

# **Energy Efficiency, Technology Transfer and Emission Reduction: a few considerations on business key role**

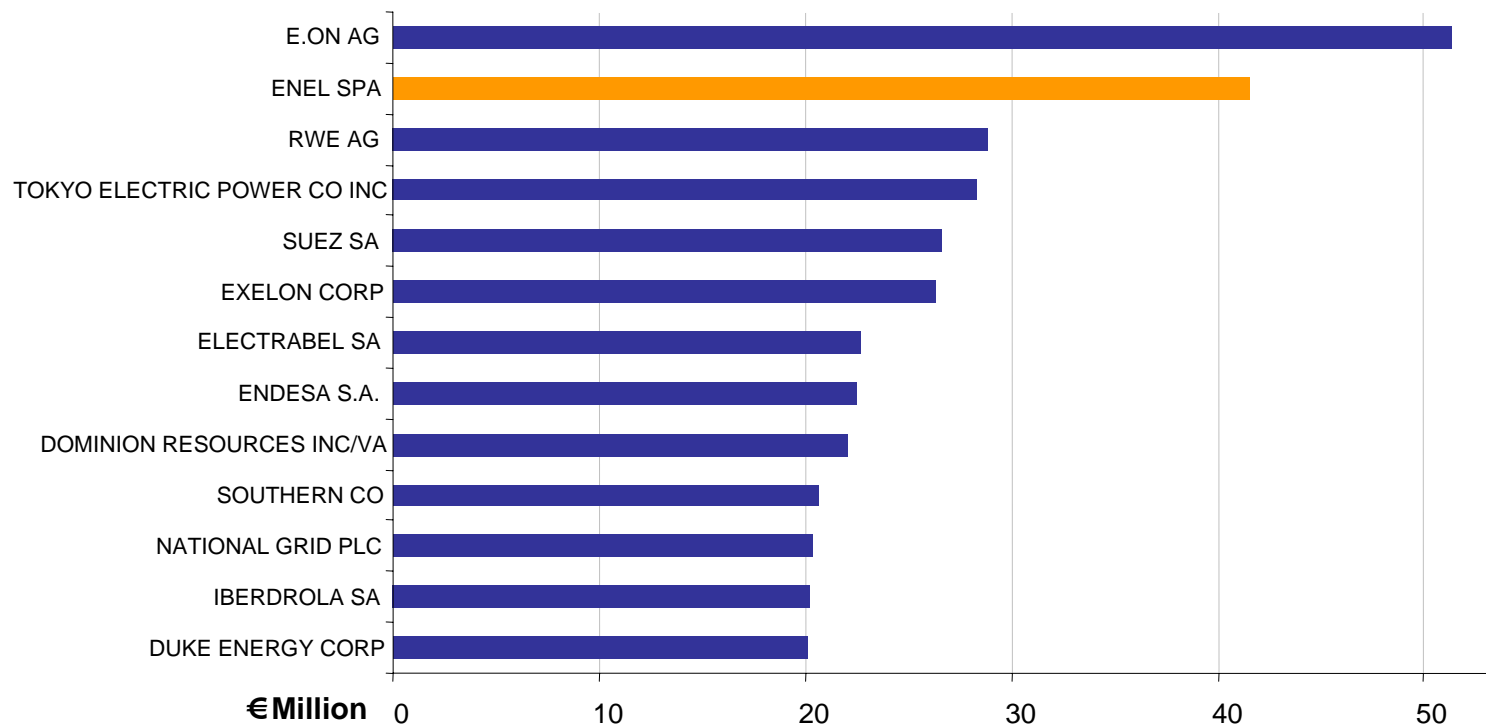
Bruxelles, June 28th, 2006

**Mr Vincenzo de Luca – Head of International Public Affairs – Enel SpA**

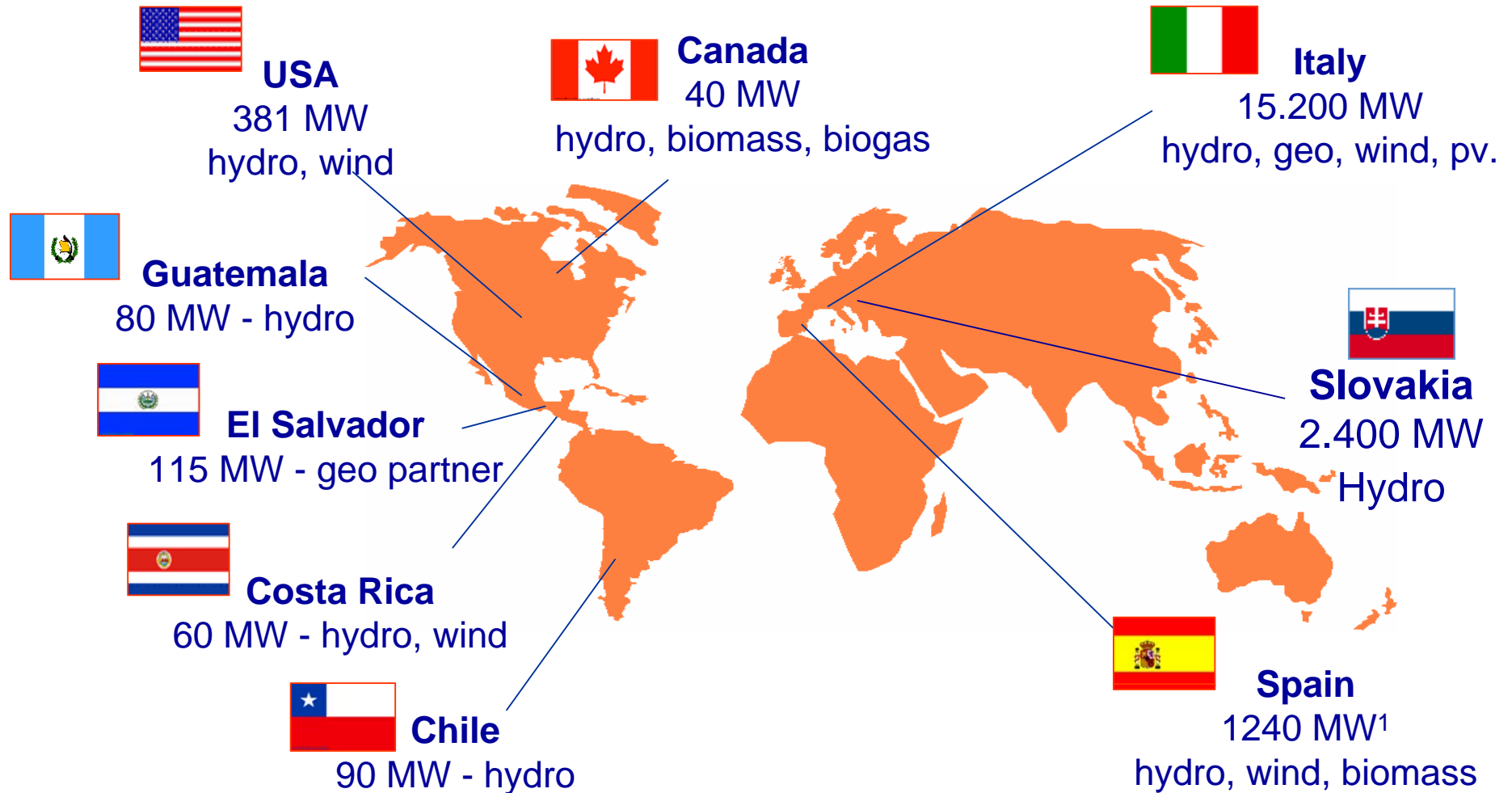
# Enel SpA - Italy

- Leader operator on Italian electricity market (production, distribution, retail)
- Second operator on Italian gas market
- Among World leader players in energy
- Second operator in Europe (market capitalisation)

## Stock exchange capitalisation (13th October 2005)



# Enel's "renewables" portfolio in the world

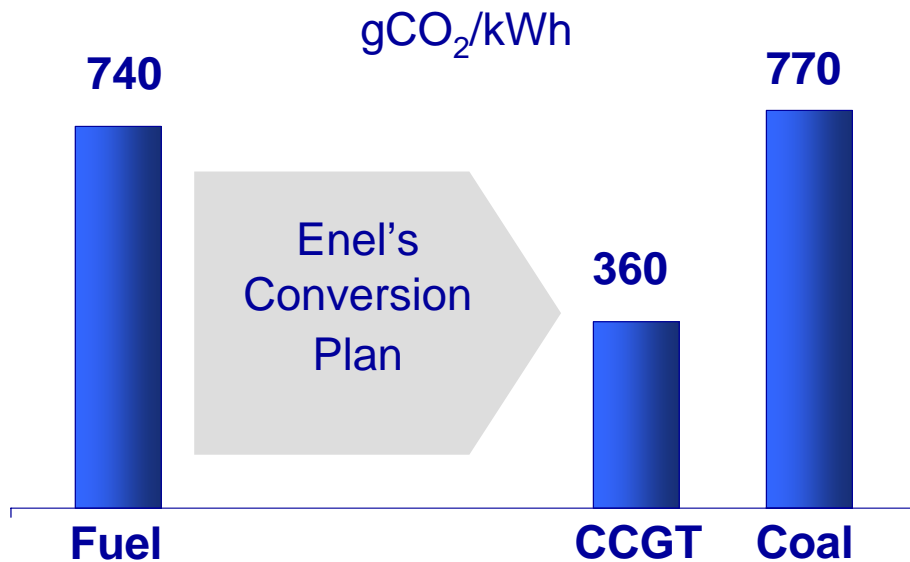


<sup>1</sup> plants in partnership included

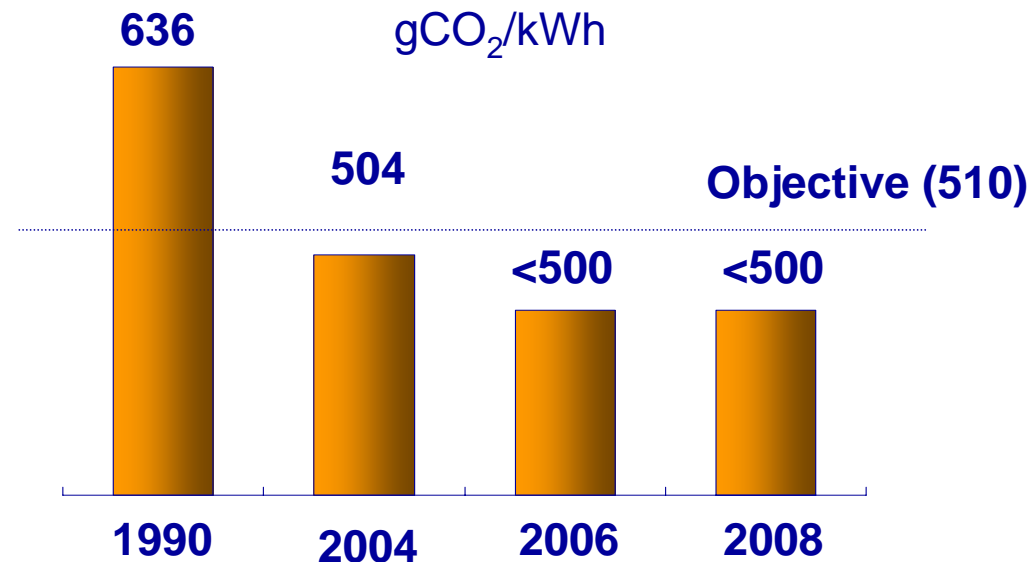
# Enel's commitment to reduce its specific greenhouse gas emissions\*

*Enel commits itself to reduce its specific emissions to 510 g CO<sub>2</sub>/kWh in 2006 [- 20% compared to 1990]*

Specific CO<sub>2</sub> emissions per technology



Enel's specific emissions trends



\* Voluntary agreement signed in year 2000 with Italian Ministry of Environment and Ministry of Industry

# Enel's commitment for the future

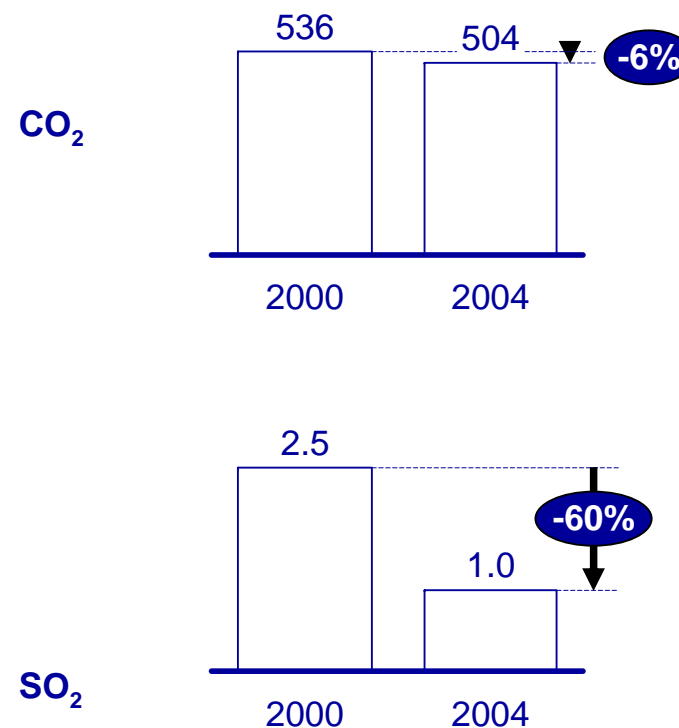
## Strong commitment to renewables:

- EUR 1,568 million invested in 2001-2005
- EUR 2,309 million committed in the next years

## New initiatives on Kyoto project mechanisms:

- CDM
- JI

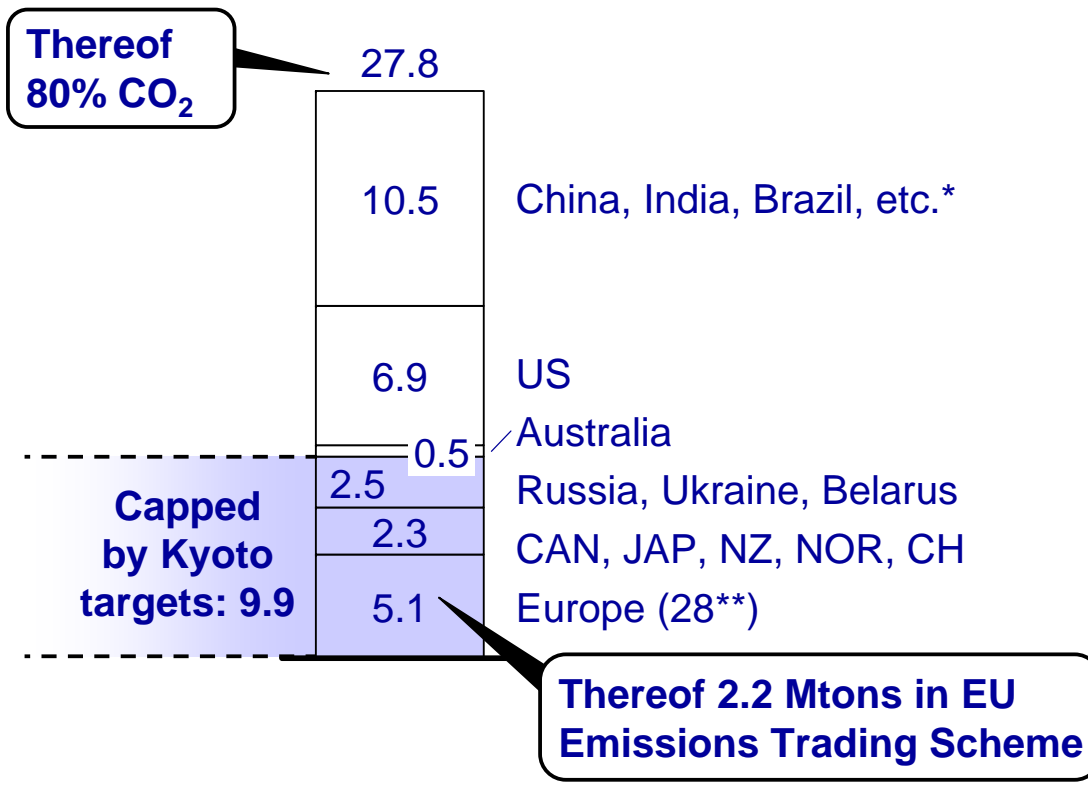
## Enel emissions evolution g/KWh



# Main trends in global greenhouse gas emissions

## Global greenhouse gas (GHG) emissions

Million tons of CO<sub>2</sub> equivalent 2003



- Only 1/3 of the world emissions committed to Kyoto reduction targets
- No targets for biggest growth regions (China, India)
- Current Kyoto targets cover only 2008 - 2012, further targets in negotiation

\* No recent data available, mostly 1994/95 figures

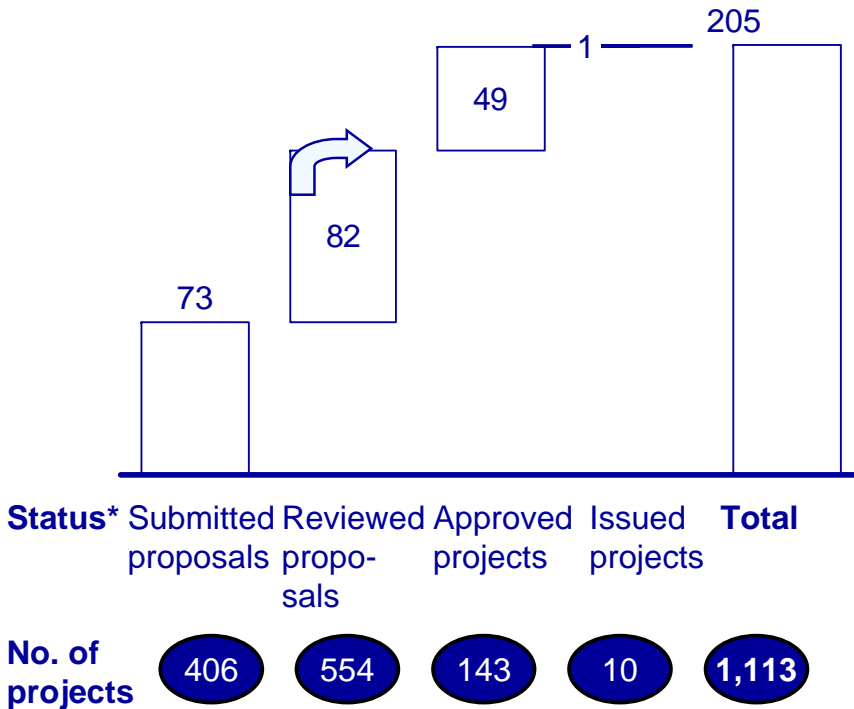
\*\* Including Romania, Bulgaria, Croatia

# JI/CDM development process shows how cooperation between developed and developing countries could work

A lot of projects in the approval pipeline...

## JI/CDM pipeline by stage of approval

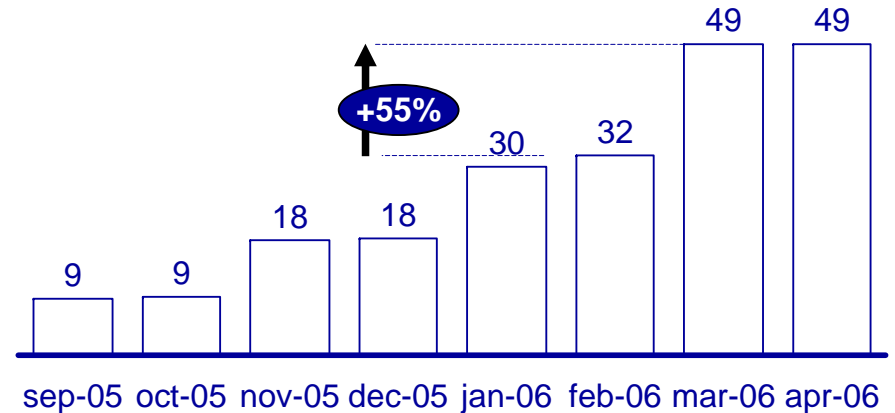
Estimated reduction p.a., in million tons CO<sub>2</sub>, as of April 2006



... with a recent acceleration in the approvals

## Evolution overtime of approved projects

Estimated reduction p.a., in million tons CO<sub>2</sub>



\* Reviewed proposals : project submitted for public comments on UNFCCC website. Approved projects: projects registered by the CDM Executive Board or JI Supervisory Committee. Issued projects: CDM EB or JI SC has issued CERs/ERUs

# Appropriate regulatory frameworks

- China and India are offering more and more CDM opportunities, especially of industrial origin but CDM projects still presents some problems, and in particular the **high uncertainty** that is in part linked to the procedures for credit recognition
- **Investors need clear, long-term incentives:** guaranteed withdrawal of the power generated and/or subsidized prices, in order to make “renewables” competitive with other commercial technologies
- **Uncertainty** of value of credits after 2012 makes it very difficult, at this stage, even for the investors that are more sensitive to sustainable development, to decide further investment.
- Enel wellcomes every effort by governments and international financial institutions that contribute to create a “**business climate**” appropriate to attract long-term business partners



# Enel's commitment for sustainable development

## Improvement of thermal power plants environmental sustainability:

- Conversion of oil plants to CCGT/clean coal
- QUASAR project to maximize heat rate of thermal power plants operations (from 2,269 Kcal/KWh in 2000 to 2,191 Kcal/KWh in 2004)
- Installation of BAT solutions to reduce emissions

## R&D investments to develop new processes and technologies to improve emission efficiency, e.g.:

- European “Zero emission fossil fuel power plan” (ZEFFPP) project: member of advisory council
- Solar energy: collaboration with Enea in the “Archimede” project
- CO2 sequestration: participation to “Dynamis” EU project
- Hydrogen: participation to “Hydrogen Park” consortium to develop hydrogen combined cycle (16MWe in operation by 2007)
- Clean coal technologies and coal pyrolysis

# Enel's capacity building program

- “e8” is a group of electricity companies of the G8 countries who are committed to promote sustainable energy development and share their expertise with partners in developing countries.
- The e8 have recently launched a **human capacity building program** to share best practices in power generation in order to improve emissions profiles.
- This program fits within the Asia-Pacific Partnership initiative.
- In the framework of the e8 program, **Enel is ready to share with engineers from developing economies** its experience in improving the efficiency and environmental performance of its thermal power plants through changes in technologies and processes.
- As an example, **Enel** is ready to organise - as soon as in operation - technical visits to the new plant it is building in Civitavecchia, which is at the leading edge of pulverized coal technology, both in terms of **efficiency** (from 38 to 45%) and **environmental performance** (as an example, 99,9% particulate abatement).

# THANK YOU FOR YOUR ATTENTION

Bruxelles, June 28th, 2006

**Mr Vincenzo de Luca – Head of International Public Affairs – Enel SpA**



L'ENERGIA CHE TI ASCOLTA.