

JRC Workshop on White Certificates, Utility and Supplier Obligations

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Distributor obligations and White Certificates in Italy

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(AEEG) - Italy



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Major steps of the scheme

- ◆ **Legislative framework** introduced in **2001** (energy efficiency obligation on distributors in 1999 and 2000)
- ◆ **Regulatory framework** developed throughout **2002-2004** via consultation of all interested parties
- ◆ Limited revision of the legislative framework in **2004**
- ◆ **Fully operational** since **January 2005**
- ◆ **Extended and revised** in **late 2007**



“Model of Governance”

◆ Government:

- **targets**
- **obliged parties** (including apportionment rules)
- **eligible parties**
- **eligible measures**
- **some M&V rules**, i.e.: *ex-post* accreditation for a conventional lifetime
- **trading ‘routes’**
- **enforcement mechanism**: general criteria for setting the penalty, grace period
- **cost-recovery**: general principle(s)
- **responsibilities** regarding the definition of the implementing regulation, the administration of the system, the monitoring of results



“Model of Governance”/2

◆ Regulator (AEEG):

- technical rules for **projects design, development and evaluation**
- technical rules for the **issuing of EECs** (e.g. how many types, unit, lifetime)
- technical rules for the **functioning of the EECs market** (jointly with the Electricity Market Operator)
- definition of sanctions for non compliance
- criteria and rules for cost-recovery
- day to day administration, e.g. project evaluation and certification of energy savings; annual compliance check with the targets and EECs redemption
- monitoring of results and proposals to the Government: publishes an *Annual Report* on the results delivered by the mechanism with proposals to improve its effectiveness



Key and Distinctive Features/1

- ◆ **Demand driver: annual primary energy saving targets on (major) electricity and natural gas distributors**
- ◆ **Supply-side: fully open-ended but banded obligation; only “hard” measures; early actions; eligible parties include “energy service providers” and companies controlled by DNO**
- ◆ **Ex-post accreditation of annual savings + conventional 5 year lifetime (→ relative stringency of the EEO when comparing with other countries experiences)**
- ◆ **Strong additionality rule (M&V of energy savings: baseline setting and regular updates)**



Key and Distinctive Features/2

- ◆ **Trading**: central element; **no authorisation** needed; spot market + OTC; **electronic Registry**, directly linked with the **AEEG information system** for administering projects evaluation; **electronic trading platform**; **specific rules and procedures** to guarantee access, transparency, security of market deals, market liquidity, etc.
- ◆ **Cost-recovery mechanism**: no “pass-through” but standard allowed cost (efficiency goal); eligible costs, up to the occurrence of the target, including purchasing costs for TEE (trading development); technology-neutral (efficiency goal)
- ◆ **Penalty system**: no pre-defined penalty; grace period



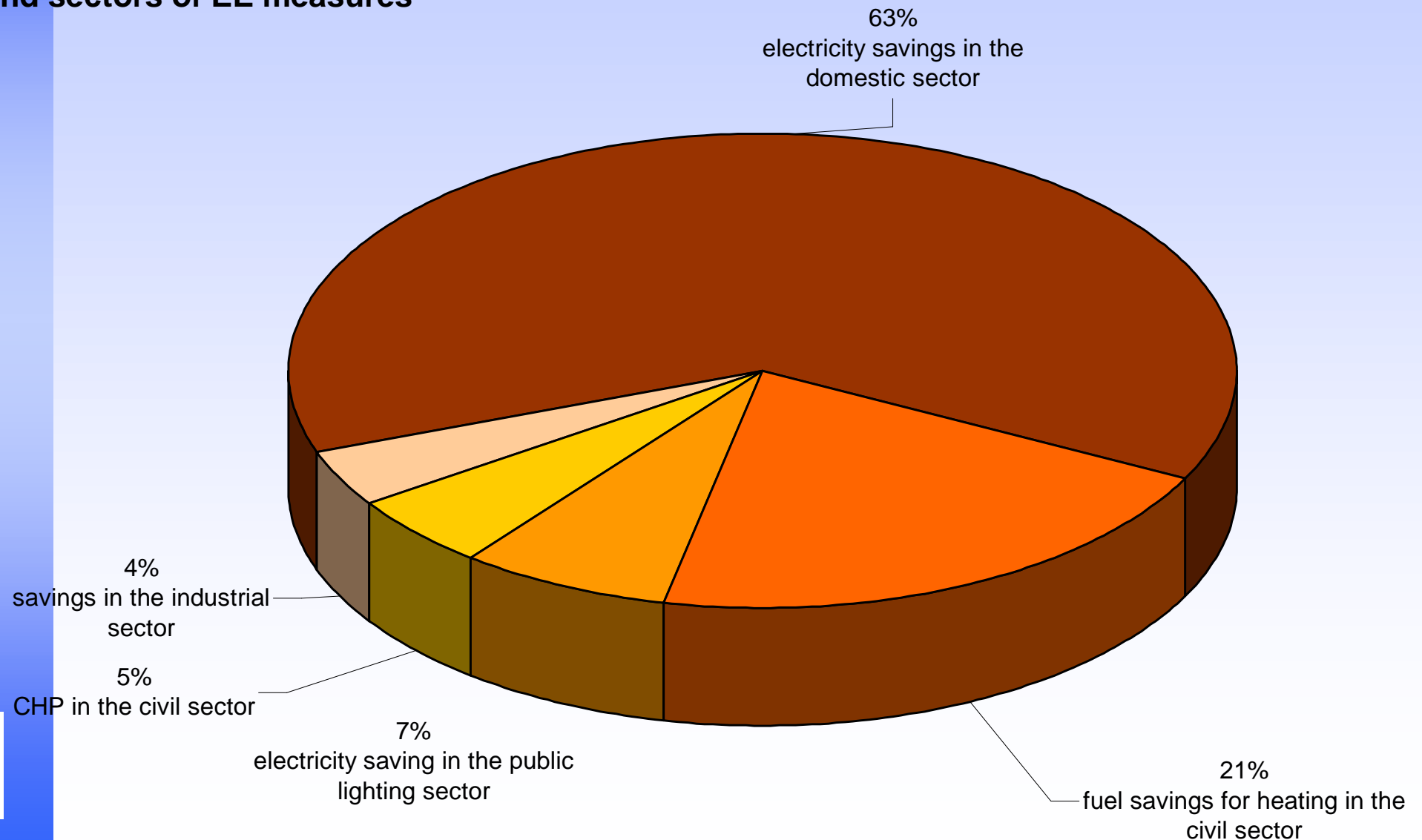
Results achieved: 2005-2007

- ◆ **2 million toe saved against a target of 1,1 million toe:**
 - **78% electricity savings; 18% natural gas savings; 4% other fuels savings**
 - **90% of savings delivered via projects for which simplified M&V methodologies exists (mostly deemed savings)**
 - **75% of savings delivered by energy service providers (including ESCOs)**
 - **significant trading, mostly OTC**
 - **growing number of information campaigns and training programs**



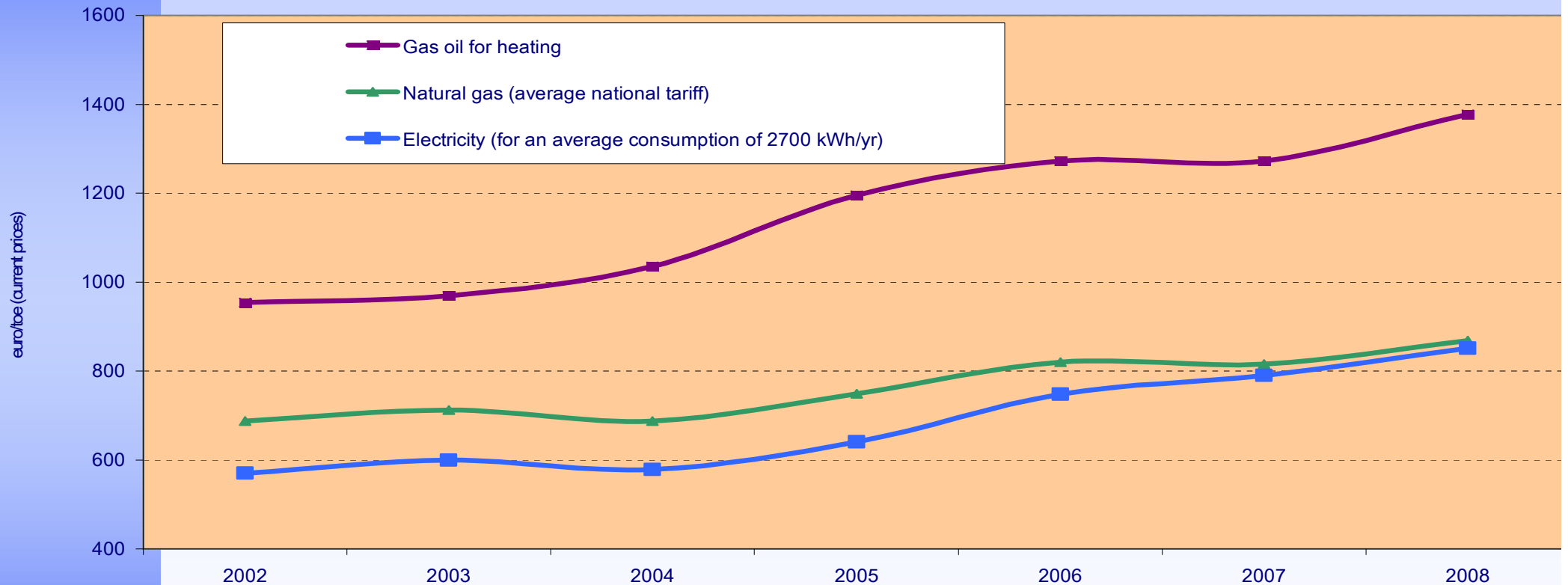
Breakdown of certified savings

Types and sectors of EE measures



Avoided energy costs for participating customers

Value of saved energy for domestic users (taxes included)



cf. tariff contribution = 100 euro/toe → large “private” economic gains



Major Design Changes

**Introduced at the end of 2007 - early 2008
and gradually implemented from 2008**

- ◆ **Targets:** last two years of the first phase + new targets for the second phase + apportionment rules
- ◆ **Obligated parties:** threshold + reference year
- ◆ **Supply-side:** “nature” of the obligation + eligible parties
- ◆ **Trading regulation**
- ◆ **Penalty system**



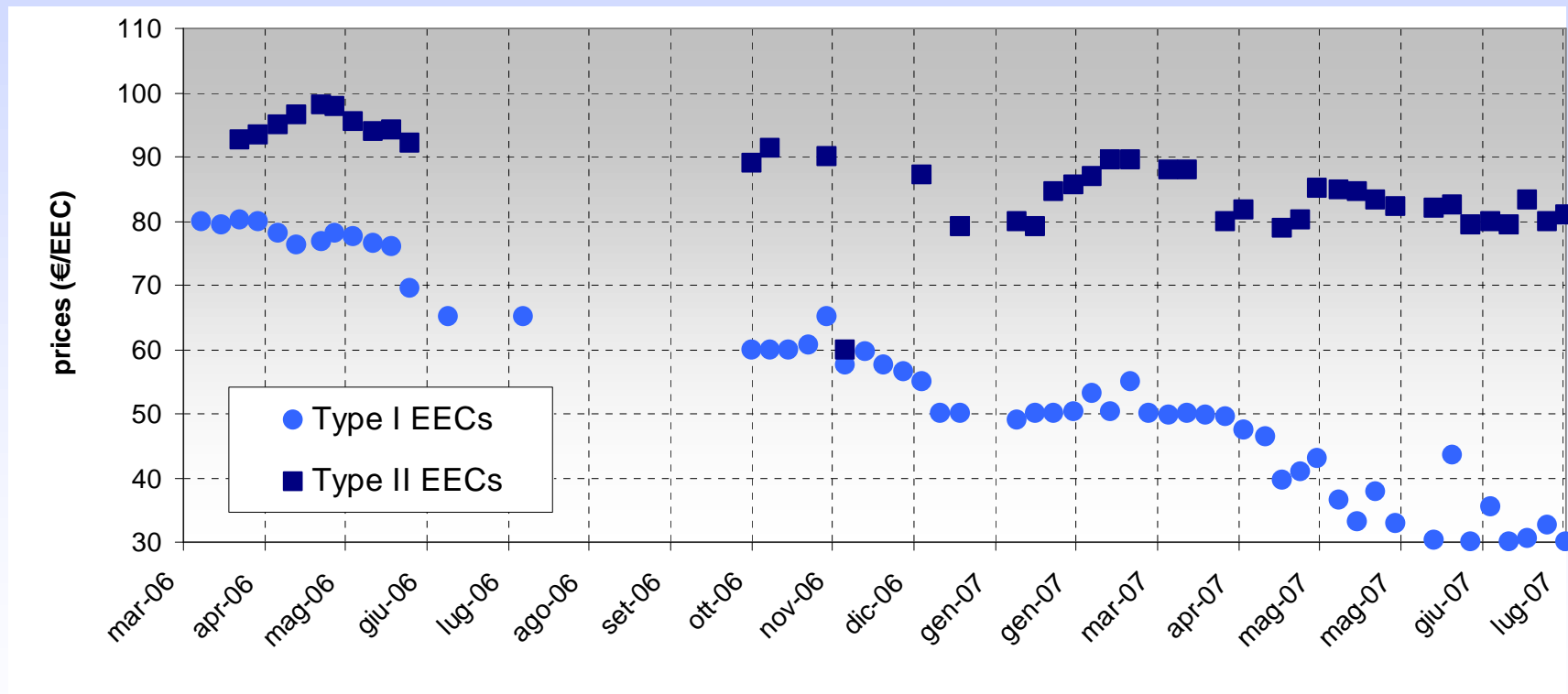


**Why changing something that is
working well? (Is it?)**



Spot market prices

- **53%** in the second year for type I TEE (electricity savings)
and **-11%** for type II TEE (natural gas savings)



decreasing trend in OTC too, although less marked

➔ **Risk of windfall profits for obliged distributors**



Possible explanations

- ◆ **Apportionment rules; early actions; M&V rules** (e.g. baseline setting)

Dropping market prices with banking and increasing annual targets?!

- ◆ **Lack of confidence on the penalty system** (too complex)
- ◆ **Lack of targets for the post-2009 period**
- ◆ **Market structure on both the demand-side** (market power?) and the **supply-side** (small, financially ‘weak’ actors with short term strategies)



The key role of the market

- ◆ **Importance of the market component: price signals key to highlight market disequilibrium and the need for corrective legislative and regulatory measures**
- ➔ **Need to increase market transparency ... but prevalence of OTC trading (possibly driven by the opportunity to conclude forward contracts and/or to buy large quantities of certificates in one shot with bilateral contracts)**



Major Design Changes

**Introduced at the end of 2007-early 2008
gradually implemented from 2008**

- ◆ **Targets:** last two years of the first phase (2008 and 2009) + new target for the second phase (2010-2012) + apportionment rules + automatic adjustment mechanism in case of over-supply (>5%)
- ◆ **Obligated parties:** threshold + reference year
- ◆ **Supply-side:** from a banded to an un-banded obligation + access to the market extended to new actors
- ◆ **Penalty system:** grace period (length and benchmark)
- ◆ **Banking:** extended to the end of the second phase



A first example of positive impact/1

- increased number of obligated parties + removal of the “50% constraint” and consequent unification of the TEE market (demand-side)
 - **increased competition (decreased concentration) on the demand-side**



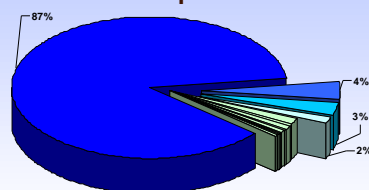
A first example of positive impact/2

Herfindahl-Hirschman Index applied to the demand-side of the TEE market from 2005 to 2009

Settore	2005	2006	2007	2008	2009
Electricity	81%	78%	79%	24%	24%
Natural gas	15%	16%	16%		

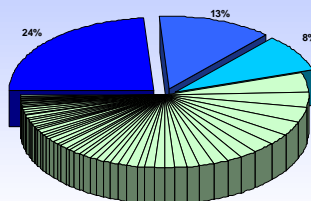
Struttura della domanda se ci fosse ancora il vincolo del 50%

TEE tipo I



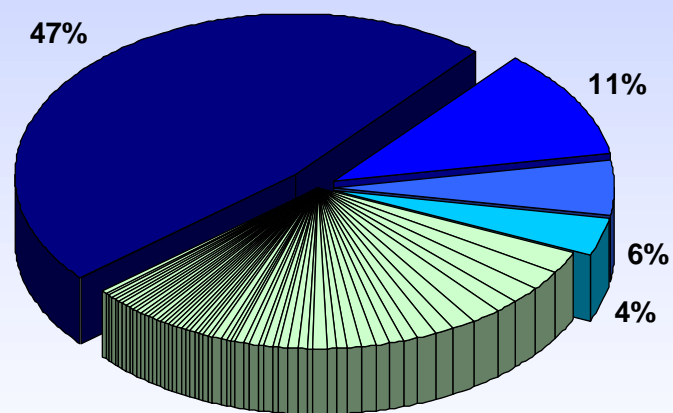
14 distributori elettrici obbligati di cui 11 con percentuali inferiori al 3%

TEE tipo II



61 distributori GAS obbligati di cui 58 con percentuali inferiori al 5%

Struttura effettiva della domanda di TEE nel 2008

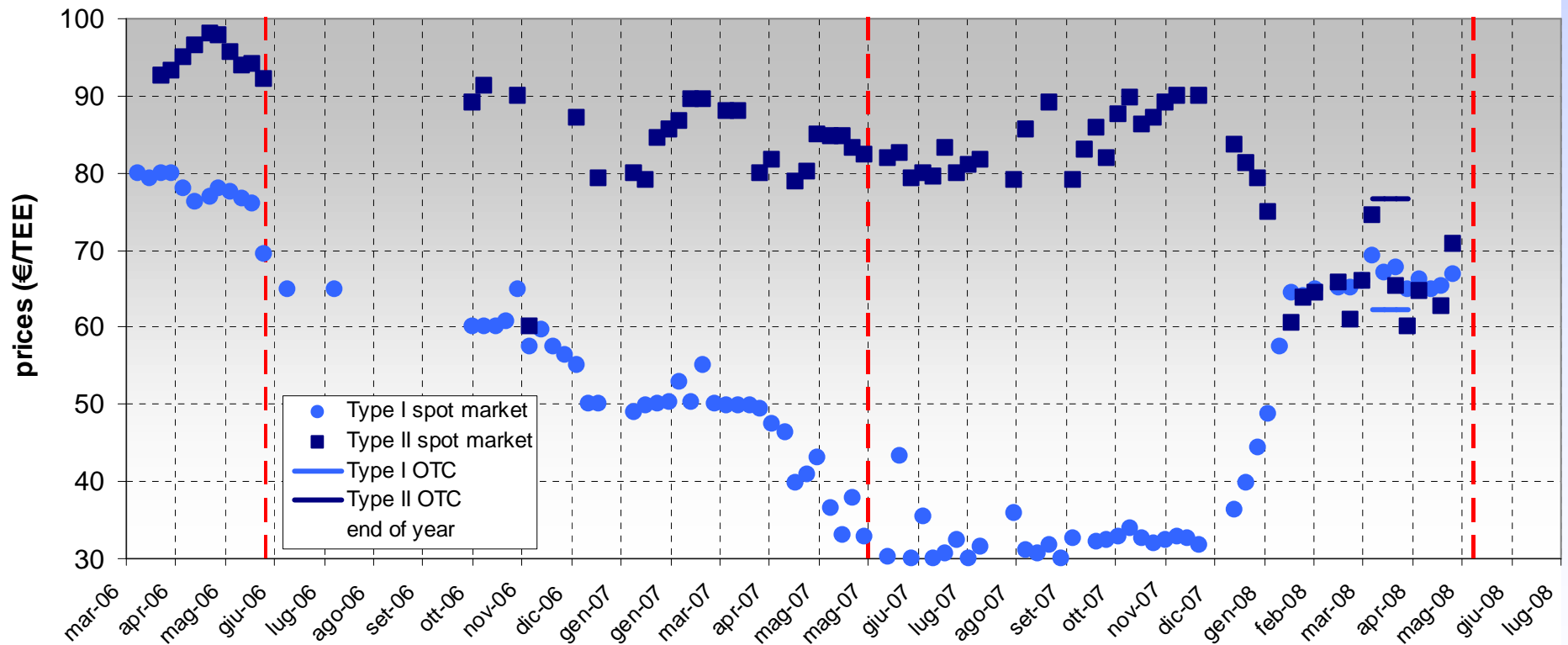


Major Regulatory Measures

- ◆ **Updating** of deemed savings
- ◆ **Updating** of the conversion factor kWh saved/toe used throughout the system
- ◆ **Updating** of the unitary tariff contribution
- ◆ **On-site audits**
- ◆ **Introduction of minimum product and project requirements**
- ◆ **Regulation for price transparency in OTC trading**
- ◆ **Mandatory registration for OTC contracts**



The market does reacts!



Further changes

Recently introduced and already implemented:

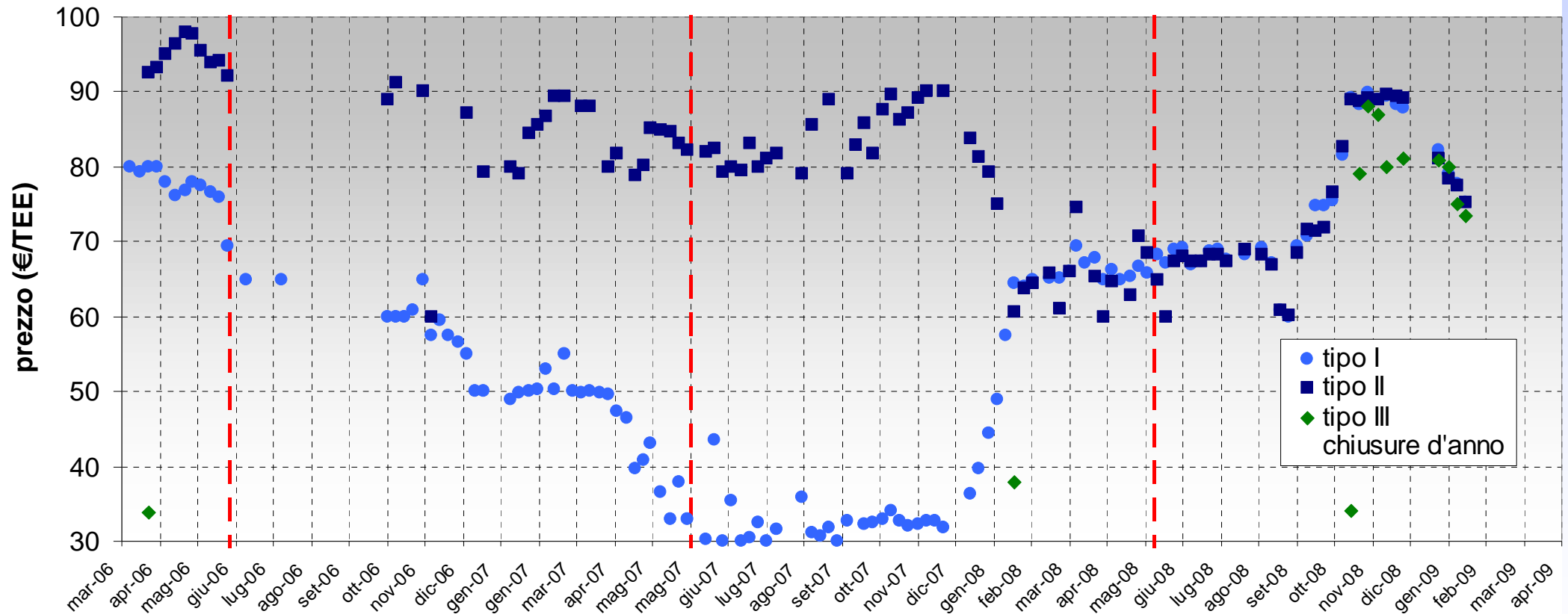
- ◆ **Cost recovery mechanism:** extension of its scope (cf. following graph)
- ◆ **Model of governance:** day-to-day administration and technical regulation (deemed savings) to a technical agency (ENEA) with AEEG focusing on regulation and monitoring

Announced (cf. d.lgs n. 115/08 implementing Directive 32/2006/CE):

- ◆ **Targets? Obligated parties? Eligible projects?**



And the market reacts again ...



Major remaining challenges

- ◆ **If you choose a market instrument, leave the market work without (deliberately) distorting market forces**
- ◆ **Promotion of investments also in technologies with long lasting effects**
- ◆ **Need for:**
 - market studies and statistics to help identify and monitor the technological baseline and to give incentives where they are more needed
 - complementary policy tools e.g. energy labels and minimum energy efficiency requirements
 - complementary, structural initiatives to facilitate consumers access to information as well as to credit
 - policy coordination in order to avoid over-incentives
- ◆ **Look for a balance between apparently conflicting policy goals (es.: economic efficiency vs integrity of the system)**
- ◆ **+ cf. tomorrow panel discussion?**



References

In Italian:

- ◆ www.autorita.energia.it/ee/index.htm (including the first three *Annual Report on the White Certificates Mechanism*)

In English:

- ◆ Pavan M. (2008) – *Tradable energy efficiency certificates: the Italian experience*, in *Energy Efficiency (2008) I: 257-266*, Springer Ed.
- ◆ Pavan M. (2007) – *Not just energy savings: emerging regulatory challenges from the implementation of tradable white certificates*, in *Proceedings of the 2007 ACEEE Summer Study on Energy Efficiency in Buildings*
- ◆ Pavan M. (2006) – *New trends in energy regulation: the integration of command and control approaches, tariff regulation and artificial markets for demand-side resources* in *Proceedings of the 2007 Conference of the International Association of Energy Economists (IEAEE)*, Postdam, Germany



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