



Ministero dello Sviluppo Economico

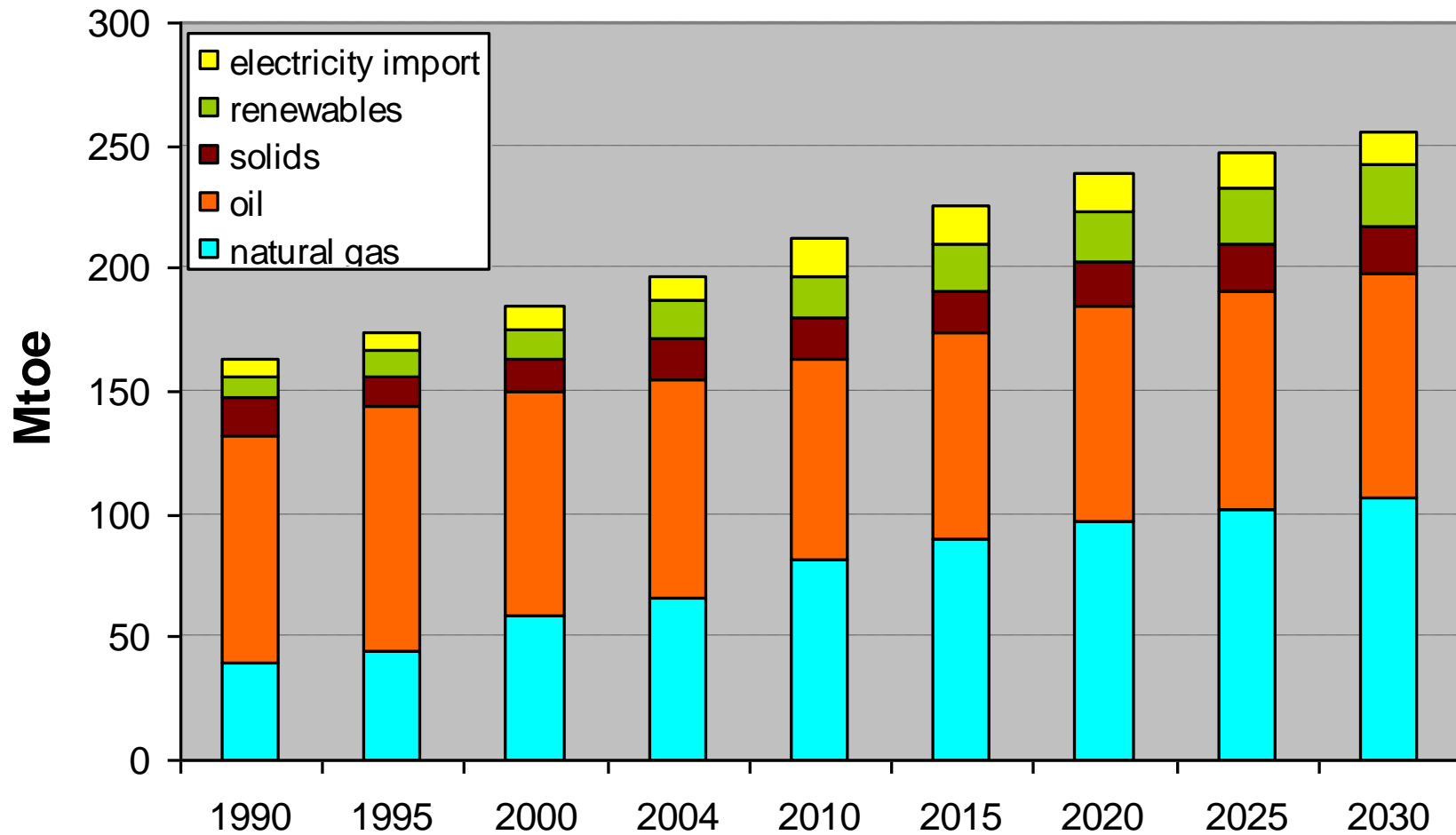
Italian Strategy for Energy Efficiency

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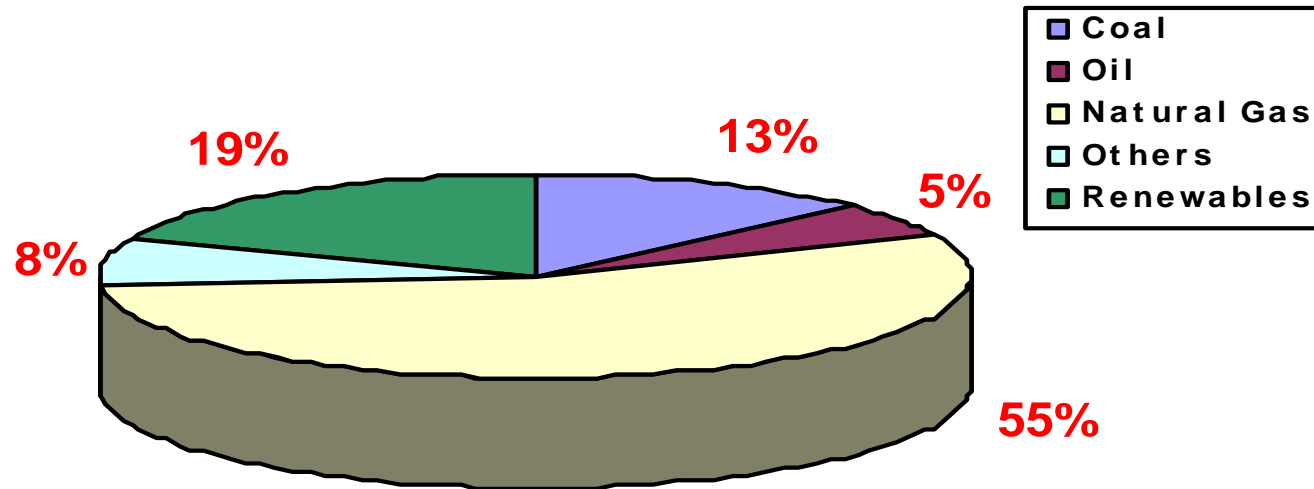
Heat Pumps in the Italian Energy System

CNR - Rome, November 4th 2009

The energy demand

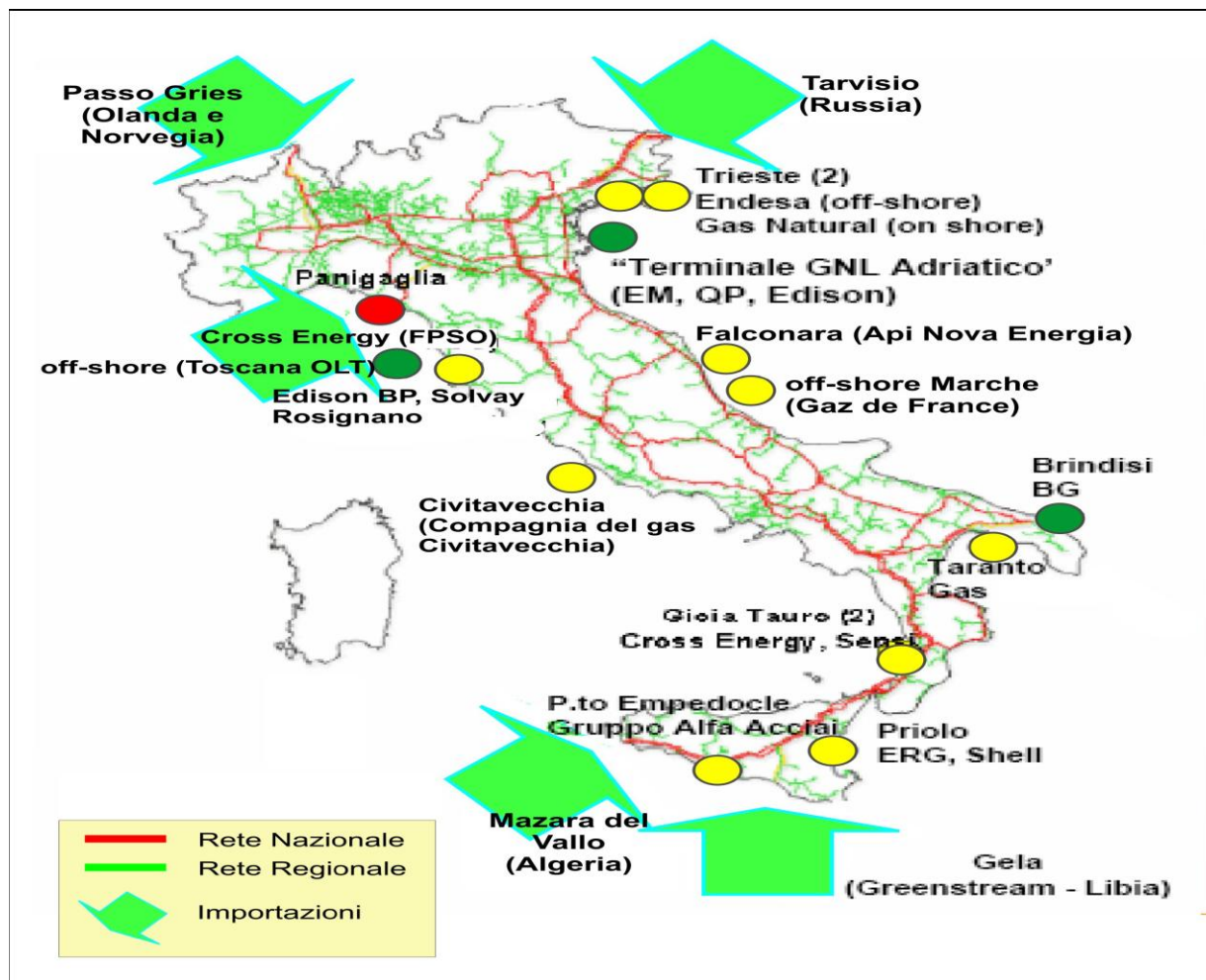


Electricity Generation



**Primary Energy Sources Contribution (%)
to 2008 Electricity Generation (305 TWh)**

The Italian gas infrastructures



Issues in the Italian energy policy (1)

- Diversify the energy suppliers
- Diversify routes and the related infrastructures
- Support the international dialogue between producers and consumers
- Increase energy efficiency both in electricity generation and in end-uses
- Diversify energy sources

Issues in the Italian energy policy (2)

- Emphasise energy diversification while coping with environmental concerns
- Continue the process of liberalization of the electricity and gas market towards retail market
- Increase security of energy supply
- Reduce energy prices and tariffs
- Prepare the tools to promote and facilitate investments
- Increase transparency of markets rules and streamline administrative procedures

Technological Carbon Management Options

Reduce Carbon Intensity

- ◆ Renewables
- ◆ Fuel Switching

Improve Efficiency

- ◆ Demand Side
- ◆ Supply Side

Sequester Carbon

- ◆ Capture & Storage
- ◆ Enhance Natural Sinks

All options needed to:

- Affordably meet energy demand
- Address environmental objectives

The European context

- “Chapeau” Communication: 20 20 20 by 2020 – Europe’s climate change opportunity
 - target of 20 % cut in greenhouse gas emission by 2020
 - target of 20 % renewable energy in energy consumption by 2020
 - Target of 20% energy efficiency by 2020
 - enabling low-CO₂ power generation from fossil fuels by 2020
- Legislative proposals:
 - The Renewable Energy Directive on MS shares
 - The ETS Directive for the post 2012 period
 - The CCS Directive on the geological storage of CO₂

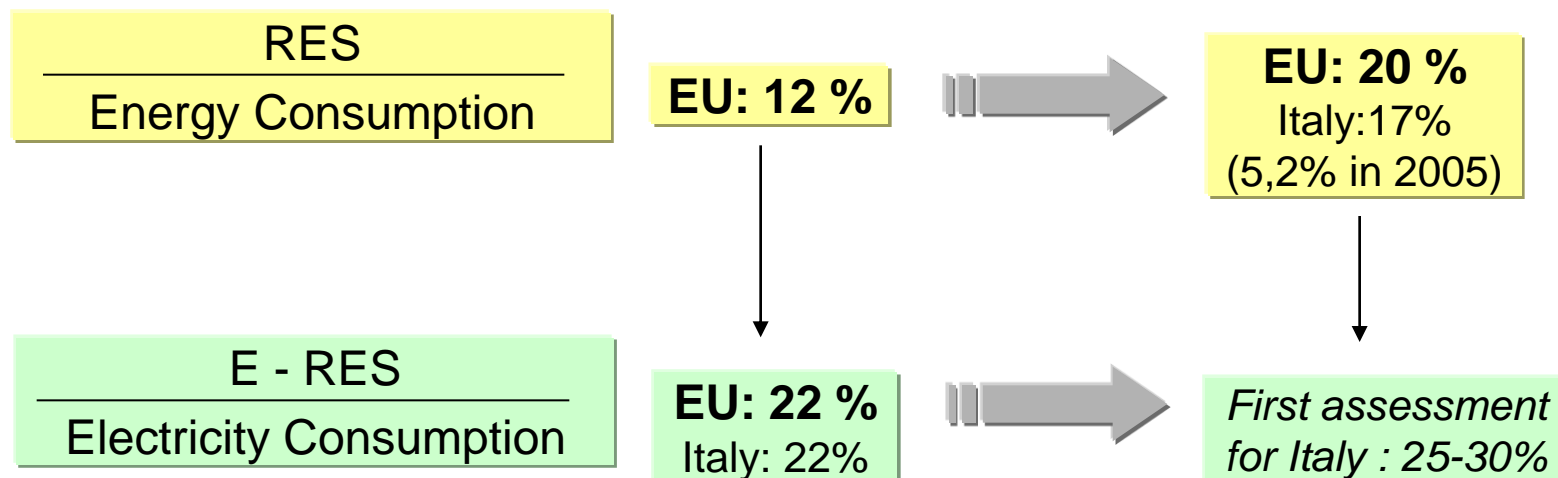
EU Targets: more and more ambitious

RES not binding target up to 2010

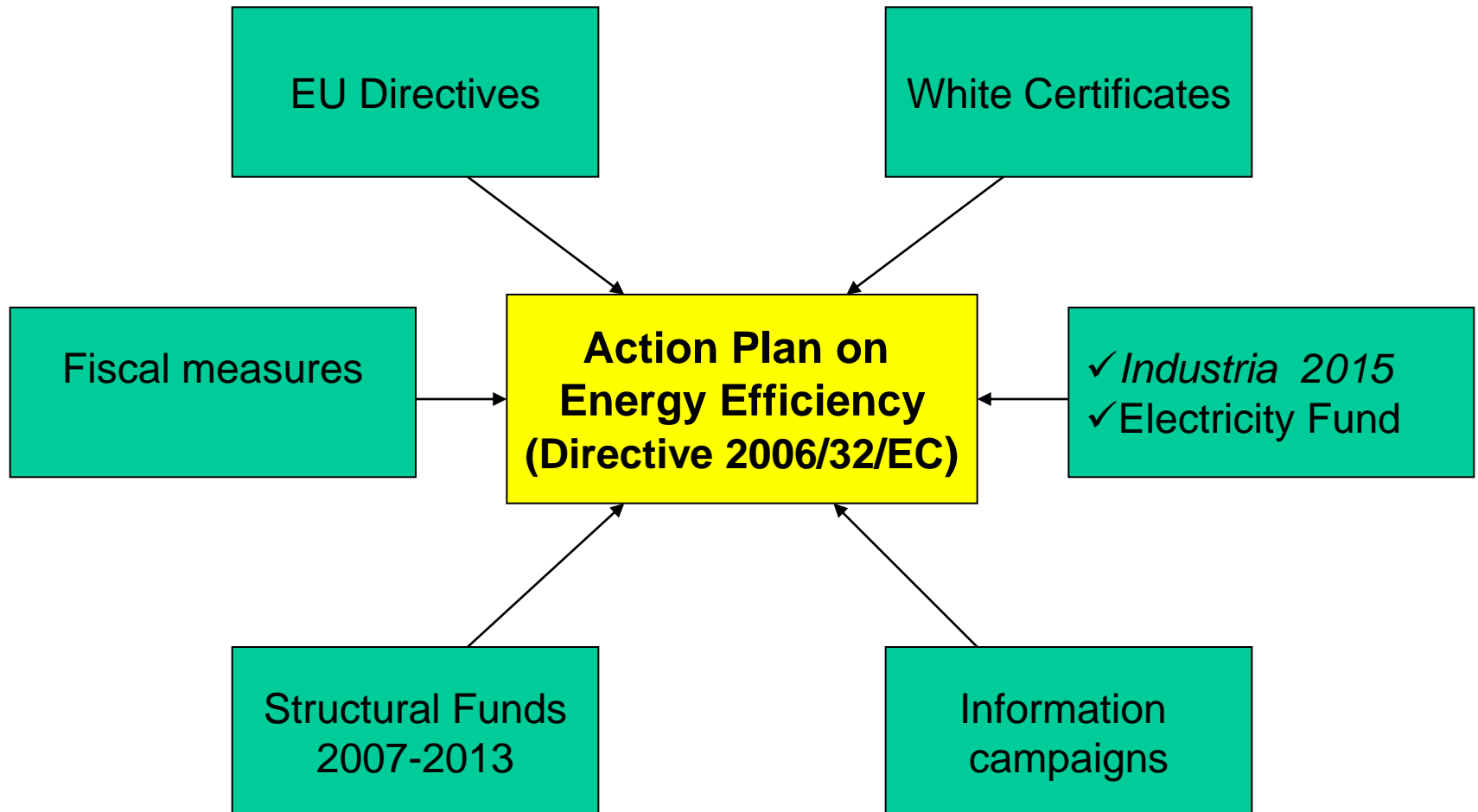
(EU Directive 2001/77/EC, etc..)

RES binding target up to 2020

(New energy package approved by the Spring 2007 Council)

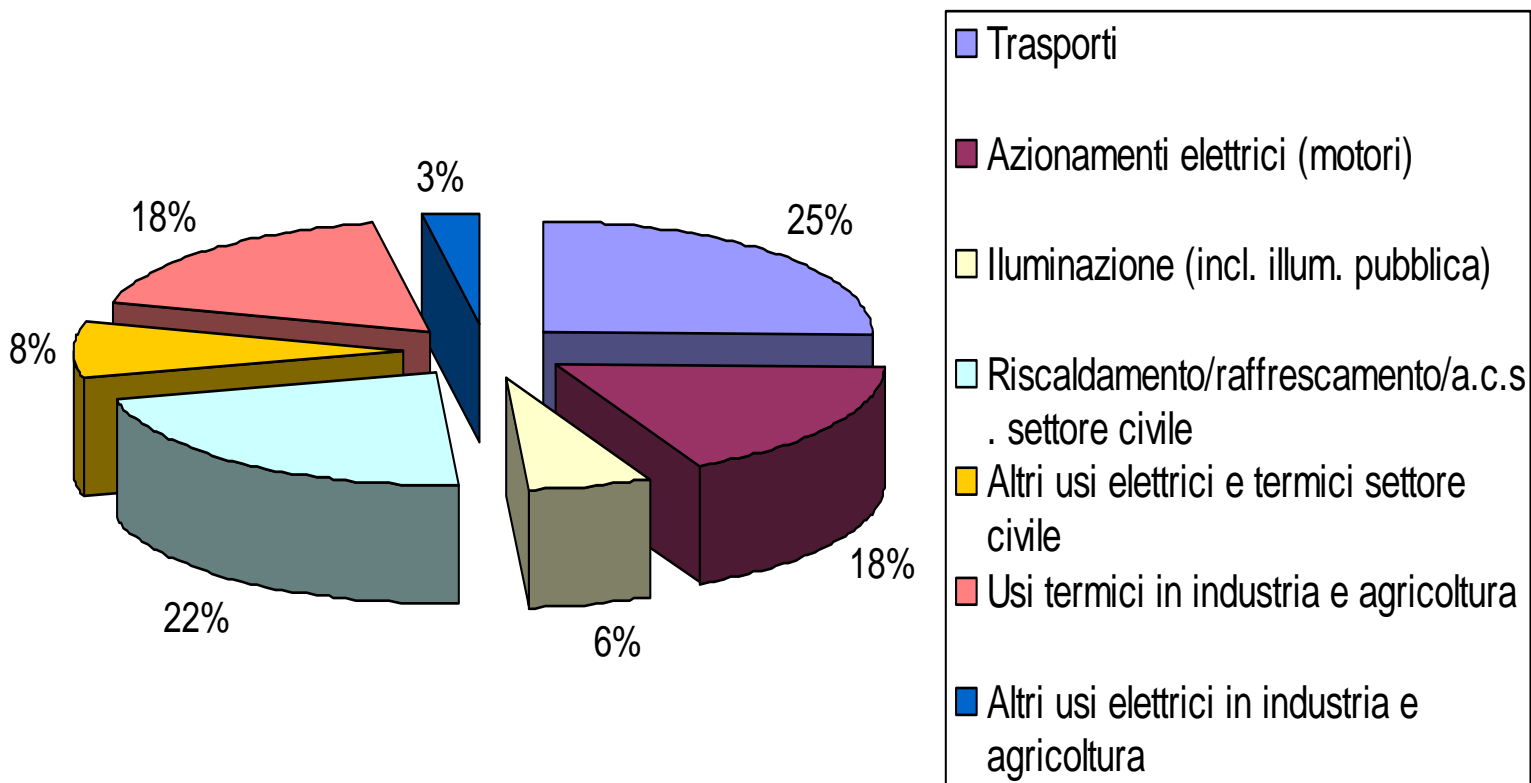


National Action Plan on Energy Efficiency



Reference data

Ripartizione dei consumi per impiego anno 2005 (riferiti ad energia primaria)



Main issues

- ◆ **Target of 9.6 % of energy saving at 2016**
- ◆ **Significant benefits at energy and environmental levels**
- ◆ **Significant energy savings potentials in Residential and Tertiary Sectors**
- ◆ **Critical situation in Transport Sector: the highest increase of energy consumptions is expected**

The role of Heat-pumps in the Action Plan

- ◆ **Adoption of efficient heat-pump water heaters**
- ◆ **Adoption of efficient heating systems with heat-pump installations with compression or absorption technology (Residential and Tertiary Sectors)**
- ◆ **Adoption of efficient conditioning systems with heat-pump installations with compression or absorption technology (Residential and Tertiary Sectors)**

Small Business Act (SBA)

Main issues for SMEs:

- ◆ **Investment fund for energy efficiency**
- ◆ **Energy audits for industrial process**
- ◆ **Streamlining of authorisation procedures for small cogeneration plants**
- ◆ **Innovation and technology transfer**

Assessment of energy savings

- ◆ **“Top-down” methodologies**
- ◆ **“Bottom-up” methodologies**

Extraordinary Action Plan on Energy Efficiency

- ◆ **To strengthen the existing Action Plan in order to achieve the 2020 target**
- ◆ **To define a set of measures and tools for an extraordinary effort on energy efficiency**
- ◆ **To join up the Plan with other policies on climate change (ETS, RES)**

Energy R&D National Programmes

◆ Research National Programme (PNR):

- Participants: Industries, Universities, R&D Centers

◆ Fund for R&D on the Electricity System:

- Collect of electricity bills (<0.03 c€/kWh)
- Main goal: technology innovation of the electricity system
- New 3-years programme approved in 2009; funding: 210 M€
- Call for tender 2009; funding: 53 M€

◆ Industria 2015:

- Industrial technology innovation
- 3-years programme on Energy Efficiency 2009-2011; funding: 200 M€

Industria 2015: R&D and Innovation

Three main tools:

- **Business networks**
- **Innovative Finance**
- **Industrial Innovation Projects on Strategic Technology Areas:**
 - **Energy Efficiency**
 - **Sustainable Mobility**
 - **New technologies for the “Made in Italy”**

Industria 2015: Main Goals and Achievements

◆ Energy Efficiency

1. New products and technologies for energy generation
2. Requalification of industrial sectors
3. Improvement of Production process
4. Other technologies

Total Call EE: 30 projects @ 0.6 billion €

International Cooperation

- ◆ Bilateral cooperation
- ◆ Partnerships and Multilateral Agreements
- ◆ IEA Implementing Agreements
- ◆ In the European context:
 - European Framework Programs
 - European Platforms
 - Strategic Energy Technology - SET Plan

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Thank you for your attention!