

# Les certificats d'économies d'énergie: un nouvel instrument pour l'efficacité énergétique

Ministère de l'Économie des Finances et de l'Industrie, ADEME  
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## *The Italian Energy Efficiency Certificates (EECs) Scheme*

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*(\*) This is not an official document of the Italian Regulatory Authority for Electricity and Gas*

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# The Regulatory Authority for Electricity and Gas/1

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- ◆ Independent national regulator established in 1995 and fully operational since April 1997
- ◆ Guarantees the **promotion of competition and efficiency**, and ensures **adequate service quality standards** in the electricity and gas sectors
- ◆ Major activity fields: **tariff setting, market and price monitoring, quality of service, settlement of disputes and complains**
- ◆ **Member to the Council of European Energy Regulators (CEER) since March 7, 2000**



# The Regulatory Authority for Electricity and Gas/2

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## ◆ Role in the EECs scheme:

- technical rules for projects design, development and evaluation
- technical rules for the issuing of EECs
- technical rules for the functioning of the EECs market (jointly with the Electricity Market Operator)
- criteria for the definition of sanctions for non compliance
- criteria and mechanism for cost-recovery
- administration and enforcement of the whole mechanism
- proposals to the Government for possible changes in the design of the mechanism in order to improve its effectiveness



# The legislative process

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- ◆ **Energy Efficiency Obligation for electricity and natural gas distribution companies introduced with the implementation of the European Directives on the liberalisation of the electricity and gas market (1999 and 2000 respectively)**
- ◆ **First Ministerial Executive Orders in 2001: definition of the obligation and introduction of the energy efficiency certificates market**
- ◆ **Technical revision of the 2001 Executive Orders with consultation of Regional Administrations + definition of technical and economic regulation throughout 2002 and 2003**
- ◆ **New legislative provisions in July 2004**
- ◆ **Entered into force in January 2005**



# Policy drivers

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## ◆ **Kyoto:**

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

## ◆ **Security of supply:**

- EU Green Book
- concerns at the national level

## ◆ **Concerns on the potential negative impacts of the liberalisation process**

- gradual price reductions and impact on consumption behaviours
- competitive pressure and impact on utilities' investment behaviours



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# The Demand Side of the Energy Efficiency Certificates Market

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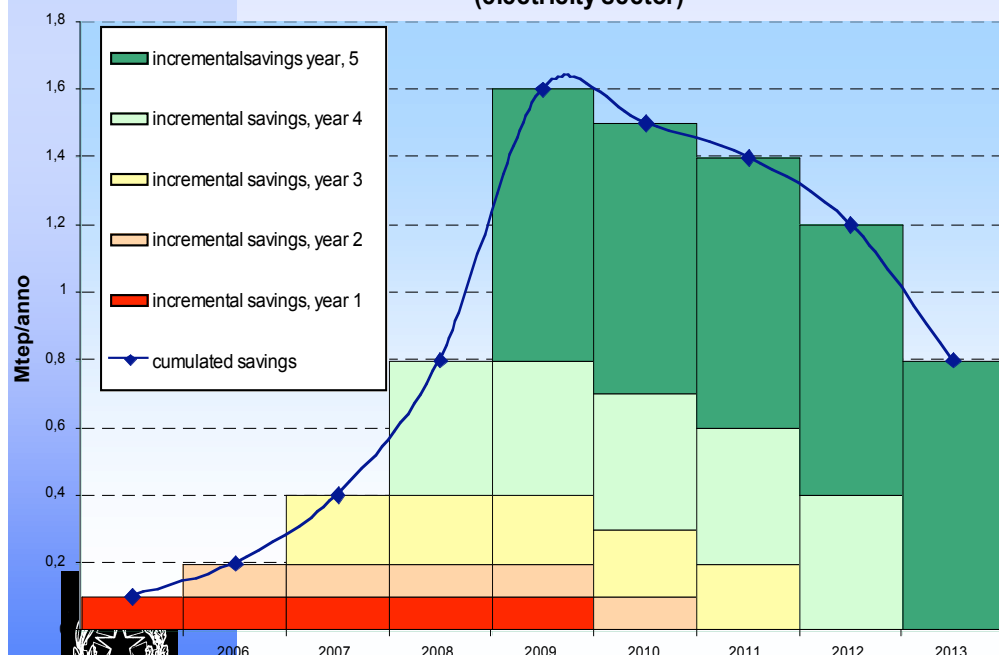
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# The Energy Efficiency Obligation

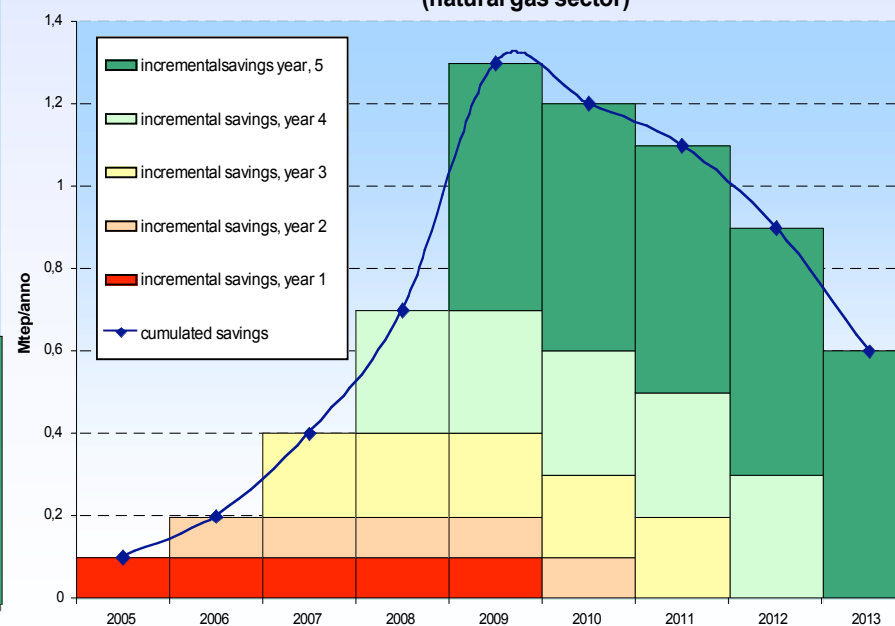
## ◆ National quantitative energy efficiency targets:

- first target period: 2005-2009
- 2,9 Mtoe/year in the fifth year;
- target for the post-2009 period to be defined by the Government by July 2006

Energy Saving Targets, incremental and cumulated  
(electricity sector)



Energy Saving Targets, incremental and cumulated  
(natural gas sector)



# The Energy Efficiency Obligation/2

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## ◆ Obligated actors:

- electricity and natural gas distributors with more than 100.000 customers as of 31 December 2001
- rules for distributors under this threshold to be issued by the end of 2005

## ◆ Current apportionment rule:

- Quantity of electricity/natural gas distributed to final customers compared to the national total in the year t-2





# The Energy Efficiency Obligation/3

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## ◆ Regions and autonomous provinces:

- receive from distributors annual energy savings plans
- *may set local quantitative objectives and*
- may define criteria for their implementation ...

*...“in the framework of the targets and criteria defined in the decrees” and “taking into account additional financial needs”*



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# The Supply Side of the Energy Efficiency Certificates Market

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# Eligible Projects

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## ◆ Eligible projects

- **hard measures** targeted to energy efficiency improvements **in all energy end-use sectors**
- **projects implemented in the period 2001-2004**, subject to AEEG approval

## ◆ The 50% constraints

- at least half of each year distributors' target has to be achieved via **reduction of electricity and natural gas uses**

## ◆ Projects can be implemented by

- electricity and natural gas **distributors**
- **companies controlled by** electricity and natural gas distributors
- **“companies active in the energy service sector”**



# Eligible Projects/2

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- ◆ Projects must be **designed, implemented and validated according to criteria established by AEEG**, following consultation of all interested parties
- ◆ Projects are **not subject to approval before their implementation**, although proponents may ask AEEG for an *ex-ante* “qualitative” eligibility check
- ◆ Projects **contribute to the achievement of targets for up to 8 years (mostly 5 years)**
- ◆ Projects must achieve a minimum size (in terms of toe saved, set by AEEG) to be eligible for AEEG validation and certification



# Measurement and Verification

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- ◆ **M&V is the key for an effective tradable certificates mechanism** applied to the promotion of energy efficiency in end-use sectors
  
- ◆ **AEEG has developed three approaches for the M&V of the primary energy savings achieved by each project:**
  - a) a **default (deemed savings) approach**: no on-field measurement;
  - b) an **engineering approach**, partial on-field measurement;
  - c) **energy monitoring plan** (subject to AEEG pre-approval)



# Measurement and Verification/2

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- ◆ Only “additional savings” are considered i.e. savings over and above spontaneous market trends and legislative requirements
- ◆ Deemed savings and engineering methods are developed by AEEG following consultation of all interested parties
- ◆ Energy monitoring plans have to meet criteria pre-defined by AEEG and are subject to AEEG pre-approval. They can be proposed only for measures for which no deemed savings or engineering methods have been adopted by AEEG



# The Energy Efficiency Certificates

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- ◆ **Projects validation** as well as **energy savings certification** are under AEEG's responsibility
- ◆ **Verification** is carried out via:
  - control of projects **documentation** prepared according to a predefined reporting format and sent to AEEG by interested parties
  - random on-site **audits** (i.e.: control of more detailed project-related documentation as well as audit at customers' premises)
  - both **quantitative** and **qualitative project characteristics** are checked for validation
- ◆ **The certification of the energy savings produced by each project is made via the issuing of Energy Efficiency Certificates (EECs)**



# The Energy Efficiency Certificates/2

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- ◆ EECs are **issued** by the Electricity Market Operator **upon request of AEEG** to:
  - all electricity and natural gas **distributors** (AEEG decision)
  - **companies controlled** by electricity and natural gas distributors
  - “companies active in the energy service sector” defined as “**companies that offers, *inter alia*, integrated energy services to their customers**”
- ◆ **The unit value of EECs is the primary energy saved (1 tep)**
- ◆ **Three types of certificates:**
  - ✓ type 1: attest savings achieved via **reductions of electricity consumption**
  - ✓ type 2: attest savings achieved via **reductions of natural gas consumption**
  - ✓ type 3: attest savings achieved via **reductions in the consumption of fuels other than electricity and natural gas**





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# Trading, Enforcement and Cost-Recovery

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# The trading mechanism

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- ◆ **Energy Efficiency Certificates are tradable:**
  - in a specific market organised and administered according to rules set out jointly by AEEG and the Electricity Market Operator
  - over the counter
  
- ◆ **Three markets (one for each type of EEC)**
  
- ◆ **Banking of certificates is allowed**



# The enforcement mechanism

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- ◆ **EECs serve as an accounting tool to prove that the annual target has been met**
- ◆ **Distributors who turn out to be non compliant are subject to penalties.**
- ◆ **Compliance with annual targets is evaluated also with respect to the average performance of all the others market actors as measured by the amount of EECs issued compared to the national saving target for that year.**



# The enforcement mechanism/2

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## ◆ Sanctions for non-compliance:

- has to be “*proportional and in any case greater than investments needed to compensate the non-compliance*”
- under certain circumstances a **2 years “grace period”** may apply for compliance with each year target
- **under certain circumstances does not cancel the obligation**
- is quantified *ex-post* by the Regulator, on the basis of criteria that have been clarified *ex-ante* by the Regulator itself
- **sanctions proceedings** are put in a specific (government-administered) Fund to be used to finance information and training programs



# The cost-recovery mechanism

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- ◆ **Costs born by distributors to carry out projects in the framework of the two decrees may be recovered via electricity and gas tariffs according to criteria and mechanisms defined by AEEG:**
  - **only distributors subject to the mandatory energy saving targets**
  - **only costs related to the development of projects or to the purchase of certificates attesting energy savings via cuts in electricity and gas consumption**
  - **only up to the occurrence of each distributor's obligation**
  - **100 €/unit of primary energy saved in the first year; regularly updated also on the basis of information on the actual costs of energy savings**



# A user friendly system

Indirizzo <http://www.autorita.energia.it/ee/index.htm> Vai

CHE COSA È L'AUTORITÀ  
ATTIVITÀ ISTITUZIONALE  
COMUNICATI STAMPA  
RELAZIONE ANNUALE  
PUBBLICAZIONI

**efficienza energetica**

## LA PROMOZIONE DEL RISPARMIO ENERGETICO

I decreti ministeriali 20 luglio 2004

L'attività dell'Autorità

Riferimenti normativi e legislativi

## IL SISTEMA EFFICIENZA ENERGETICA

Presentazione e istruzioni

Accreditamento (società di servizi energetici e società controllate dai distributori)

Società di servizi energetici accreditate per l'utilizzo del sistema **NEW**

**Accesso al sistema:**

- > distributori energia elettrica
- > distributori gas
- > società di servizi energetici
- > società controllate dai distributori

**efficienza energetica**

Electricità

Gas

Consumatori

**cerca** **contatti** **link**

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Electricità Internet

# A user friendly system/2



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Sistema Efficienza Energetica

**A) Request submissions**

Benvenuto **Cariati Roberto** (Utenza di test Autorita per l'energia)

Dati anagrafici	<ul style="list-style-type: none"><li>• Visualizza e modifica i dati archiviati</li></ul>
Inoltro di nuove richieste	<ul style="list-style-type: none"><li>• Richiesta di verifica preliminare di conformità alle Linee guida</li><li>• Proposta di progetto e di programma di misura</li><li>• Richiesta di verifica e certificazione risparmi</li></ul>
Richieste Presentate	<ul style="list-style-type: none"><li>• Visualizza e stampa il contenuto delle richieste già presentate e verificane lo stato di avanzamento</li></ul>
Altro	<ul style="list-style-type: none"><li>• Invia segnalazione all'Autorità</li><li>• Cambia password</li></ul>

**B) Check requests status**

**C) Questions**



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# A user friendly system/3

Fig. 3: Informazioni generali sull'intervento

Informazioni quantitative sull'intervento					
		Zona climatica - Destinazione d'uso dell'edificio	Impianto di riscaldamento alimentato a		
Seleziona il valore dei parametri da utilizzare per il calcolo e premi il tasto "Aggiungi" per inserire una nuova combinazione		A, B Abitazioni	gas		AGGIUNGI
<b>Si ricorda che per la richiesta in oggetto il periodo di riferimento su cui vengono calcolati i risparmi indicati nel seguito è pari ad un semestre.</b>					
3.1	3.2	3.3	3.4	3.5	3.6
Superficie di vetro sostituita [m <sup>2</sup> ]	Zona climatica - Destinazione d'uso dell'edificio	Impianto di riscaldamento alimentato a	Risparmio Specifico lordo annuo [tep/anno/m <sup>2</sup> ]	Coefficiente	Risparmio netto conseguito [tep]
s			RSL	a	
30000	A, B Abitazioni	gas	.002	100%	30
					Calcola Tutti
3.7 Risparmio totale netto conseguito [tep]					30
3.8 Eventuale risparmio aggiuntivo riconosciuto per campagna di supporto [tep]					1.5
3.9 Risparmio totale netto di cui si richiede la verifica e certificazione [tep]					32





# Does it work?

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◆ **Positive results in the first 10 months of operation**

◆ **Key design issues:**

- **graduality** in implementation
- **credibility and transparency** of the policy approach
- **simplicity and thoroughness** of rules and guidelines
- sufficient degree of **flexibility** for market actors to meet their goals



# Contacts

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