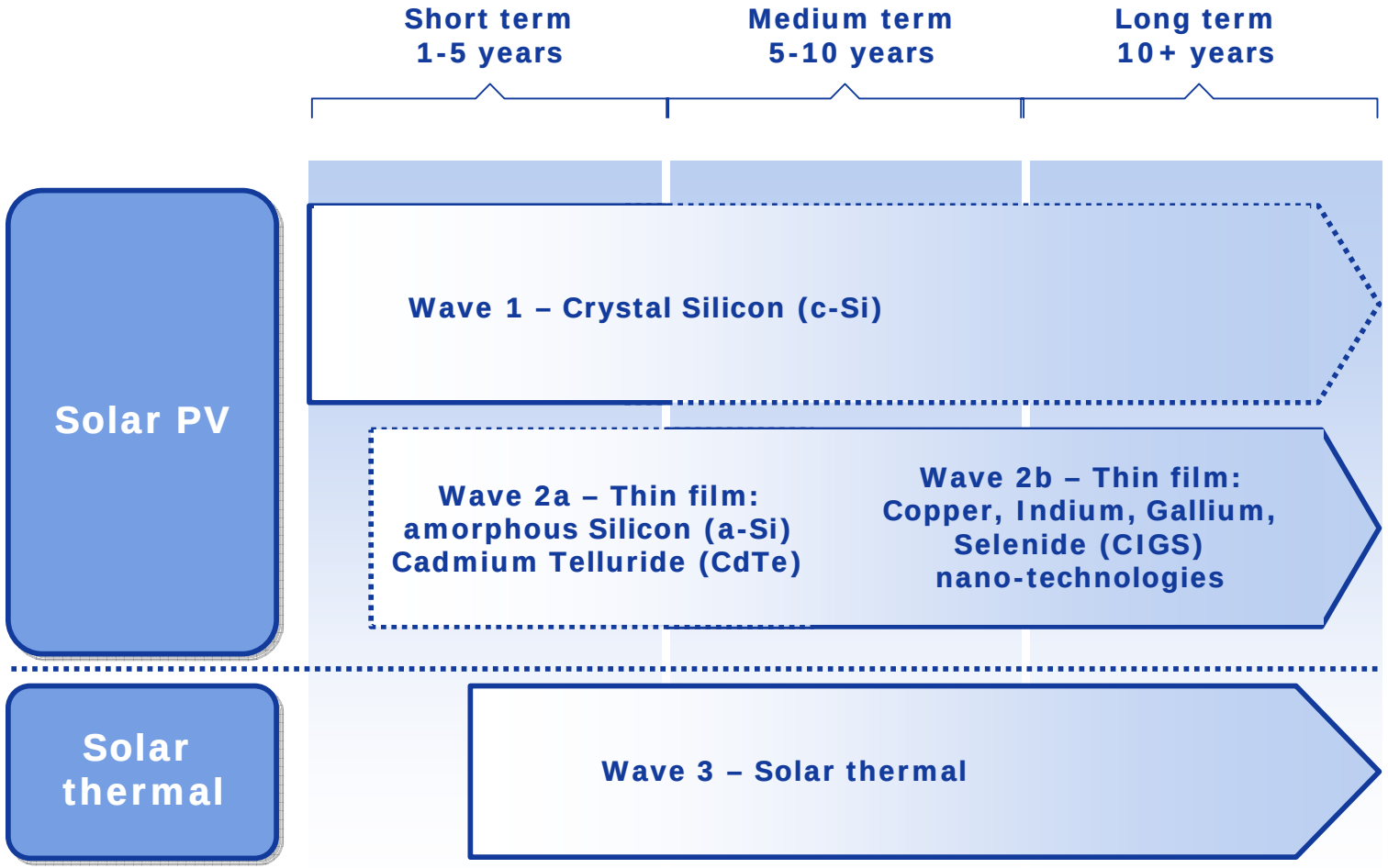




Global horizontal irradiation kWh/m$^2$ * year

- In 2008 over 340 MW of new capacity: Italy is among global TOP 5
- High irradiation levels in the Southern parts of Italy

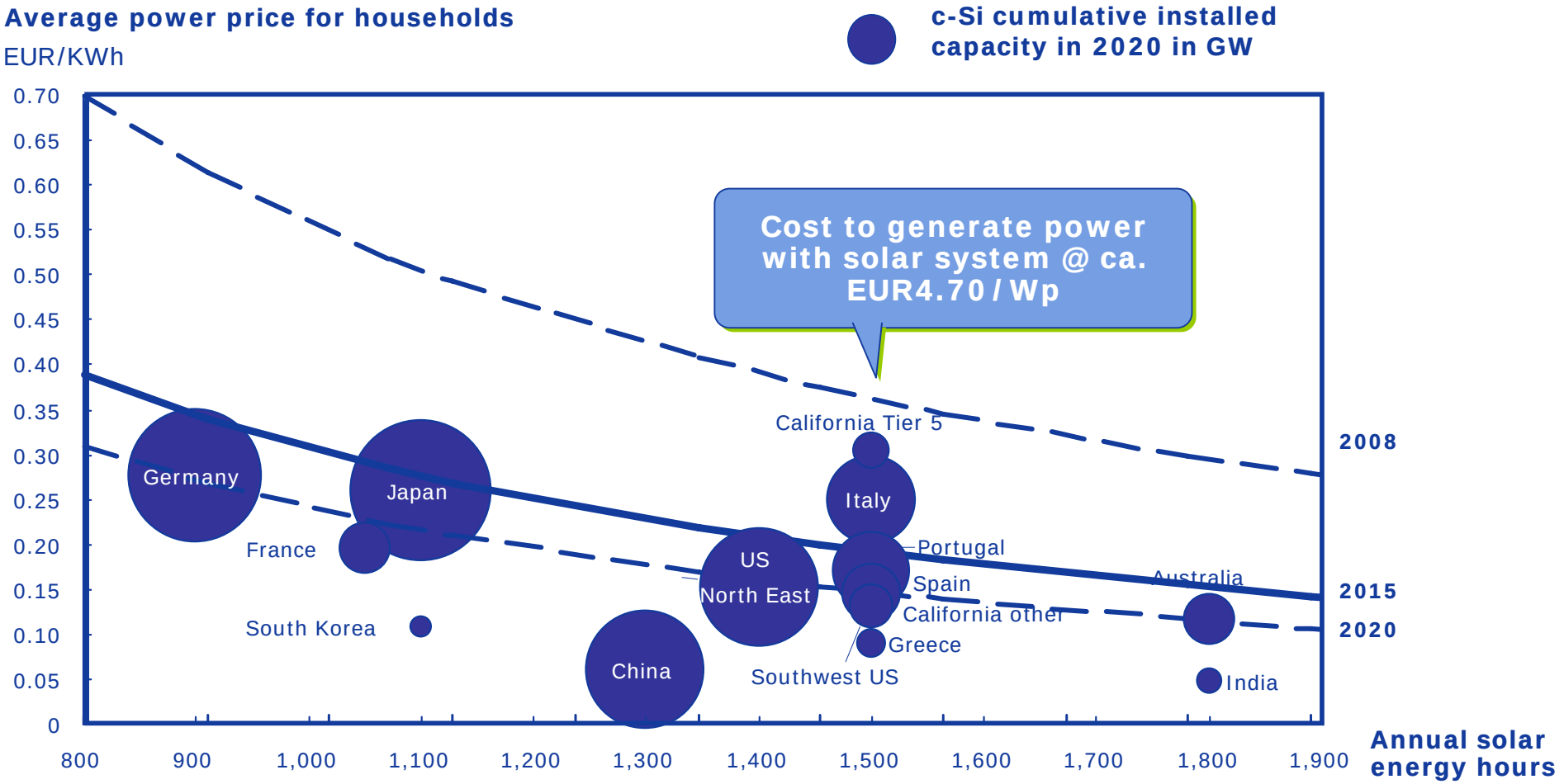
Enel Green Power

# Medium / long term technology evolution



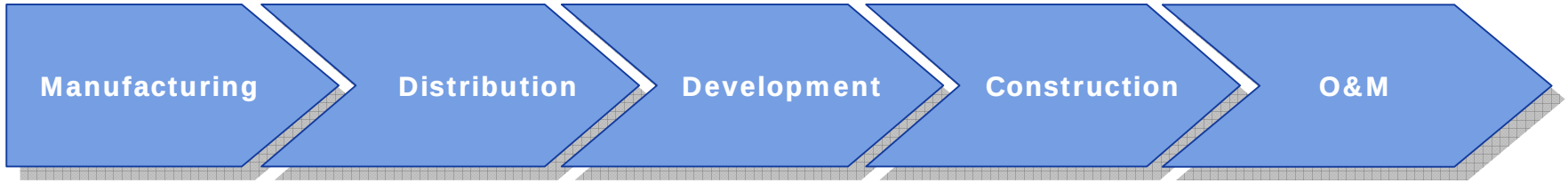

- a-Si thin film evolves as a new competitive large-scale technology
- Still large potential for technological evolution

# Key driver for market growth: grid parity




- **Grid parity to be reached in several countries within the next 5 years**
- **Italy will be the first "grid parity" market in Europe**

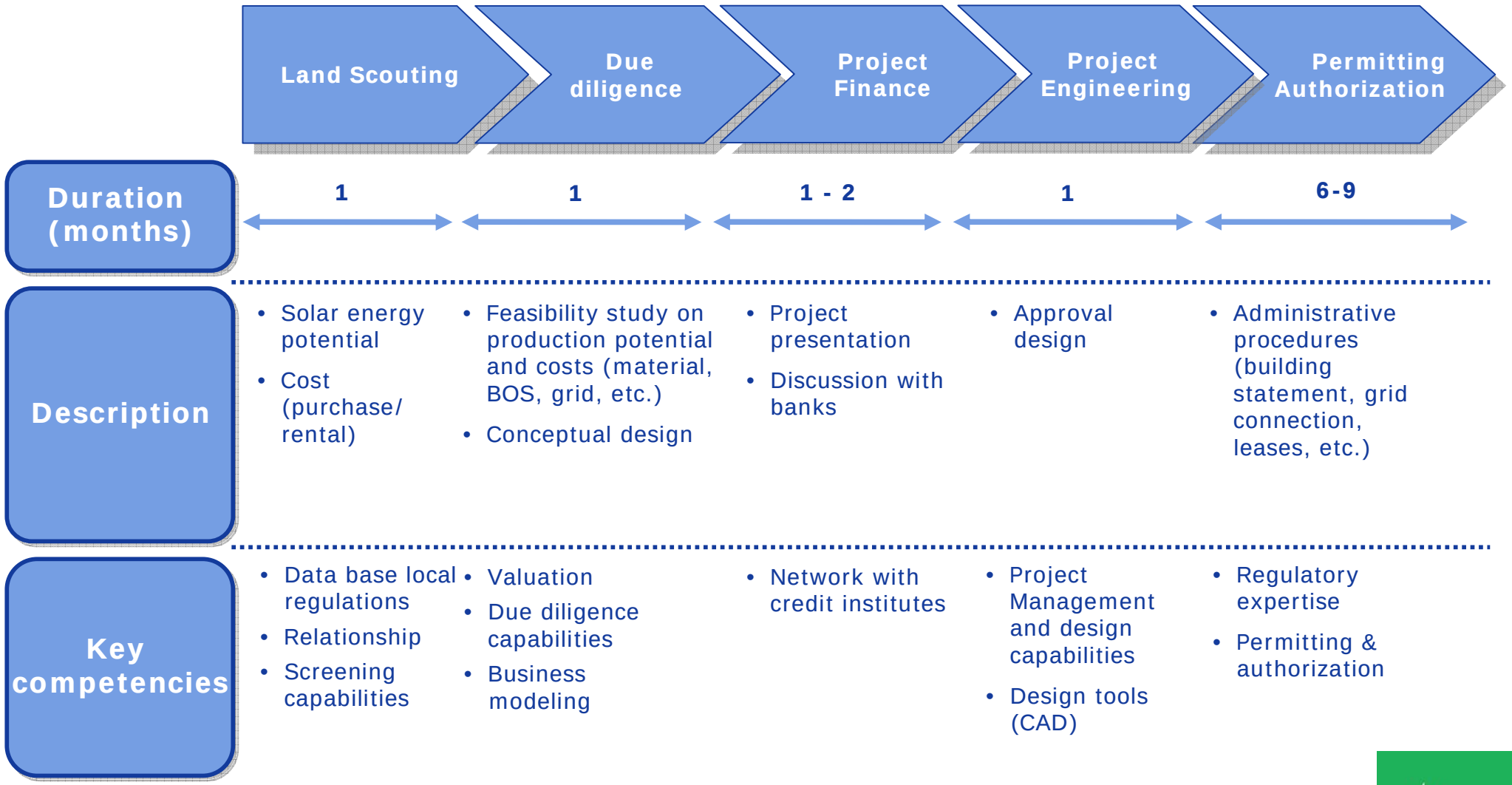
# Enel Green Power positioning along the value chain




| | Manufacturing | Distribution | Development | Construction | O&M |
|---|---|---|---|---|---|
| **Major content** | • Building & Production Equipment* | • Supplying of photovoltaic components | • Land Scouting<br>• Due diligence<br>• Conceptual design | • Final design<br>• Modules, inverters, BOS integration<br>• Plant certification | • Plant visual inspection<br>• PV testing<br>• PV field measurement |
| **EGP** | **Long Term Partnership** | **Enel.si** | **EGP** | **IPP Projects** | **EGP / Enel.si** |
| **Activity** | • Flexible contracts<br>• Set of asset-based and commercial long-term supply options under study | • Procurement<br>• Franchising network with over 450 entrepreneurs<br>• Over 50 MW of PV installed in past three years | • Dedicated development and engineering team | • Specialized engineering team: Construction Project management | • Combined O&M with existing renewables<br>• Network of PV installers throughout Italy |

(*) Silicon Crystalline Production Plant

# Typical development process: 9-12 months



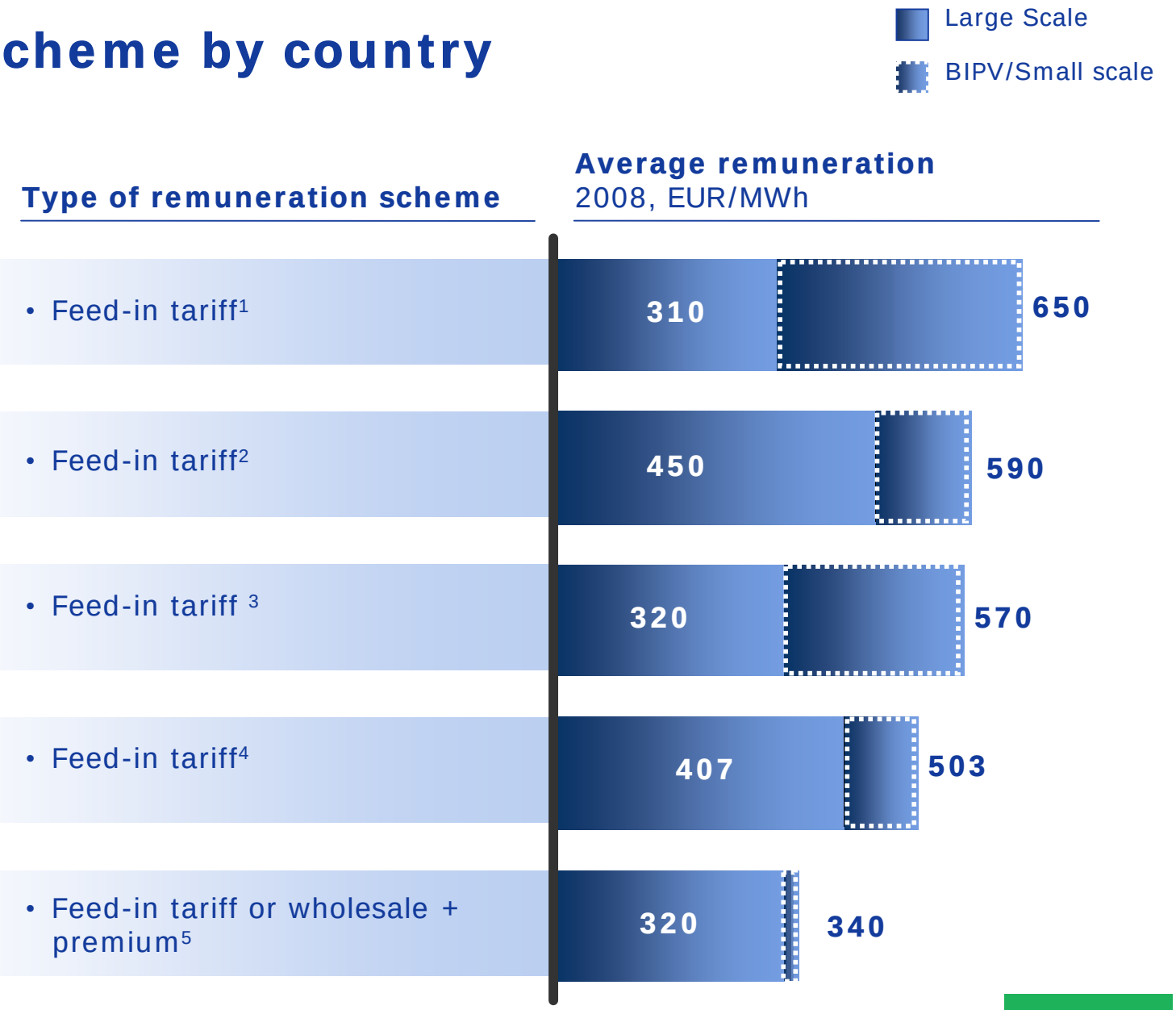
# Typical project economics for a new entrant
## Example Italy

Key drivers

| Drivers | | Values | |
|---|---|---|---|
| | | 2008 | 2020 |
| Investment | • CapEx[1] | • EUR 4.30 million/MW | • EUR 1.60 million/MW |
| | • OpEx[2] | • EUR 40,000/MW | • EUR 35,000/MW |
| Operating | • Load factor | • 1,250 hours | • 1,250 hours |
| | • Useful life | • 20 years | • 20 years |
| | • Productivity decay | • 0.5%/year | • 0.5%/year |

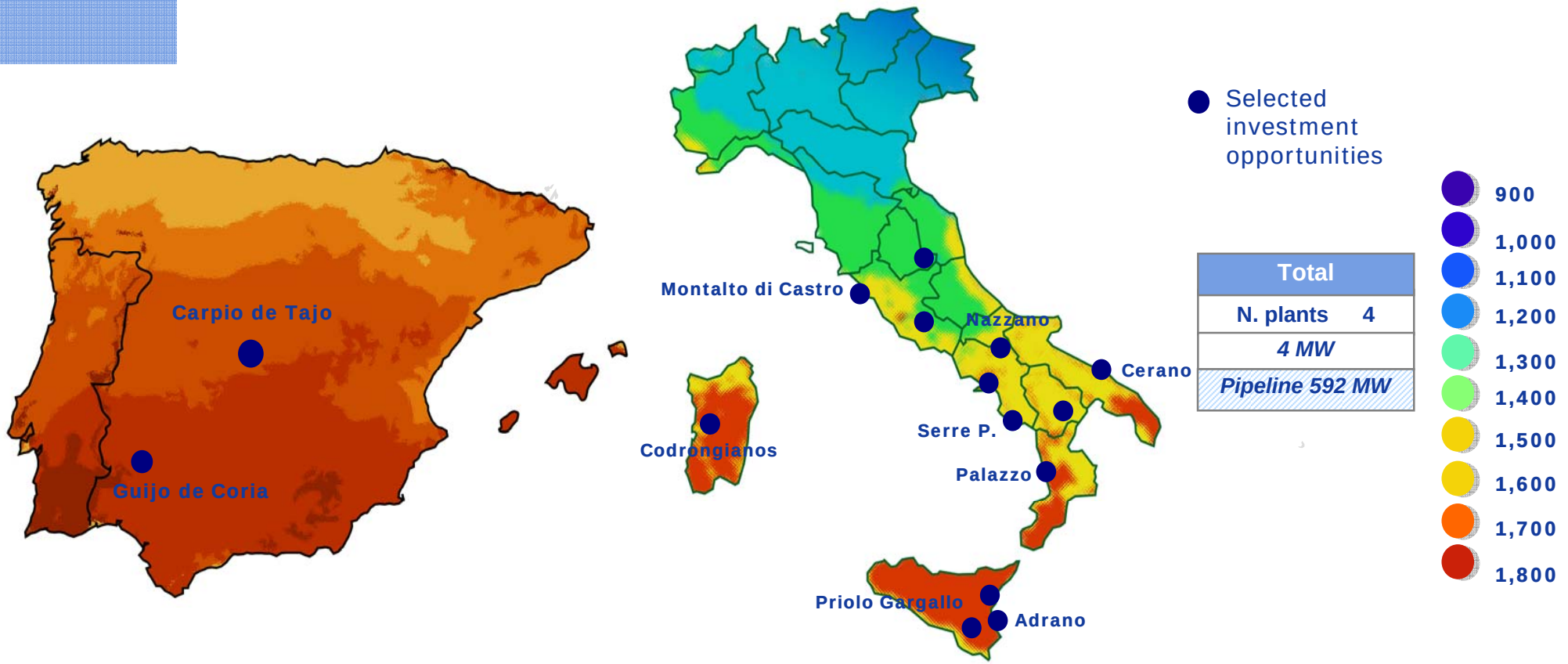
(1) Average of thin film technologies. Efficiency around 9%.
(2) 10 MW power plant (insurance not included)

# Remuneration scheme by country




(1) Assuming 310 EUR/MWh for ground installation and 650 for plants smaller than 3.68 kWp
(2) Assuming 360 EUR/MWh for ground installation + ~90 EUR/MWh for energy sale into the market and max 490 for BIPV
(3) Assuming 320 EUR/MWh for ground installation and 570 EUR/MWh for BIPV
(4) Assuming 403 EUR/MWh for ground installation on mainland and 503 EUR/MWh for small plant on islands. In addition, 30% CapEx subsidy can be awarded
(5) Assuming 320 EUR/MWh for ground installation and 340 for roof top installations

# Enel Green Power's solar pipeline development




| Total |
|---|
| N. plants 4 |
| *4 MW* |
| *Pipeline 592 MW* |

| Iberia |
|---|
| *Pipeline 325 MW* |

- Very high irradiation
- Positive policy scenario
- Diversification into CSP

| Italy |
|---|
| N. plants 4 |
| *4 MW* |
| *Pipeline 267 MW* |

- High irradiation in Southern Italy
- Positive policy scenario
- Cost competitive projects at existing Enel sites
- Projects with fast authorization process

# Enel.si: access to the prosperous retail market

## Business model

- **Franchising: local entrepreneurs supported by Enel.si**
- **Enel.si** provides centralized communications, products, technical assistance, finance solutions, sales and technical training platform
- Development of **distributed renewable energy generation** devices and **energy efficiency solutions**

**Over 450 franchisees locally distributed over Italy**

## Status

- Over **450 franchisees** with local points of sale
- Over **50 MW photovoltaic solutions sold**

## Development opportunities

- Refueling **product pipeline** with new innovative applications
- Expansion of **franchise network to over 1,000**
- Extension of business model to **selected countries with local partners**

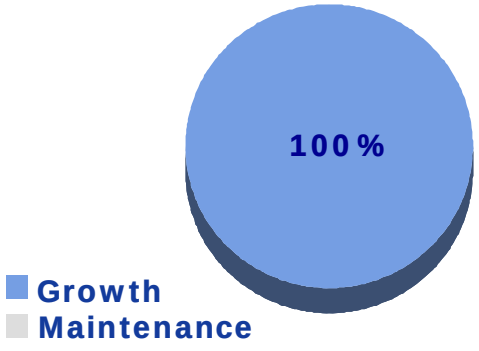
Enel Green Power

# Strategy: Solar Photovoltaic

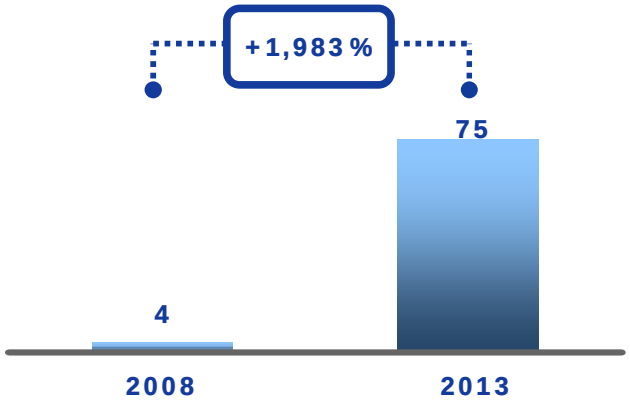
- Large-scale power plants in key geographies
- Upstream value chain integration
- Downstream integration into retail market

## CapEx (m€)

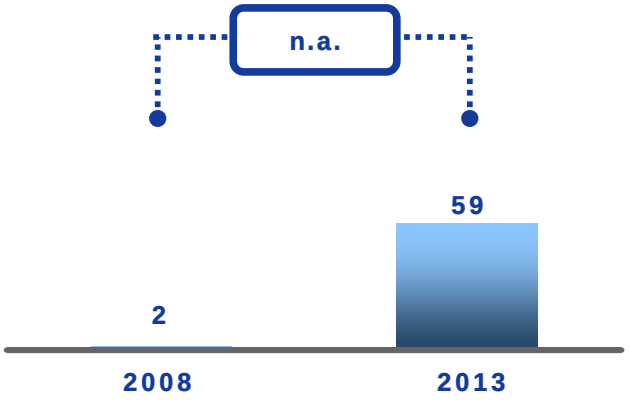
Total 09-13 = 202 m€




## Installed capacity (MW)




## Energy production (GWh)



# Investor Day

Rome - April 22nd, 2009

| | |
|---|---|
| • Opening remarks | F. Conti |
| • Enel Green Power: a leading player in renewable energies | F. Starace |
| • Focus on technologies: | |
| • Geothermal | T. Volpe |
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# Focus BD

## Roberto Deambrogio


Rome, April 22, 2009

# The Workflow for Creating Value in Enel Green Power

**Staff Functions:** ICT, Communication, Corporate, AFC, Regulatory, Legal, HR, Audit, Procurement


- **Project identification**
- **Screening**
- **Valuation**
- **Permitting**
- **Approval process**
- **CapEx allocation**

- Realization of approved projects
- Integration of acquisitions
- CapEx expenditure

- Plant operation
- Production optimization
- Continuous improvement
- EBITDA generation

# Strategic approach - Greenfield and co-development

## Greenfield

- Market Monitoring
- Strong local relationship
- Take advantage of Enel development capabilities
- Higher return projects
- Acquisition of a cost-free option to invest
- Skilled local team required
- 1-3 years as lead time

## Co-development

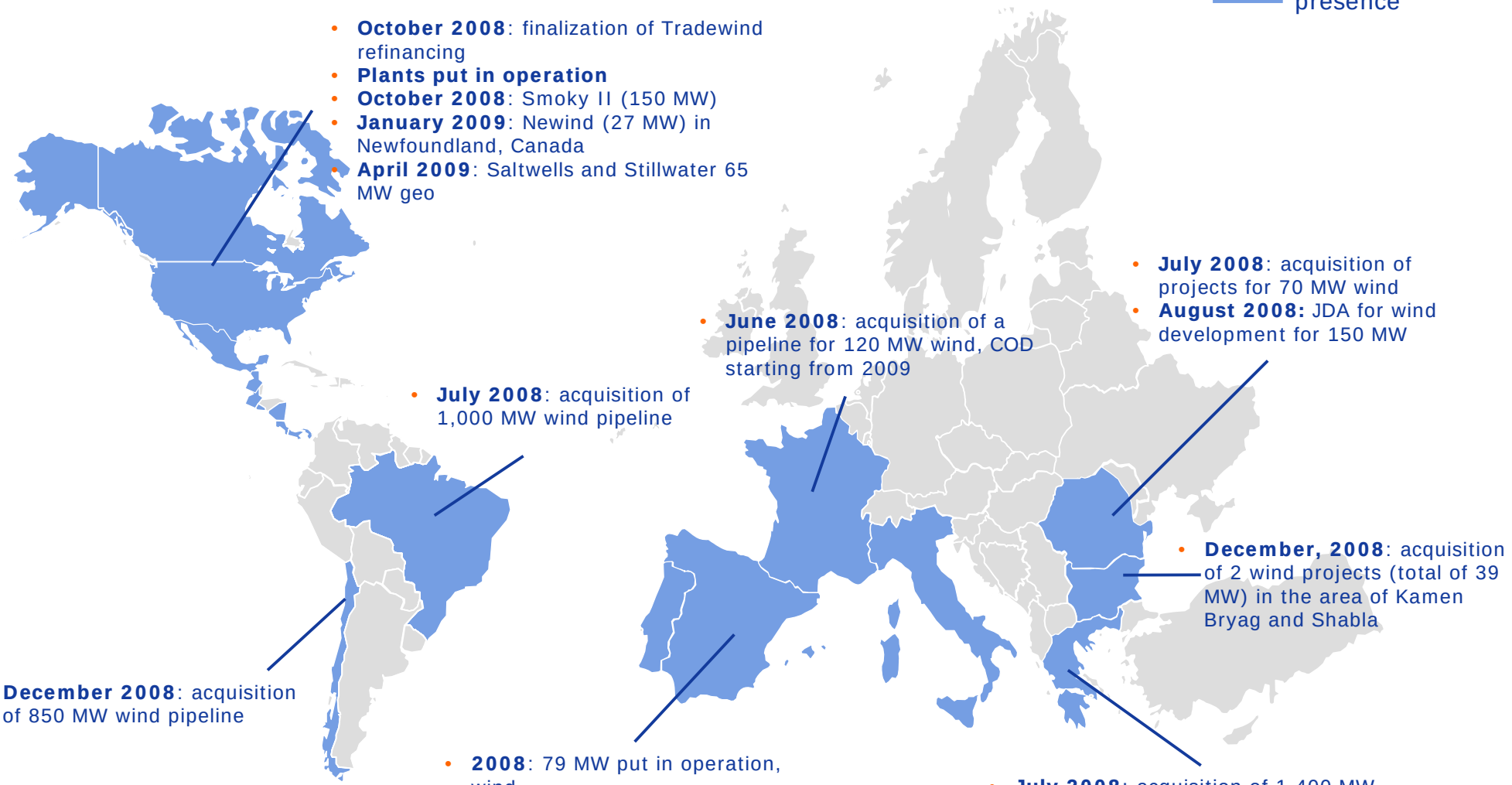
- Implementation of the pipeline with strategic partners in medium term
- More rapid development process
- Scalability and replicability of the Joint Development Agreements
- Complementary set of skills with Partners
- Success-fee based agreements to share the development risk and upside

**A strong and significant pipeline can lead EGP to optionality, more flexibility and profitable growth**

Enel Green Power

# Enel Green Power additional capacity

## Most recent deals finalized and plants put in operation

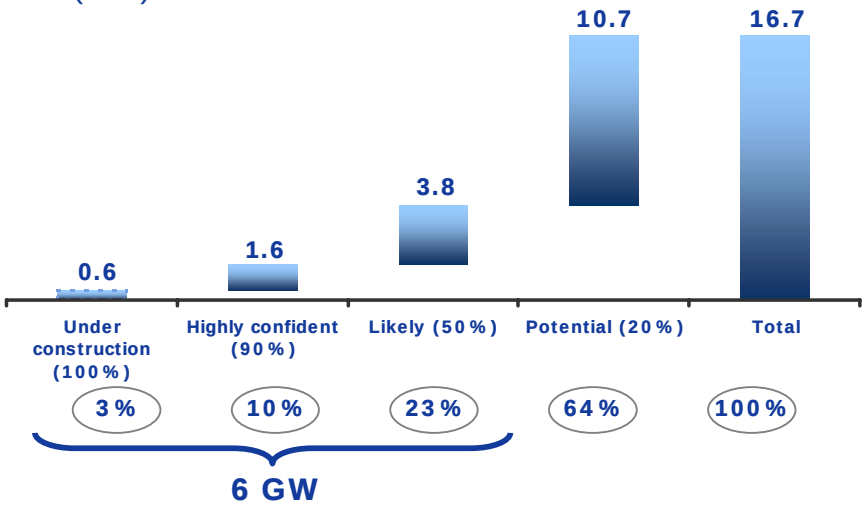


# Enel Green Power Development Pipeline

Weight on total capacity (%)

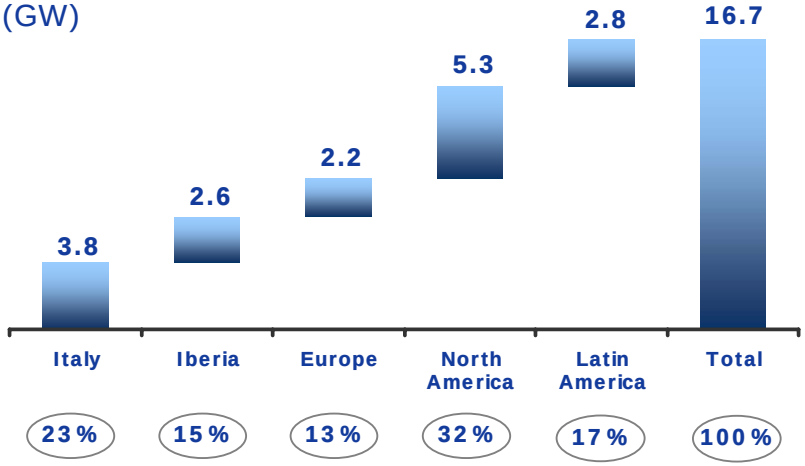
## A solid pipeline*...

(GW)



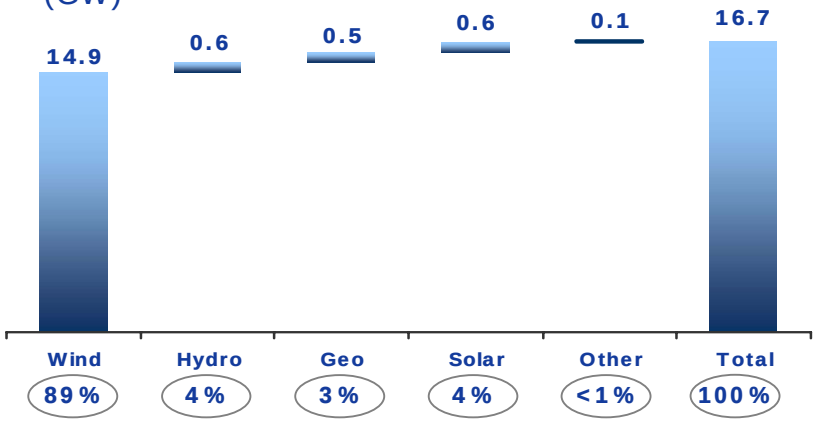

## ...evenly split among geographies...

(GW)




## ...with projects in four technologies

(GW)




- 6 GW of solid pipeline plus 10.7 GW of back-up options
- Financial discipline: geographies and technologies compete for capital allocation on the base of profitability

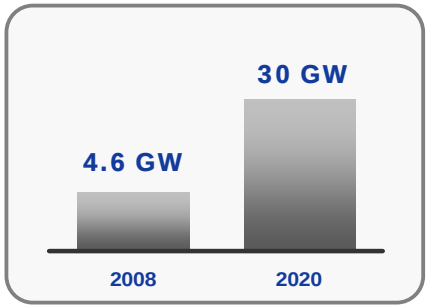
* Probability of project becoming operational at exp. COD

Note: Proforma data; Endesa not included (accounting for 12.4 GW pipeline)

# Area Europe - Enel Green Power positioning
## Focus Italy


1. **South**: approx. 1,400 MW wind pipeline and 80 MW PV solar pipeline
2. **Islands**: approx. 400 MW wind and 150 MW PV solar pipeline
3. **Rest of Italy**: approx. 250 MW wind, 200 MW geothermal and 50 MW PV solar pipeline

### Market-Resource




The Italian Government has set ambitious targets:

- 12 GW of wind
- 9.5 GW of solar
- Approx. 8.5 GW of hydro, biomass and geothermal

Source: Position Paper Italian Government

### Regulatory

Among the highest incentives for Renewables in Europe:

- **CIP6:** feed-in tariff for plants with COD up to 1999
- **Green Certificates:** by technology
- **"Conto Energia":** feed-in tariff for solar PV plants

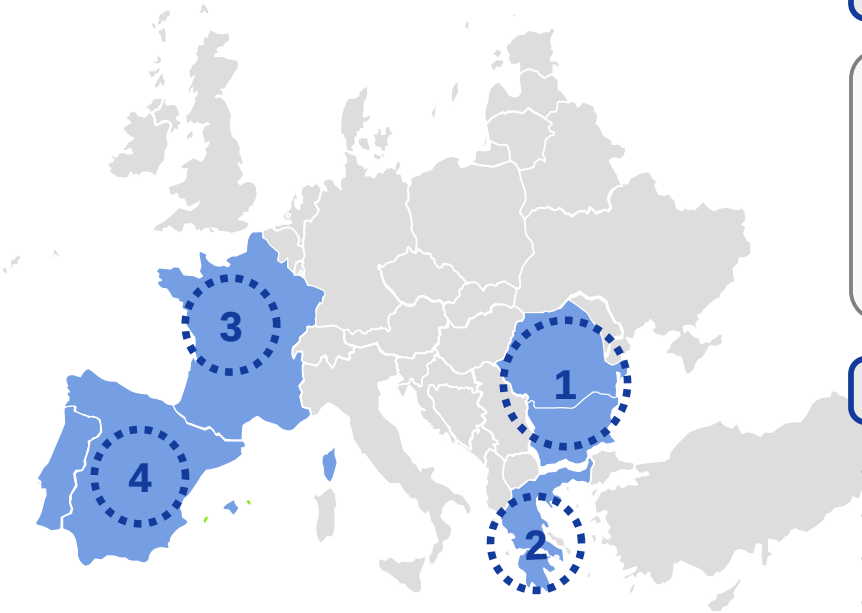
### Enel Green Power's strengths

- **Wind:** Synergies with hydro O&M; more than 100 employees dedicated to BD activities and construction
- **Hydro:** 3 Business units, 24 O&M units; more than 600 employees
- **Solar:** Enel.si, leader in Italy on PV market; ~ 400 franchisee and ~35 employees dedicated to design and "turn key" projects

**Significant growth due to favorable regulatory framework, with incentives for wind and solar PV**

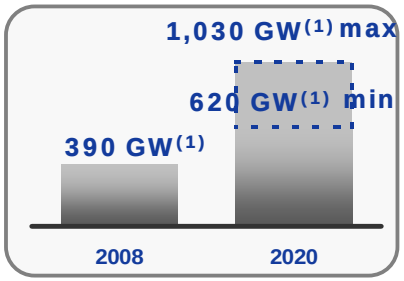
# Area Europe - Enel Green Power positioning

## Focus Rest of Europe




1. **ROMANIA** and **BULGARIA** – 75 MW wind farm under construction and 500+ MW wind pipeline
2. **GREECE** – 1,400 MW wind pipeline
3. **FRANCE** - 95 MW wind farms under construction and more than 400 MW wind pipeline
4. **SPAIN** - 122 MW wind under construction and 2,500+ MW pipeline(2) (wind, hydro, biomass, solar, and cogen)

### Market-Resource




- EU 20-20-20 Directive
- Most Countries are new or developing wind markets
- Spain, France and Greece key markets for solar development

### Regulatory

- Tradable Green Certificates (Romania)
- Feed in tariff (France, Greece, Spain, Bulgaria)
- Investment incentives (Greece)
- Tax incentives (France)

### Enel Green Power's strengths

- Spain: since 2003 presence in the market through EUFER
- Romania: synergies with Enel's three Discos
- France, Greece, Bulgaria: presence as a growth platform

**A strong boost by EU to reach ambitious targets makes our markets attractive in terms of growth and profitability**

(1) Including Italy
(2) Corresponds to Enel Green Power share (50%)

# US outlook - New regulation and its implication

**Objectives' of Obama Administration on renewables**

**Job creation**

**Reducing oil dependence**


**Greenhouse gas reduction**

**Distinct pieces of climate and energy legislation in 2009**

**Stimulus package**

- Up to ~98 USD billion energy-related funding
- Substantial direct loans, loan guarantees and grants

**Energy Bill**

- Expected to address:
  - Federal renewable portfolio standard (RPS)
  - New transmission lines
  - Energy efficiency standards
  - Federal consumption

**Climate Bill**

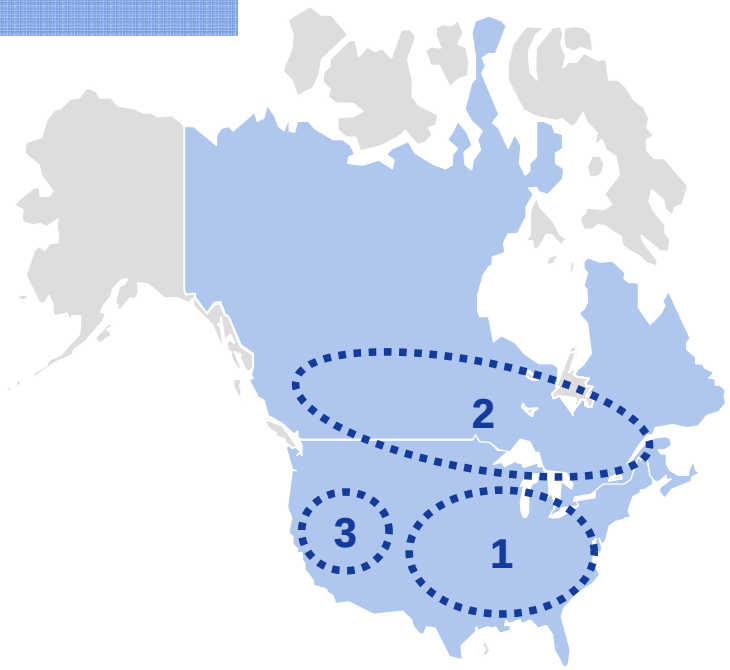
- Likely focus on:
  - Creating a carbon cap-and-trade system or other carbon reduction system
  - Energy efficiency

**Implications for renewable players**

- **Higher regulatory "stability"**
  - » Multi-year renewal of PTC/ ITC
- **Easier financing conditions**
  - » Loan guarantees
- **Introduction of "top-line" incentives**
  - » Federal RPS
  - » Strong induced demand for green energy
  - » Renewable certificates to reduce forced reliance on financial partners

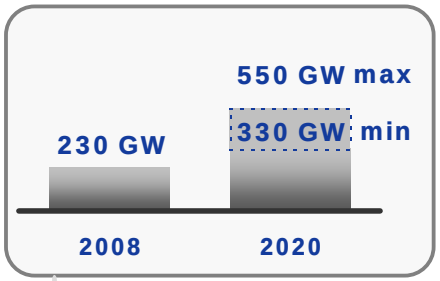
Source: HR1; Center for American Progress

# Area North America - Enel Green Power positioning




1. **US Midwest**: Tradewind exclusive developer for Enel with substantial pipeline (4,000+ MW)
2. **North-East US and Canada**: 600+ MW greenfield Wind and Solar projects
3. **Nevada**: commissioning 63 MW gross geo plants and approx. 100+ MW geo pipeline

## Market-Resource




- Large potential still untapped
- Wind development starting in key markets (Mexico, Brazil and Chile)
- Central American regional market being implemented

## Regulatory

- Production Tax Credit (PTC): historically main driver in the US; new incentives in the Stimulus Bill (ITC. Grants)
- Radical change in policy support (PTC already extended, Federal RPS, Carbon legislation)

## Enel Green Power's strengths

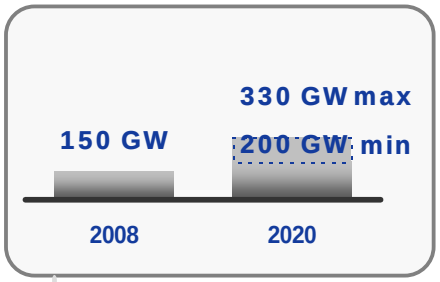
- Presence in the North American market since 2001
- 748 MW installed in four different technologies
- Long term experience in the US RE market (20+ years)
- Significant pipeline in geo and wind

**Large and fast growing market, solid policy support, Enel Green Power positioned to seize significant growth opportunities**

# Area Latin America - Enel Green Power positioning


1. **BRAZIL** - JDA with for wind development (1,000 MW) and 23 MW repowering of existing hydro plants
2. **CHILE** - JDA (850 MW wind pipeline); 120 MW geo pipeline
3. **CENTRAL AMERICA**
   i. 85 MW hydro under construction
   ii. 600+ MW hydro and geo pipeline
4. **MEXICO** - JDAs for wind development (2,000 MW) under negotiation

## Market-Resource




- Large potential still untapped
- Wind development starting in key markets (Mexico, Brazil and Chile)
- Central American regional market being implemented

## Regulatory

- Tax incentives and Clean Development Mechanism (CDM)
- Chile: New Quota Obligation system or RPS scheme
- Brazil: Subsidies fund; Financing; Auctions
- Mexico: Target by law up 2012: RES 26%; tax incentives; BOT tenders by CFE; regulation to boost renewables being drafted

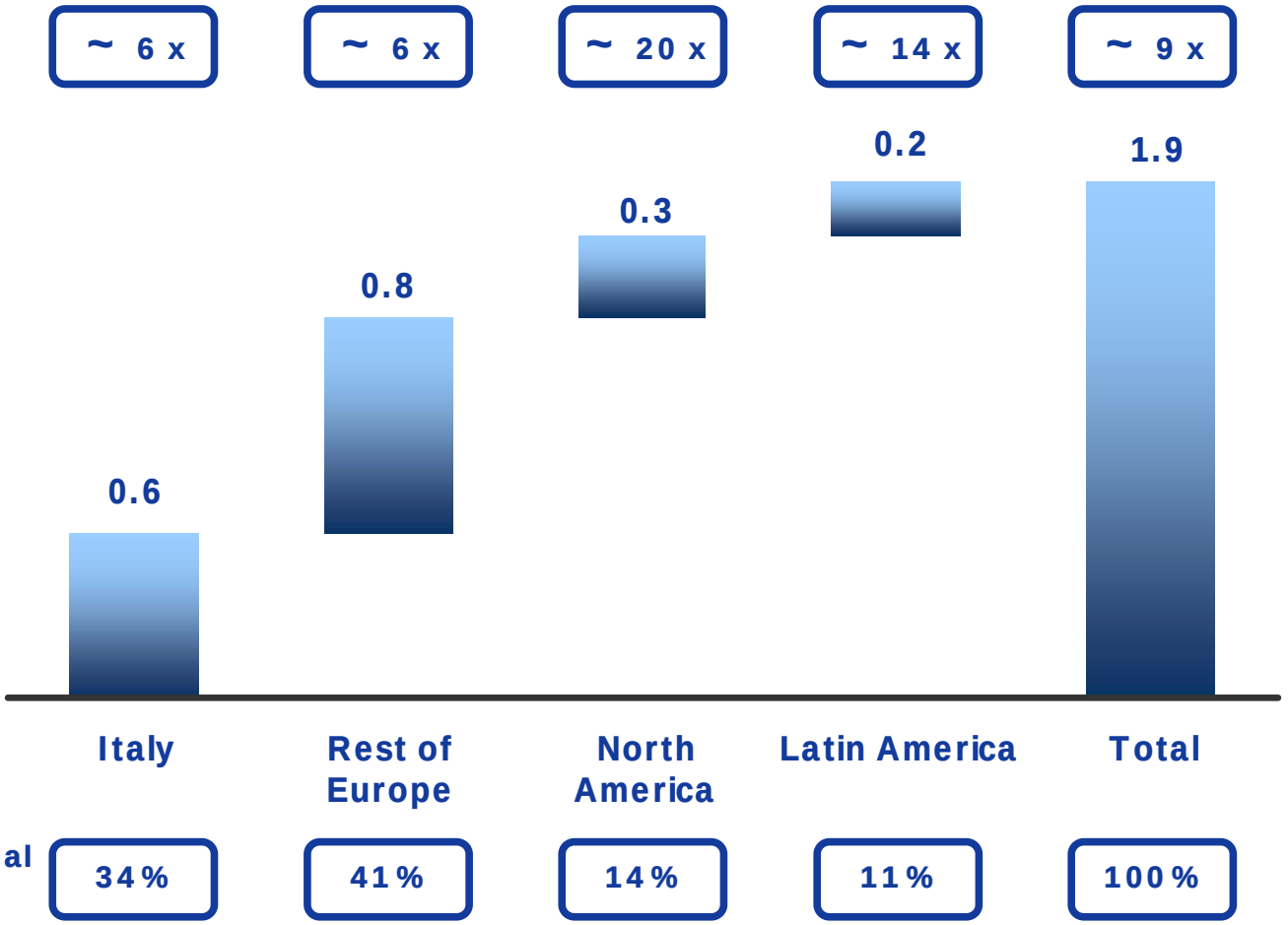
## Enel Green Power's strengths

- Presence in Latin America since 2001
- Leverage on key competences in different technologies

**Focus on three markets: Chile, Brazil and Mexico while pursuing the interesting opportunities in the other markets**

# Enel Green Power Business Plan 2009-2013

## Additional Capacity by Geography (GW)




**Pipeline covers 9 times additional capacity of Business Plan 2009-2013**

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Rome - April 22nd, 2009

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# Financials

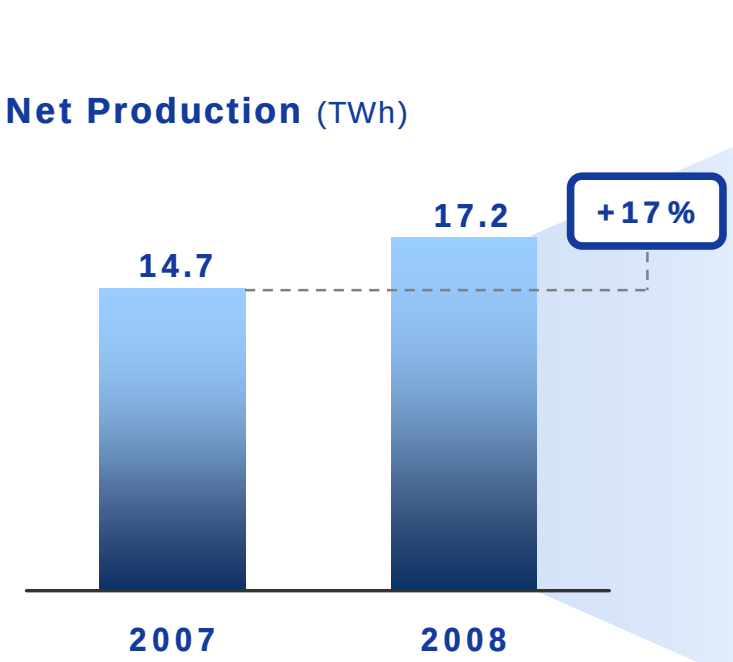
Alberto De Paoli

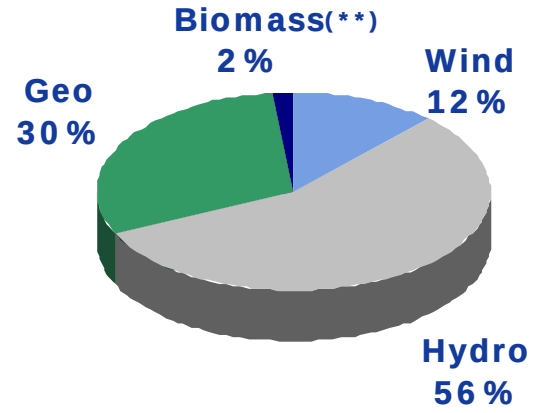

Rome, April 22, 2009

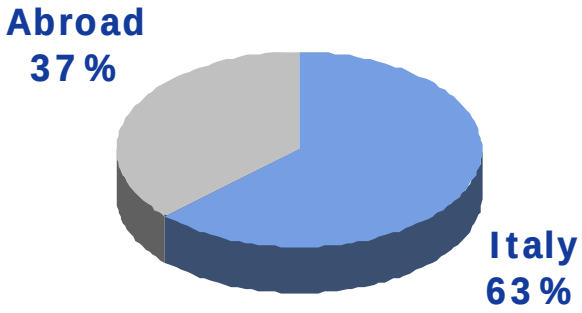
# Proforma 2007 and 2008

| M€ | 2008 | 2007 | Δ % |
|---|---|---|---|
| Revenues | 1,852 | 1,536 | +21% |
| EBITDA | 1,188 | 989 | +20% |
| *EBITDA margin* | *64%* | *64%* | *n.a.* |
| EBIT | 772 | 608 | +27% |
| Net income | 376 | *n.a.* | *n.a.* |

# Net Production 2008 (*)

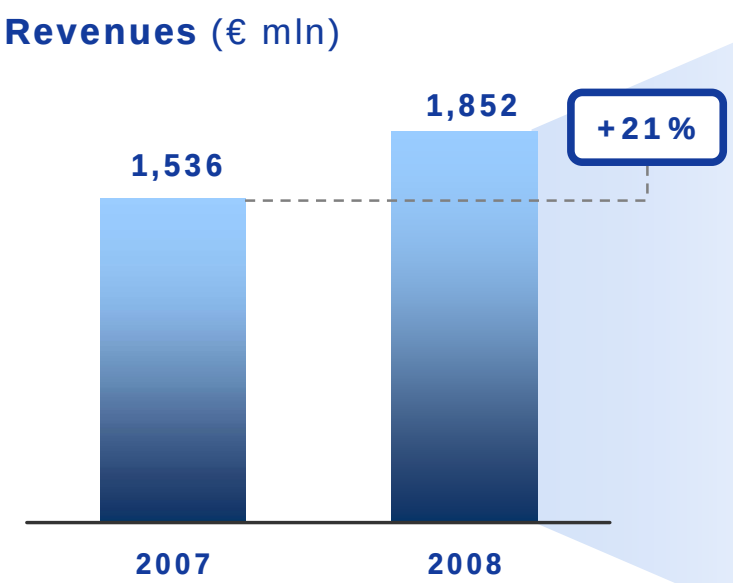


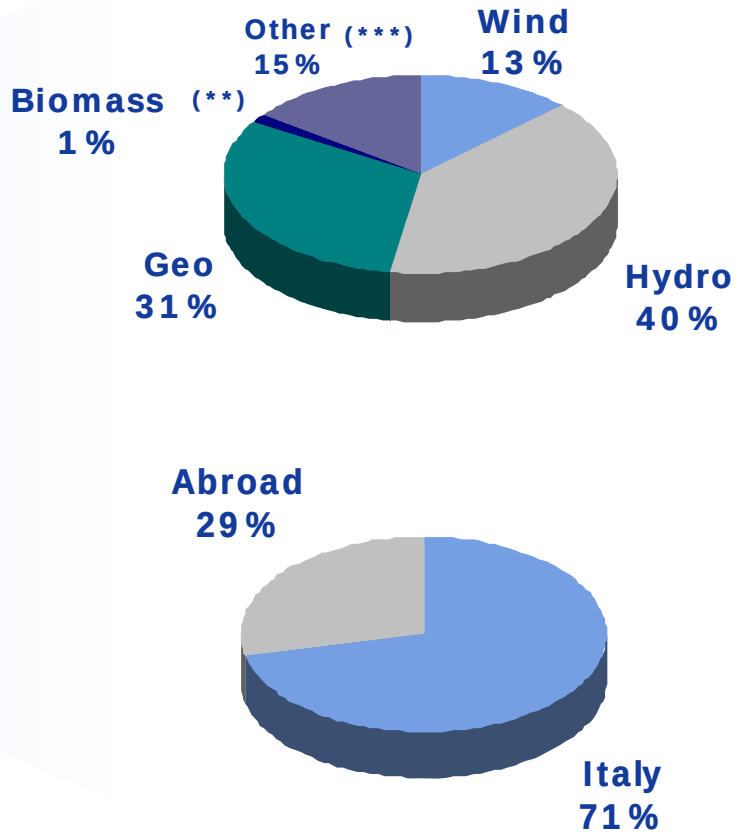




(*) Proforma
(**) Including Cogeneration

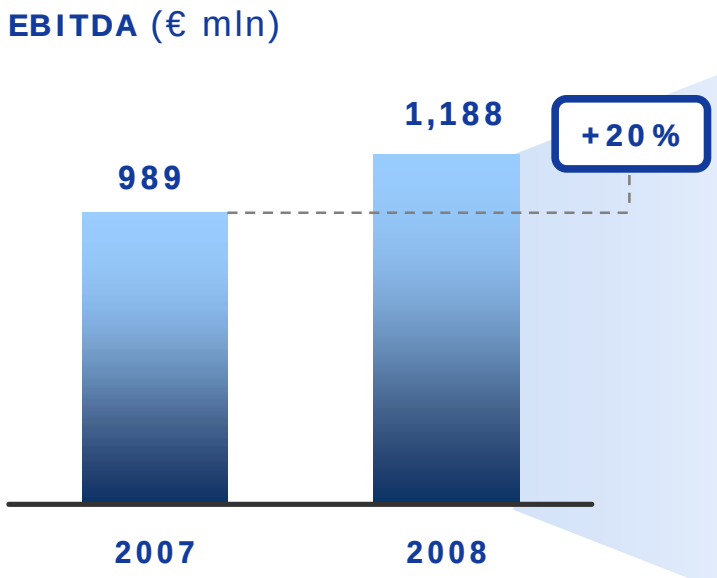
# Revenues 2008(*)



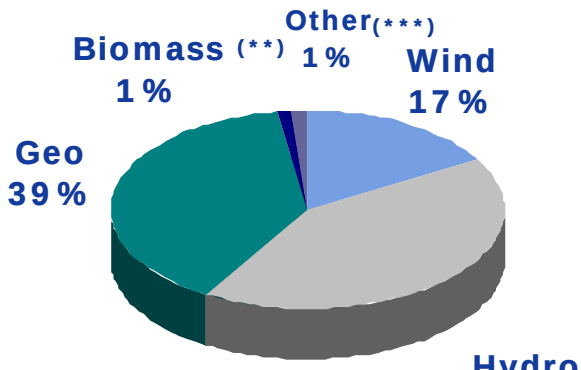



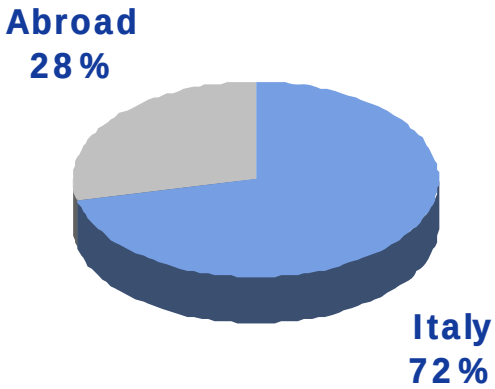

(*) Proforma
(**) Including Cogeneration
(***) Including Revenues from PV Modules selling

# EBITDA 2008 (*)




| | 2007 | 2008 |
|---|---|---|
| EBITDA Margin (%) | 64.4% | 64.2% |



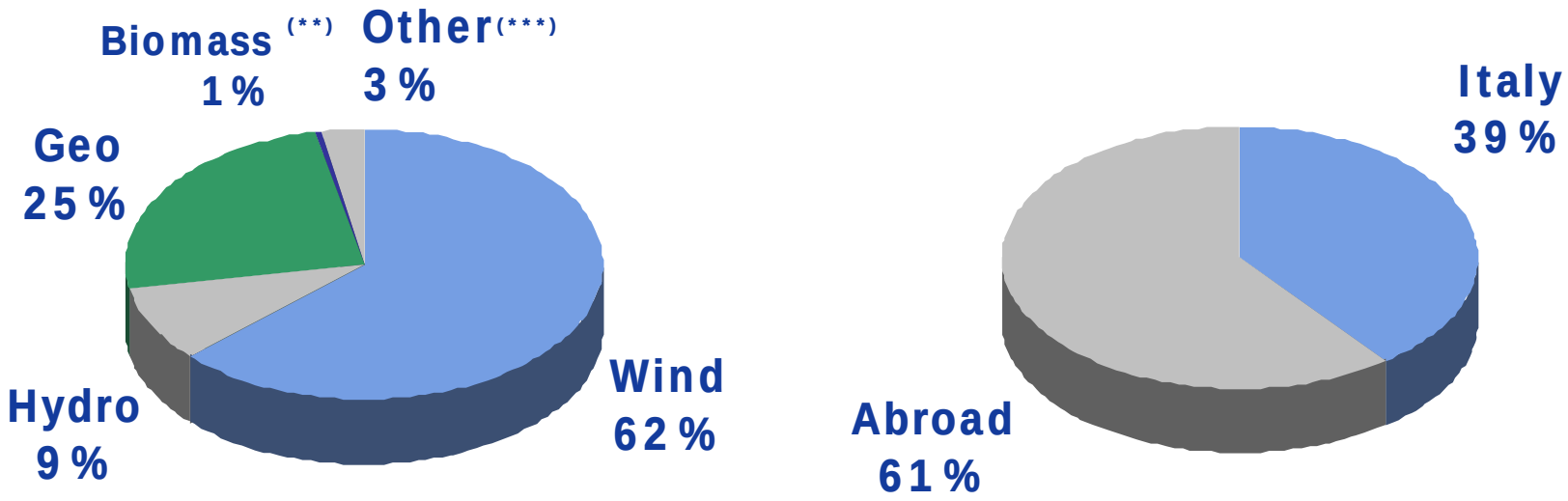




(*) Proforma

(**) Including Cogeneration

(***) Including Revenues from PV Modules selling

# CapEx 2008 (*)



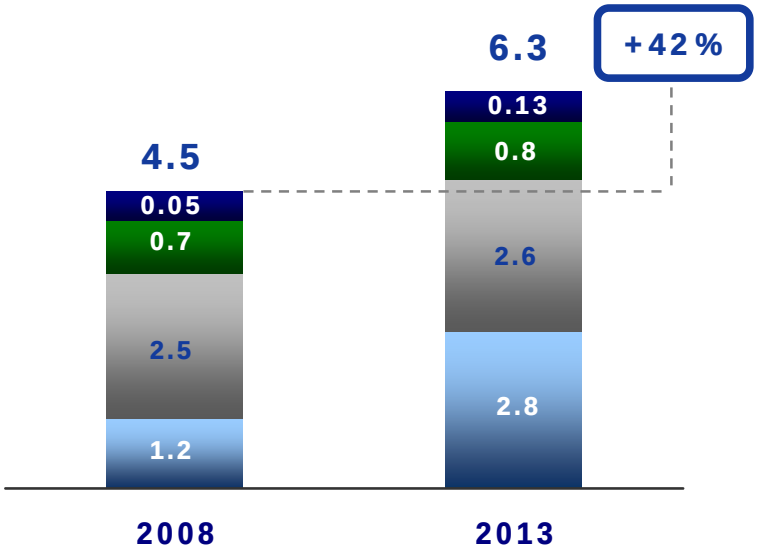

**Total CapEx 2008 = 951 € mln**

(*) Proforma
(**) Including Cogeneration
(***) Including Revenues from PV Modules selling

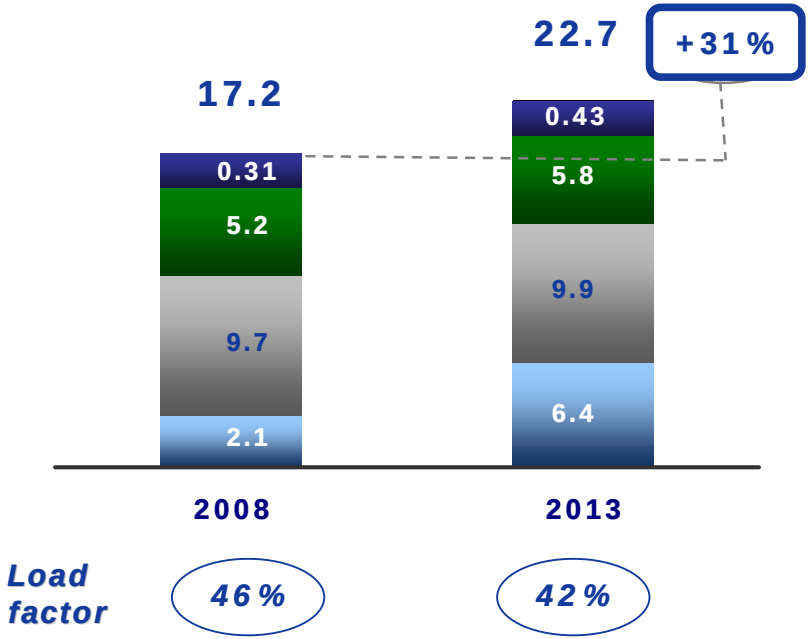
# Operating targets 2009-2013

other
geo
hydro
wind

**Net installed capacity*** (GW)




**Net production*** (TWh)



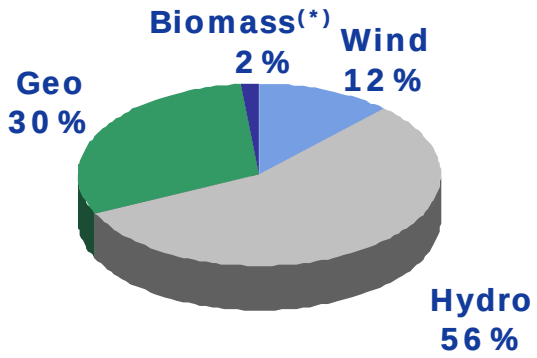

(*) Other (MW): **2008:** Solar 4, Biomass 21, Cogen. 26; **2013:** Solar 76, Biomass 26, Cogen. 31
(**) Other (GWh): **2008:** Solar 2, Biomass 172, Cogen. 136; **2013:** Solar 59, Biomass 206, Cogen. 165

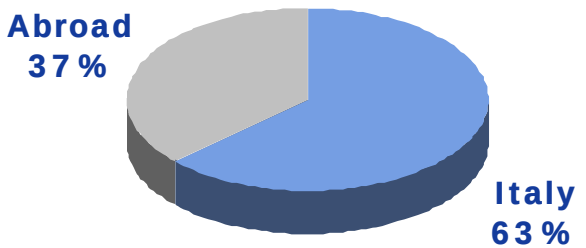


Enel Green Power

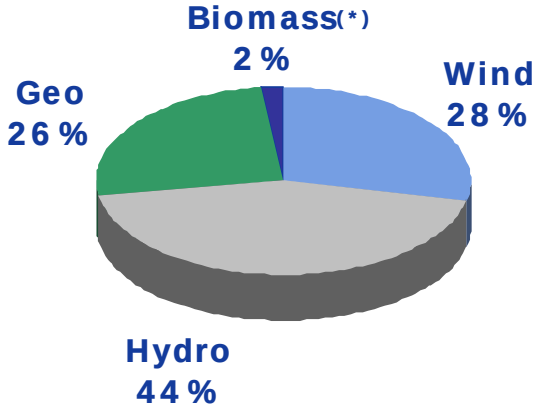
# Operating targets 2009-2013
## Net Production

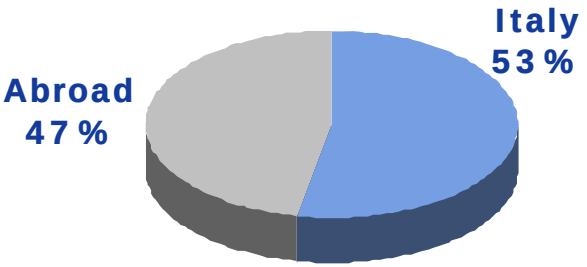
**2008** (17.2 TWh)




**2013** (22.7 TWh)

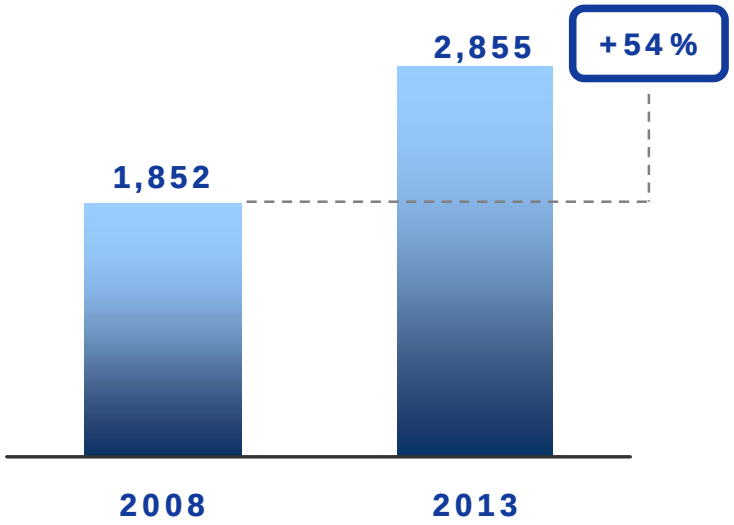


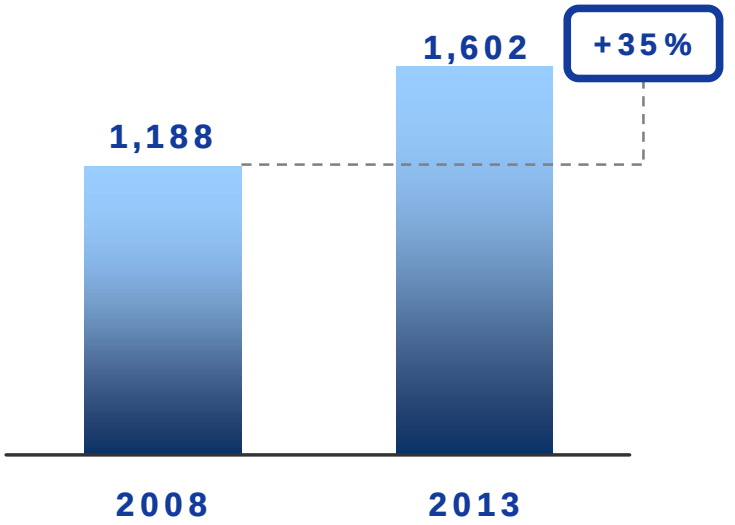

(*) Including Cogeneration

# Financial targets 2009-2013

**Revenues** (M€)



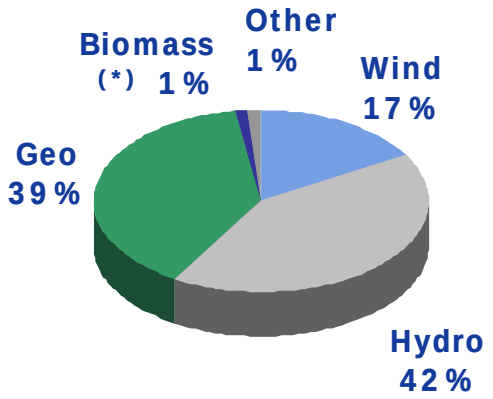

**EBITDA** (M€)

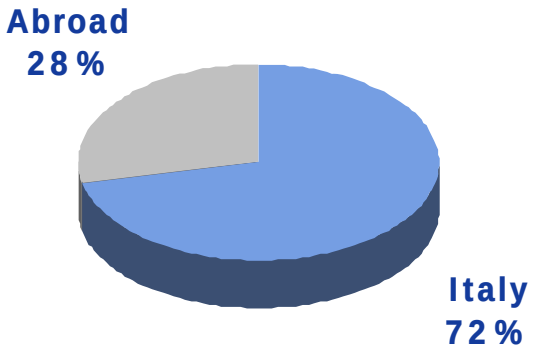



**Cum. EBITDA 09-13 = 6.7 bn €**

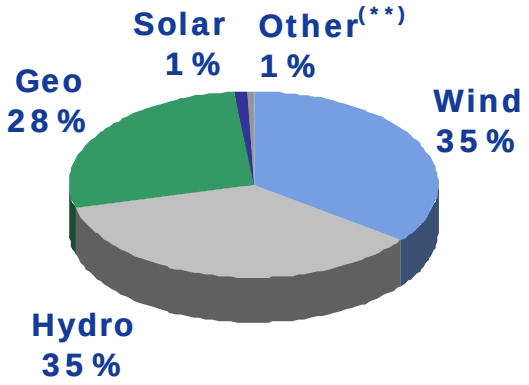
# Financial targets 2009-2013
# EBITDA

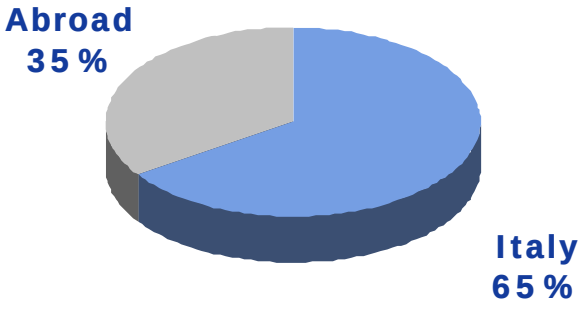
**2008** (1.2 € bln)




**2013** (1.6 € bln)

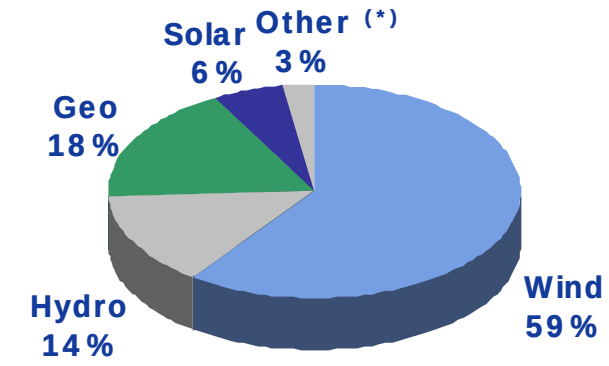


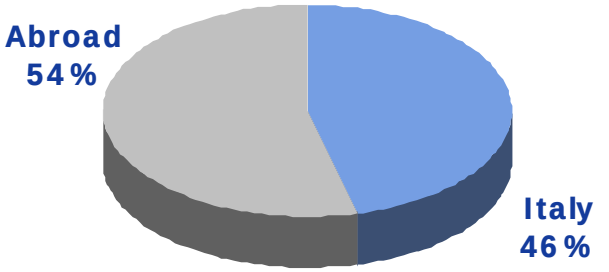




(*) Including Cogeneration

(**) Including Biomass, Cogeneration and Other

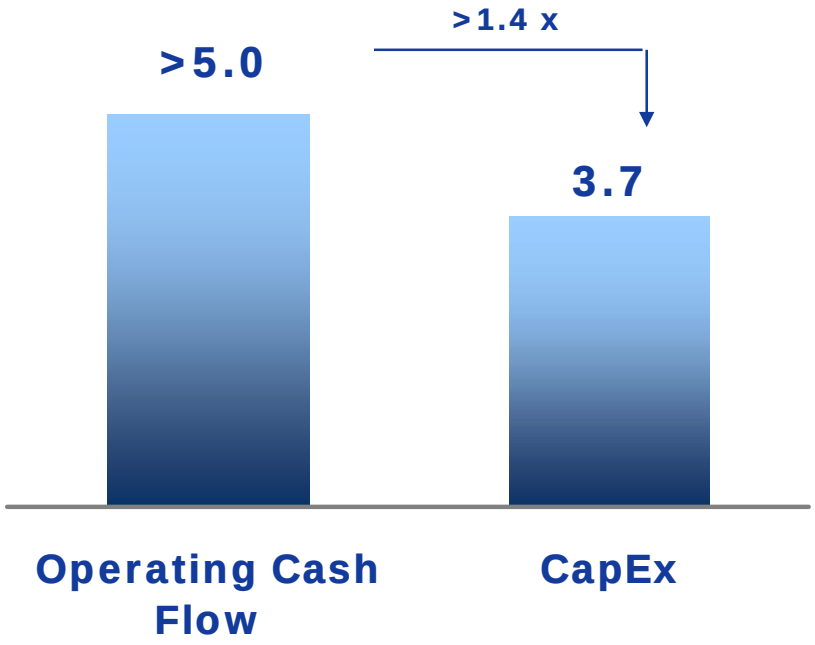
# Financial targets 2009-2013
# CapEx




**Operating Cash Flow 09-13 / CapEx 09-13**

(€ bln)




**Total CapEx 09-13 = 3.7 bn €**

(*) Including Biomass, Cogeneration and Other

# Investor Day

Rome - April 22nd, 2009

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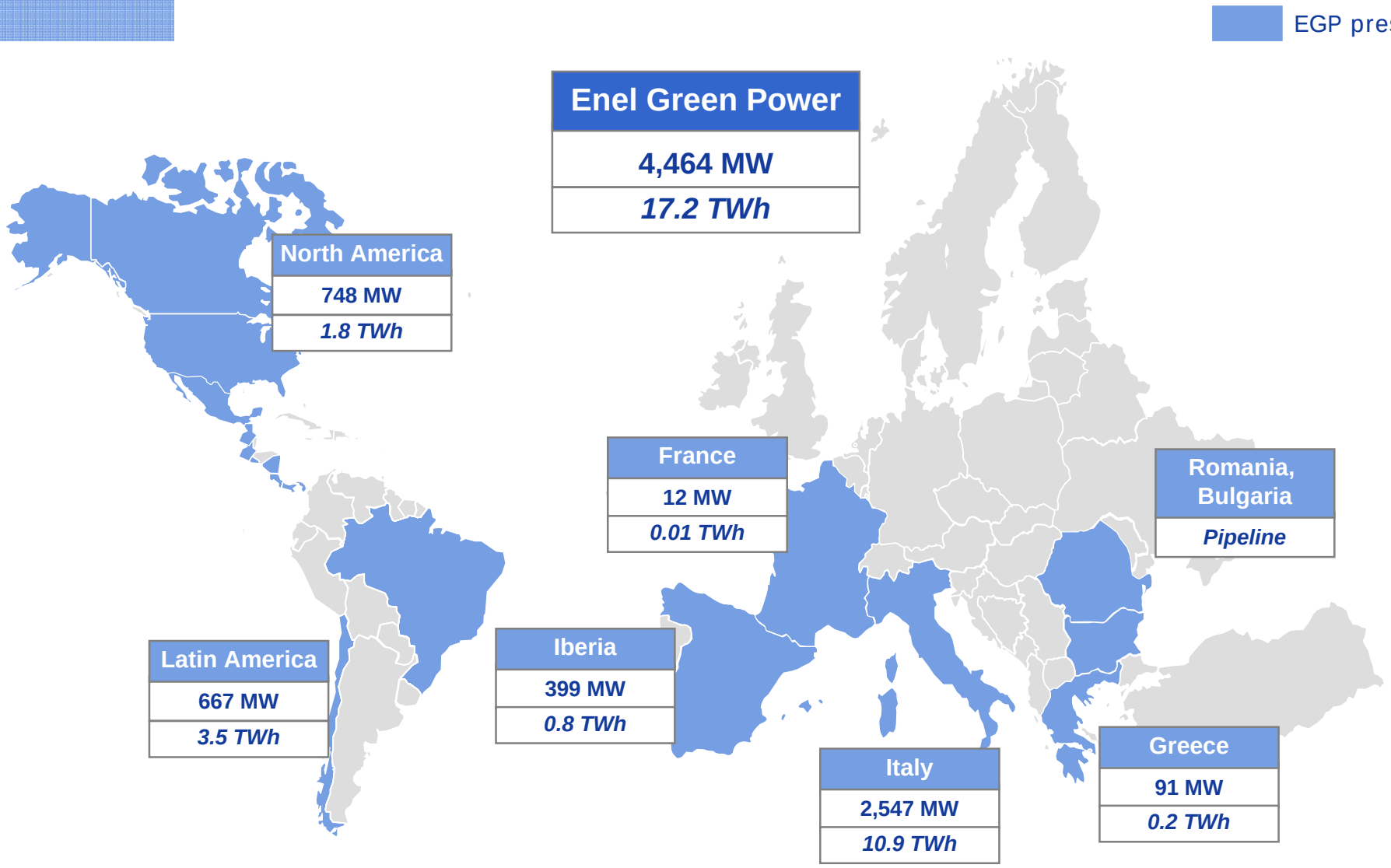
# Conclusions

Francesco Starace

Investor Day

Rome - April 22nd, 2009

# Enel Green Power: where we are
2008*




* Proforma data
Note: Endesa capacity not included (1,026 MW: 799 MW in Iberia and 227 MW in Latin America)

# Enel Green Power: how we want to grow

| | The industry so far | Enel Green Power |
|---|---|---|
| Technology mix | • Wind-only portfolio | • Balanced portfolio of technologies |
| Geographic presence | • Polarized presence | • Diversified presence |
| Long-term sustainability | • Heavy dependence on incentive schemes | • Limited dependence on incentive schemes |
| Financing | • Debt | • Operating cash flows |
| Key Performance Indicators | • Growth<br>• **MW** (Installed capacity) | • **Return on Investment**<br>• **TWh** (Energy production) |

**A new paradigm for renewables: sustainable and profitable growth**

# Enel Green Power: our value proposition

Unique portfolio of technologies and geographies

Cash Flow positive since Year 1

Solid pipeline to capture additional growth

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