



A snapshot of the Italian cleantech sector and the supply chain development

Belgrado, April 15th 2013



Overview



- **GSE – OUTLOOK AND MAIN ACTIVITIES**
- **RES DEVELOPMENT IN ITALY**
- **ITALIAN PROJECTS**
- **THE ITALIAN GREEN ENERGY SUPPLY CHAIN**

Mission



GSE is the state-owned company which promotes and supports **renewable energy sources (RES)** in Italy.

GSE fosters **sustainable development** by providing support for renewable electricity generation and by taking actions to build awareness of environmentally-efficient energy uses.



The Company



“Energy Services Company”



“Single Buyer”

Purchase of electricity for small customers

- 28,5 million customers
- 85 TWh of energy purchased



“Energy Market Company”

Energy Market and Environmental Markets
(*green certificates, white certificates, CO₂ allowances*)

- 524 TWh electricity traded
- 4 million CV – Green Certificates
(value 339 million €)



“Research into the energy field”

- 350 researchers
- 40 research projects

Main activities

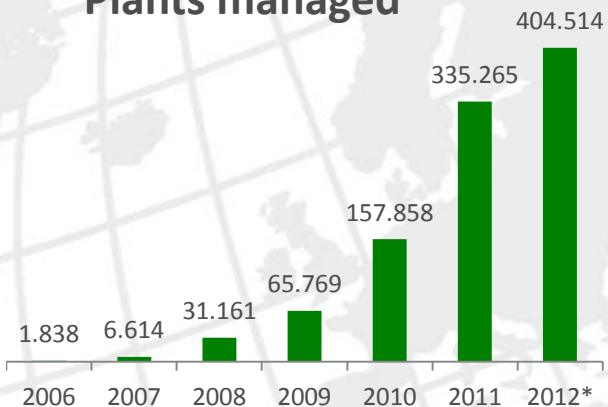


- **Support schemes for RES electricity**
 - **Green Certificates:** issuing GC and monitoring compliance of producers and importers obligated;
 - **Feed-in Tariff** (incentive + compensation for the energy sold).
- **Energy Services for RES and CHP electricity**
 - **Net-metering** system for electricity generated by RES and CHP plants up to 200 kW;
 - **Dedicated Electricity Intake:** purchase at average market price of electricity from RES and other plants (producers opting for electricity sale through GSE).
- **Support schemes for thermal RES and Energy Efficiency**
 - **White certificates** and other **specific incentives** (Conto Termico).
- **Support to institutions and to the Public Administration**
 - **Studies, Data, Consulting Services and Specialist Services in the energy sector**
- **Promotion of renewables and of the renewable-energy**
 - **Training and awareness** to operators and citizens to spread the culture of sustainable energy
- **Virtual gas storage and CO₂**
 - **Services** to the virtual gas storage and in charge of auctioning Italian emission on the European Common Auction Platform

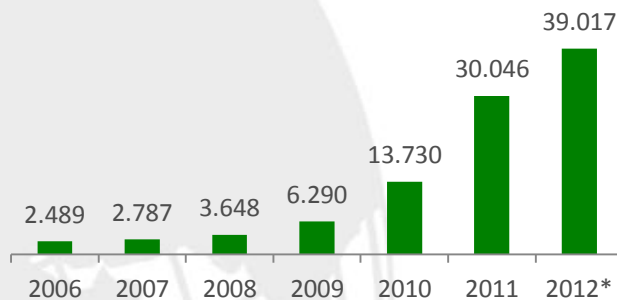
Some data



Plants managed



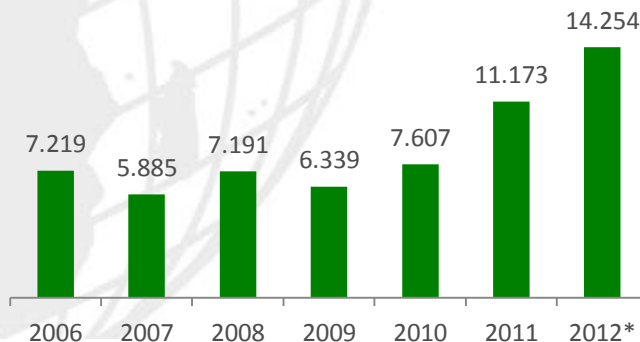
Power managed (MW)



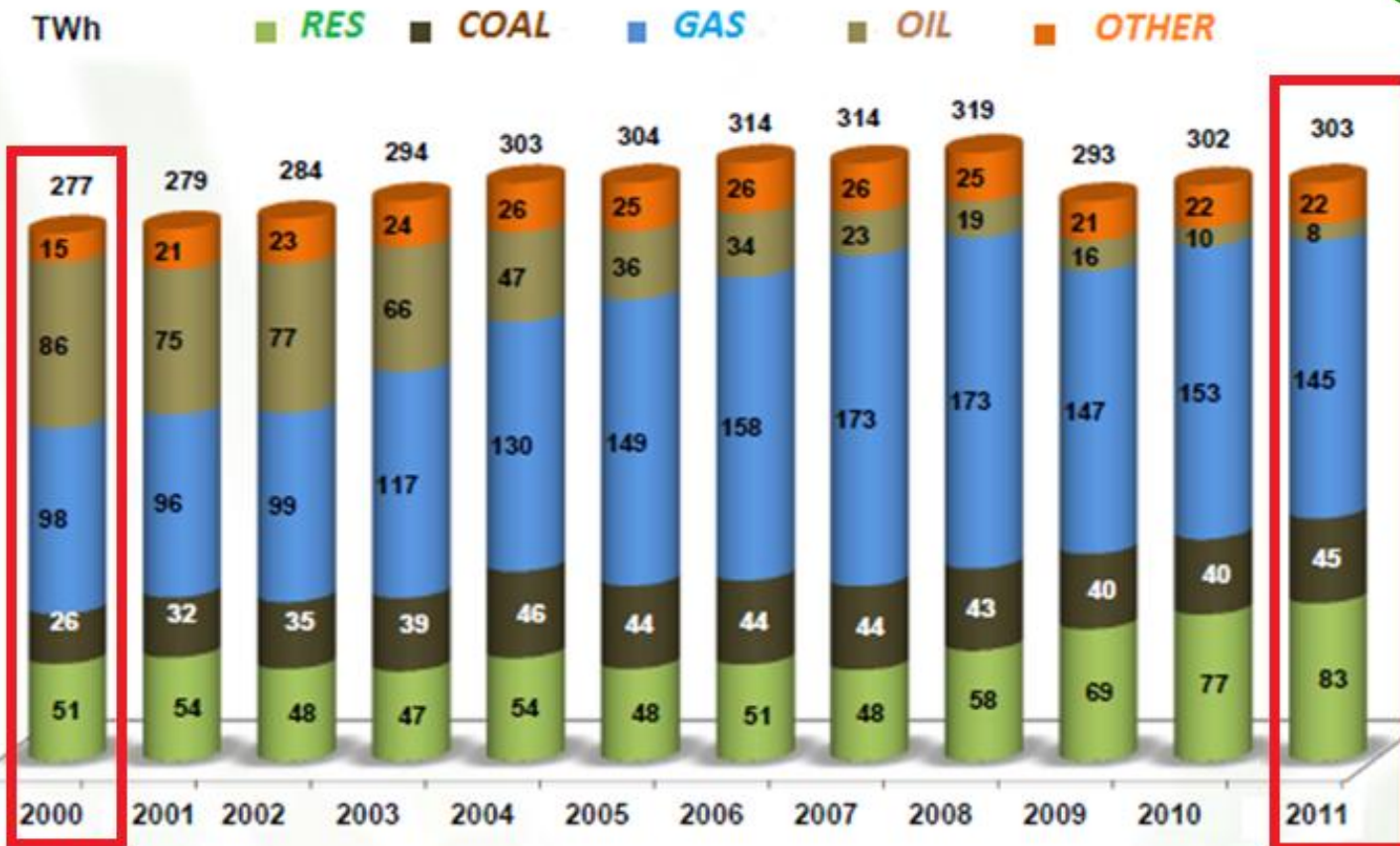
Energy incentivated (TWh)



Total support (Million €)



Total gross generation in Italy - 2011



Source: Statistical Report 2011, GSE

Electricity generation from renewables in Italy



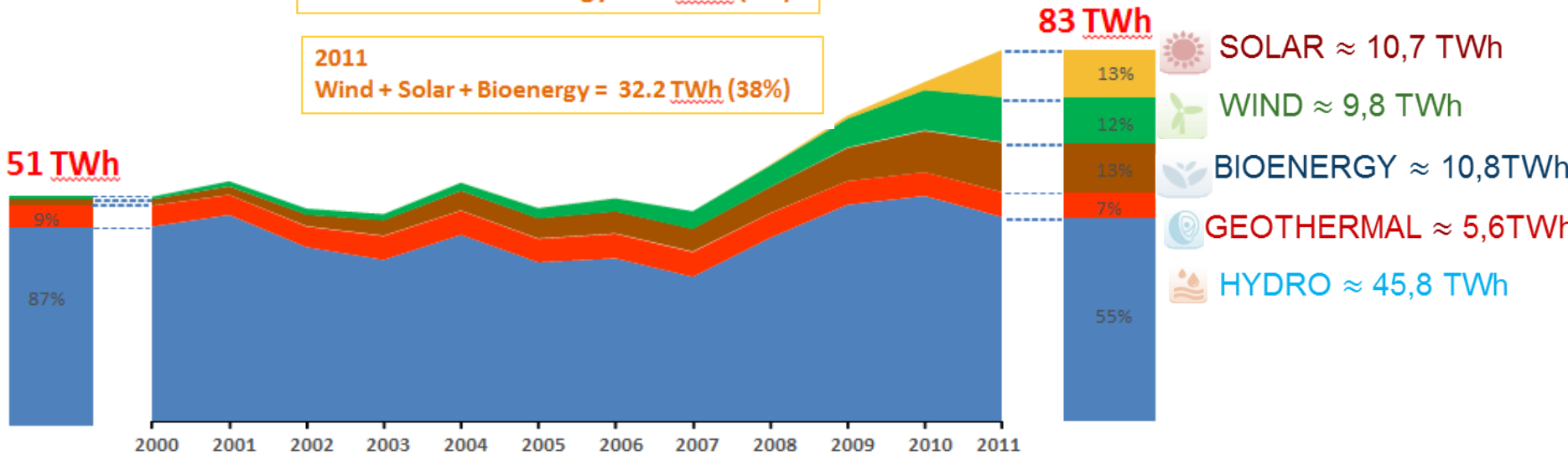
In 2000 : 51 TWh
(18,4% of total gross energy generation)

In 2011 : 83 TWh
(27% of total gross energy generation)

A total increase of around 33 TWh due to new RES:

2000
Wind + Solar + Bioenergy = 2.1 TWh (4%)

2011
Wind + Solar + Bioenergy = 32.2 TWh (38%)



Number and capacity of renewable power plants in Italy in 2011



Solar: 330,000 photovoltaic plants with a capacity of 12,8 GW

Wind: 807 plants with a capacity of 6,9 GW

Hydro: 2.909 hydro power plants with a capacity of 18 GW

Geothermal: 30 geothermal plants with a capacity of 772 MW

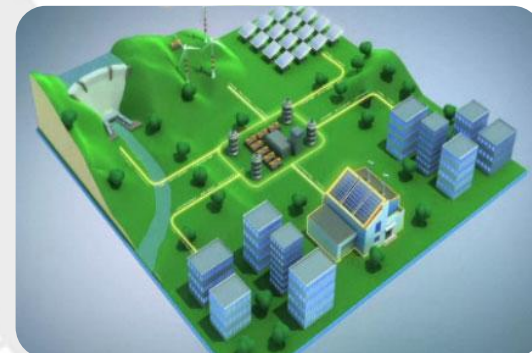
Bioenergy: 1213 plants with a capacity of 2,8 GW



Metering



A screenshot of a Bloomberg Businessweek article. The title is 'How Italy Beat the World to a Smarter Grid' in bold black text. Above the title is the Bloomberg Businessweek logo. Below the title is the author's name 'By Mark Scott on November 16, 2009' and social media icons. A red oval highlights the title. To the left of the main text is a small advertisement for 'Buy low. Save up to 81%' with a bar chart. The main text begins with 'After several false starts, 2010 finally could be the year when smart meters go global. The technology, which lets energy companies and consumers more closely monitor'.



■ GSE's Satellite Assisted Metering Project

- Monitoring and predicting the production of non-schedulable renewable
- 2300 satellite installations all over the country (5000 in the next two years)

■ Smart Metering Project

- 2000 – 2005: 30 millions installations in consumers' households

CORRENTE - The Italian energy world



CORRENTE is the GSE initiative - supported by the Italian MoED - open to free-voluntary participation by Italian RES companies.

Targets:

- Support to the Italian operators' entry into international markets
- Improvement of RES and EEF sector chain visibility
- Development of cooperation between SME and R&D

Services:

- Institutional partnerships
- International showcases
- B2B & matchmaking events
- Call for bids
- Workshops and conferences

CORRENTE supports more than 1.760 ITALIAN GREEN COMPANIES

From renewable energy to energy efficiency, from smart grid to green mobility.

CORRENTE - The Italian energy world



<http://corrente.gse.it>

Examples of past and upcoming events:

- Roundtable on opportunities in the renewable sector in Saudi Arabia
- Matchmaking initiatives during EnergyMed and Solar Expo
- Workshop on the renewable sector in Romania

Corrente's partners



Ministero degli Affari Esteri - Ministero dello Sviluppo Economico



ITALIA Istituzione nazionale per il Commercio Estero



INVITALIA

Agenzia nazionale per l'attrazione degli investimenti e lo sviluppo d'impresa SpA

Strenghts



The Italian green industry has a significant business turnover and offers a wide variety of products and services:



Main aspects of the RES Italian industry :

- Favourable location
- Focus on building integration & design
- RES for big and small applications
- Profitable cooperation between companies and universities



Strenghts

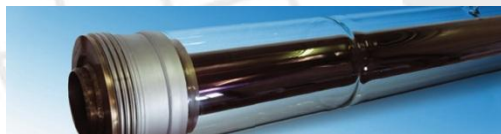


photovoltaic floor

- **Not only a photovoltaic panel, but high-innovation, building integration and design.**



photovoltaic tiles



- **Not only traditional thermodynamic solar, but a unique technology with solar receiving tubes operating at high temperatures thanks to molten salt fluid.**



Strenghts

Solar Energy Technologies



- Solar cells and modules
- Inverters
- Ultra-thin photovoltaic films
- Solar thermal
- Concentrating solar power (CSP)
- Photovoltaic concentrating systems (CPV)

Bioenergy Technologies



- Gasification of organic waste
- CHP systems
- Biogas and biomethane technology
- Digesters
- Combustors and boilers



Strenghts



Wind Energy Technologies



- Small to large scale wind energy products
- Wind turbine generators
- Towers
- Transformers and control systems
- Slew and wheel drive applications
- Gearboxes for wind turbine pitch and yaw drive systems

Hydro Energy Technologies



- Leading and a great deal of experience
- Tubes
- Hydro-pumps
- Turbines



Strenghts



Geothermal Energy Technologies



- Heat pumps
- Steam plants
- Turbines
- Drills and compressors



Italy boasts many successful green energy innovations.

You can get in touch with Italian cleantech companies and experts.

For further information please contact us at
corrente@gse.it

THANK YOU FOR YOUR ATTENTION

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