Energy efficiency certificate trading: Food for thought from a recently launched Italian scheme

Roberto Malaman, Marcella Pavan
Regulatory Authority for Electricity and Gas, Italy

Energy efficiency certificate trading
Workshop organised by IEA-DSM, IEA and CESI
Milan, 17 April 2002

This is not an official document of the Italian Regulatory Authority for Electricity and Gas
The Regulatory Authority for Electricity and Gas

- **Established** under law no. 481 of November 14, 1995
- **Fully operational** since April 23, 1997
- **Independent** entity with three Commissioners
- Sets its **own organisation and procedures** for decision-making
- **Self-financed** by contributions from regulated companies and entities
- **Member to the** Council of European Energy Regulators (CEER) since March 7, 2000
Accountability of the Regulatory Authority for Electricity and Gas

- Stakeholders
- Council of State
- Regional Administrative Courts
- Parliament
- Government & Ministers
- European Commission

- Authority for Electricity and Gas
  - Antitrust
  - General policy guidelines
  - Communications
  - Directives
  - Laws and norms
  - Hearings
  - Advice
  - Notices
  - Appeals
Background (1)
General aims

- **Kyoto:**
  - 6.5% cf. 1990 levels between 2008-2012
  - more than 25% via enhancement of end-use energy efficiency

- **Security of supply:**
  - California
  - EU Green Book
  - concerns at the national level

- **Other economic benefits:**
  - development of energy services companies (ESCO)
  - trade balance
  - cost-efficiency…
Background (2)
The starting point - 1

Primary energy intensity of GDP (1971 = 100)
Two opposite views on potential energy saving in Italy:

- Significant
  - 48% of projected energy demand in 2010 (technical potential)

- Limited
  - Relatively low primary energy intensity of GDP

Is the reality somewhere in the middle?
The role of public policy:

- contribute to overcome ‘traditional’ barriers to the development of the market for energy efficient products and services, i.e.:
  - lack of information
  - marketing practices to promote more energy intensive consumption habits
  - high transaction costs
  - externalities
  - splits incentives
  - etc.
The new Italian policy approach (1)

National targets

- Provisions in the **Ministerial decrees implementing the EU liberalisation Directives**
- **Twins Ministerial Decrees of April 2001**
- **Mandatory quantitative energy savings targets** at the national level (against the “business as usual” scenario)

<table>
<thead>
<tr>
<th>Year</th>
<th>Target (Mtoe/Yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electricity</td>
</tr>
<tr>
<td>2002</td>
<td>0,1</td>
</tr>
<tr>
<td>2003</td>
<td>0,5</td>
</tr>
<tr>
<td>2004</td>
<td>0,9</td>
</tr>
<tr>
<td>2005</td>
<td>1,2</td>
</tr>
<tr>
<td>2006</td>
<td>1,6</td>
</tr>
</tbody>
</table>
The new Italian policy approach (2)

Forecasted effect on emissions

<table>
<thead>
<tr>
<th>Year</th>
<th>Target (Mtoe/Yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>2002</td>
<td>0,2</td>
</tr>
<tr>
<td>2003</td>
<td>0,9</td>
</tr>
<tr>
<td>2004</td>
<td>1,6</td>
</tr>
<tr>
<td>2005</td>
<td>2,2</td>
</tr>
<tr>
<td>2006</td>
<td>2,9</td>
</tr>
</tbody>
</table>

- 7,5% of the mid-term Kyoto target (i.e. 2006 target) if 100% of the overall target for electricity distributors is achieved via cuts in electricity consumption
- The ex-post effect on emissions will range between 5 and 15% of total Italian Kyoto target
The new Italian policy approach (3)
Distributors’ targets

Specific targets on each distributor:

◆ threshold: **100,000 customers as at 31.12.2001**
  ➢ gas: 22 distributors; 9,630,000 customers (total: about 16 millions)
  ➢ electricity: 8 distributors; 98% of total customers

◆ apportionment **on the basis of the quantity of electricity/gas distributed to final customers compared to the national total, in the previous year**

◆ **specific regional targets can be added by Regional Administrations**

◆ at least 50% via reduction of electricity and gas consumption
The new Italian policy approach (4)
Distributors’ targets

Electricity saving projects

Other primary energy saving projects

Natural gas saving projects

Total annual national target

Electricity distributors

At least 50% of the annual target

Natural gas distributors

At least 50% of the annual target

Autorità per l’energia elettrica e il gas
The new Italian policy approach (5)

Eligible projects

- Targets have to be achieved via the implementation of **energy savings projects**

- Projects may be **implemented by:**
  - distributors (directly or via controlled companies)
  -ESCOs (still to develop)

- **Eligible projects:**
  - only demand-side actions
  - illustrative list: 14 classes of projects with more than 35 sub-classes;
  - projects started in 2001, if part of a voluntary agreement and subject to AEEG’s approval
The new Italian policy approach (6)
The TEE market

- An Energy Efficiency Certificates (TEE) market will be created
- Cost-efficiency should be increased
- Energy Efficiency Certificates (TEE) market
  - certificates issued by AEEG following verification
  - certificates issued to electricity and gas distributors or ESCOs
  - tradable via bilateral contracts or in the TEE market
  - three types
  - banking may be allowed
- Annual compliance control
- Sanctions for non-compliance
  - “proportional and in any case greater than investments needed to compensate the non-compliance”
  - to be paid in 2004 for 2003 targets and in 2005 for 2002 ones
  - 2003 first year without possibility to compensate under-compliance
The new Italian policy approach (7)
The cost-recovery mechanism – Who pays?

Costs born by distributors to carry out projects in the framework of the two decrees:

- *can be recovered via electricity and gas tariffs*
- *net of any contribution from other sources*
- criteria and mechanisms to *be defined by AEEG*
- these criteria “have to take into account, *inter alia*, any net profits variations (+ or -) resulting from projects implementation”
General criteria:

- **unit value**: €/unit of primary energy saved

- The overall cost of a unity of energy saved must be (much) less than the avoided cost

- **promotion of efficiency gains**

- The impact of energy savings projects on distributors’ revenues is already taken into account in the distribution tariff structure
AEEG’s tasks (1)

- AEEG to issue *Guidelines for the design, implementation and evaluation of projects*

  ... taking into account, *inter alia*, the need to promote competition, technological progress, and to protect low-income households

  ... and after consultation with interested parties (regions, utilities, environmental NGOs, consumers associations, etc.)

- **Consultation paper** issued on April 4, 2002

  ... broadening the scope for consultation to other issues ...
AEEG’s tasks (2)

To kick start the whole mechanism:

- **Guidelines on:**
  - projects preparation
  - evaluation of project’s results (specifically: energy savings)
  - documentation to be transmitted to AEEG to allow for projects verification and validation (on a project-by-project basis)
  - issuing of energy efficiency certificates (TEE)

- **Criteria and rules for:**
  - cost recovery via electricity and gas tariffs
  - sanctions for non-compliance

- **Definition of TEE market rules** (together with Electricity Market Operator)
Every year:

- (upon request) *ex-ante* project conformity check with legislative as well as *Guidelines* rules
- compliance check
- *ex-post evaluation* and *certification of energy savings*
- *annual report* and *proposals* concerning possible modification of the system
- *issuing of TEE*

- *compliance check* (with annual targets) + *sanctions for non-compliance*
Will it work?

Key issues:

◆ compatible with a competitive market? (distributors-suppliers relationships are crucial)

◆ administrative and compliance costs (a complex system)

◆ flexibility

◆ credibility and transparency

◆ promotion of market transformation projects

◆ definition of links with future trading mechanisms
Contacts

Roberto Malaman  
*Director – Quality and Consumers Affairs*

Marcella Pavan  
*Head - Energy Efficiency Policy Division*

Autorità per l’energia elettrica e il gas  
Piazza Cavour 5  
20121 Milano – ITALY

tel: +39 02 65 565 313  
fax: +39 02 65 565 230

e-mail: rmalaman@autorita.energia.it  
mpavan@autorita.energia.it