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# 20 Years of Energy Provider Delivered Energy Efficiency in Europe

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- Summary of key principles for EU Energy Efficiency Obligations (EEOs) on Energy Providers (White Certificate Schemes)
- Brief history & snapshot of EU EEOs
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# How do EU EE Obligations Work?

- Energy retailer/distributor has obligation to save energy in customers' premises/homes; target related to “volume” of energy supplied/distributed + financial penalties if fail to meet energy savings target
- Projects with large energy users can “afford” to have energy saving measures monitored for actual savings achieved
- For small energy users – need simple approach to keep M&V costs down – use “approved” measures with independently established energy saving values (known as deemed or ex ante savings)
- Monitoring and verification is a “measure count” + random audit of submitted claims for energy savings; N.B. M&V system must be in place prior to the start

# How are they delivered?

- Mainly by bilateral contracts between obligated energy provider and an energy efficiency market actor e.g. insulation company, retailer of appliances, manufacturers, heating installers
- In Italian & French White Certificate schemes, accredited parties (not just the obliged energy providers) can earn WCs and these can be subsequently traded
- Only in Italy has there been significant generation and trading of WCs generated by non obligated parties
- All signal to EE industry a long term commitment

# Brief History of EU EEOs

- Started in GB in 1994 on electricity companies with responsibilities for distribution and retail
- Started in natural gas in GB in 2000
- Danish extended to district heating in 2000
- From 2002, increasingly operating in a liberalised market with retail and distribution functions separated
- Around 2006 extended to oil & LPG used for heating
- Evaluations of 4 countries in 2010 showed cost of saving energy <25% of residential retail price (ex taxes)
- France in 2011 pioneering EEOs on the importers of road transport fuel

# EEOs in the EU (2011)

<b>Country</b>	<b>Obligated Energy Provider</b>	<b>Eligible Customers</b>	<b>Administrator</b>
Belgium - Flanders	electricity distributors	residential and non energy intensive industry and service	Flemish Government
France	retailers of non-transport energy + importers of road transport fuel	All (including transport) except EU ETS	Government
Italy	electricity & gas distributors	All including transport	Regulator (AEEG)
GB	electricity & gas retailers	Residential only	Regulator (Ofgem)
Denmark	electricity, gas, fuel oil & heat distributors	All except transport	Danish Energy Authority

# EEOs in the EU (2011)

Country	Nature of saving target	Current size of target	Estimated annual spend by energy providers €M {€/person}
Belgium – Flanders	1 <sup>st</sup> year primary energy	0.6 TWh annual	60 {14}
France	lifetime delivered energy	345 cumac TWh over 3 years to end 2013	340 {5}
Italy	cumulative 5 year primary energy*	5.3 Mtoe in 2011	530 {9}
GB	lifetime CO2	293 MtCO2 in 4.75 years to end 2012	1440 {24}
Denmark	1 <sup>st</sup> year delivered energy*	6.1 PJ annual	100 {18}

\* With weighting factors for longer lived measures

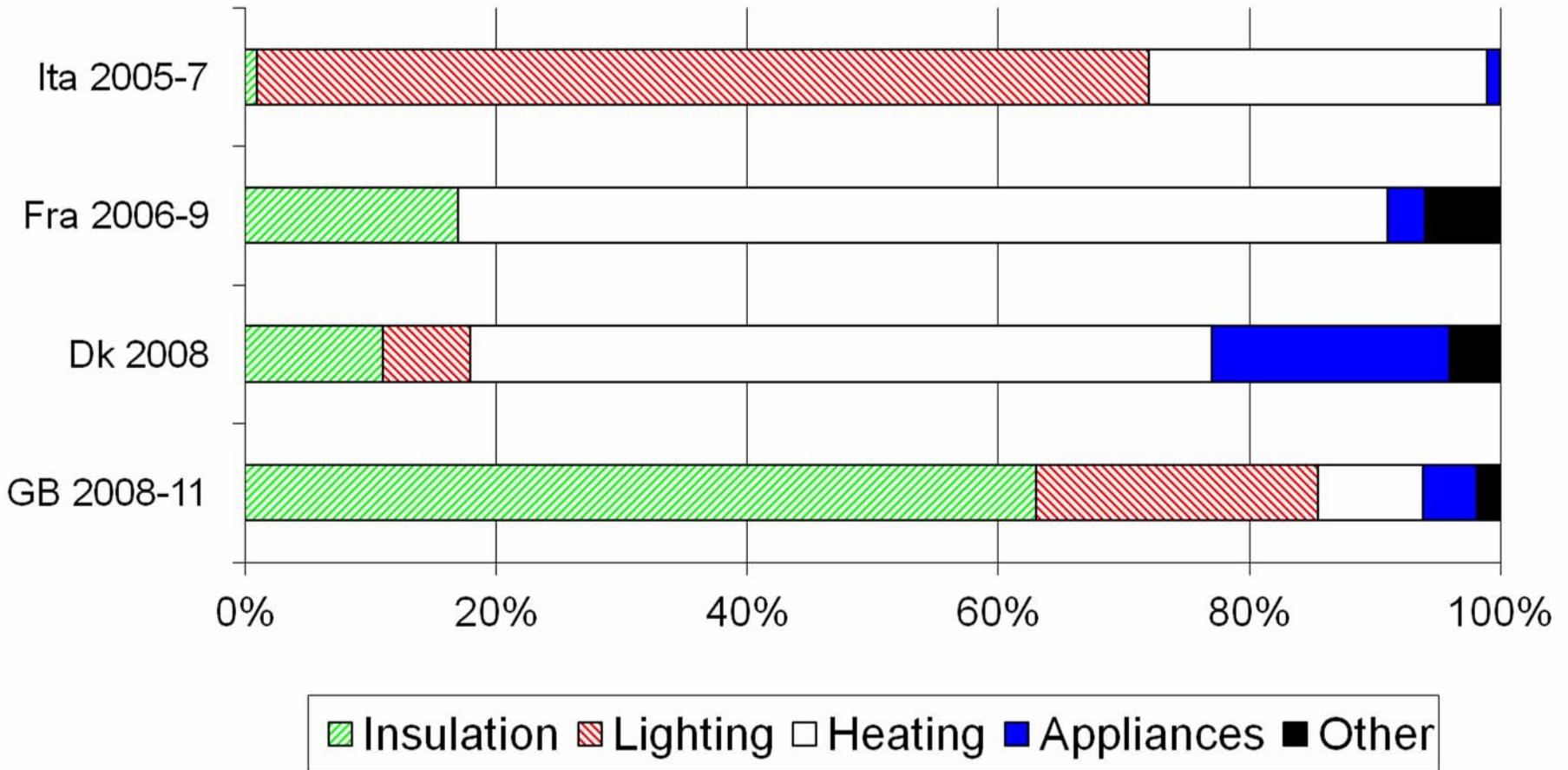
1€ = 4.1 Zlotys

# Most EEO Activity in Residential Sector

<b>Country</b>	<b>Period</b>	<b>% energy savings from residential sector</b>
Belgium - Flanders	2010	58% (mandated)
Denmark	2008	42%
France	2006-9	87%
Italy	2010	76%
GB	2008-12	100% (mandated)

# EU EEOs– where savings come from?

## Residential Energy Savings by End-use



# Observations on EEOs in the EU

- Different targets, different end use sectors covered, different obliged actors - reflect local status of energy market, EE history of the energy providers, climate, energy saving opportunities, culture etc.
- Goals set fairly low, and been achieved at costs below policy makers' expectations; energy providers now spending >\$2.5 billion/year; in over 50 operational years experience of EU EEOs, no energy provider failed to meet it's overall energy saving target
- Function in both liberalised energy markets and also where they target monopolistic segments; all need continuous updating & quality standards

# EU Energy Efficiency Directive (EED)

- Article 7 states “Each Member State shall set up an energy efficiency obligation scheme.... achieving new savings each year from 1 January 2014 to 31 December 2020 of 1,5 % of the annual energy sales to final customers”
- Article 7 paragraph 9 states” As an alternative .... MSs may opt to take other **policy** measures to achieve energy savings among final customers, **provided those policy measures meet the criteria** ” i.e. equivalent methods of determining energy savings as with EEOs
- Article 7 paragraph 7(c) “allow obligated parties to count savings obtained in a given year as if they had instead been obtained in ... **three** following years” i.e. count 2021, 2022 and 2023 energy savings but only savings from EEOs

# Conclusions on EU EEOs

- Adapting to local conditions is key for EEOs
- MSs with EEOs have evaluated their programmes and expanded them in recent times;
- New EU EED encourages establishment of EEO schemes and may “reward” them (?)
- EEOs avoid Governments having to use public expenditure to stimulate EE – relevant to the current financial problems facing many Governments