

# A new Directive on Energy Efficiency

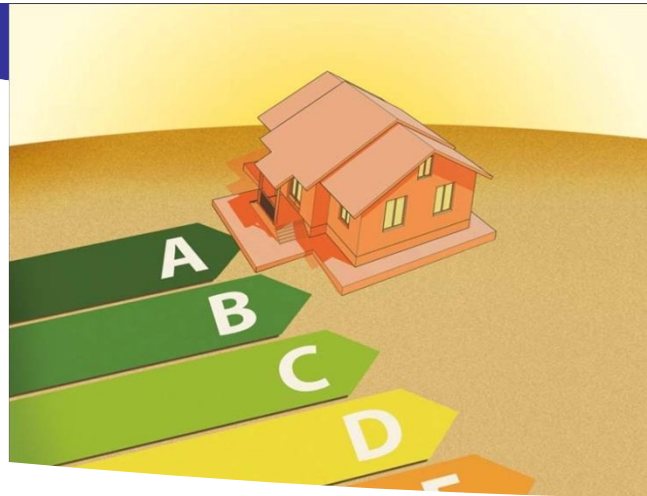
## Committee of Regions- Cecodhas

### Brussels, 12 September 2011

Directorate-General  
for Energy



Eva Hoos  
DG ENER C.3 Energy Efficiency & Intelligent Energy  
European Commission



## A new Directive on Energy Efficiency:

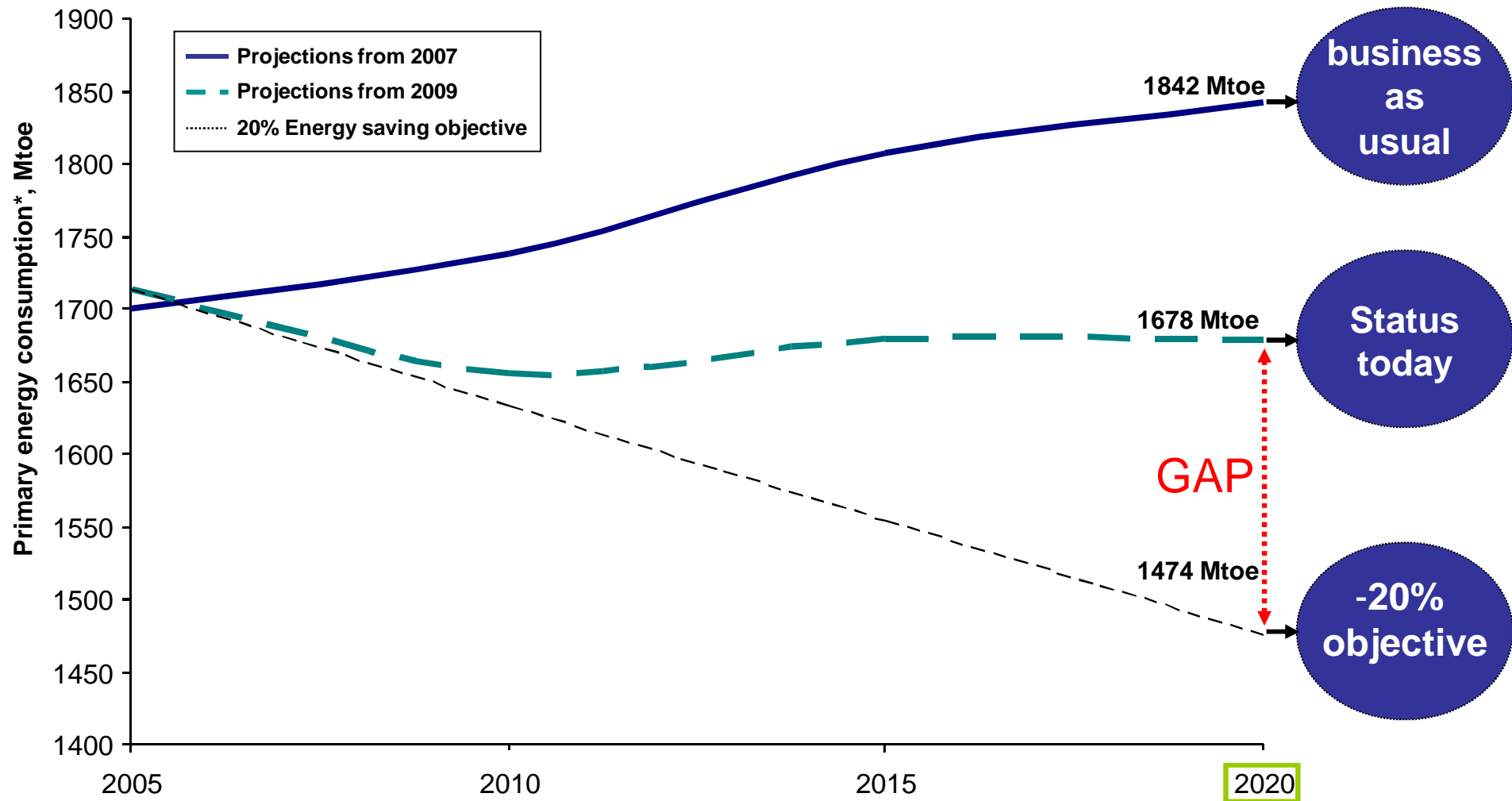
- objective
- scope and
- main elements

Directorate-General  
for Energy



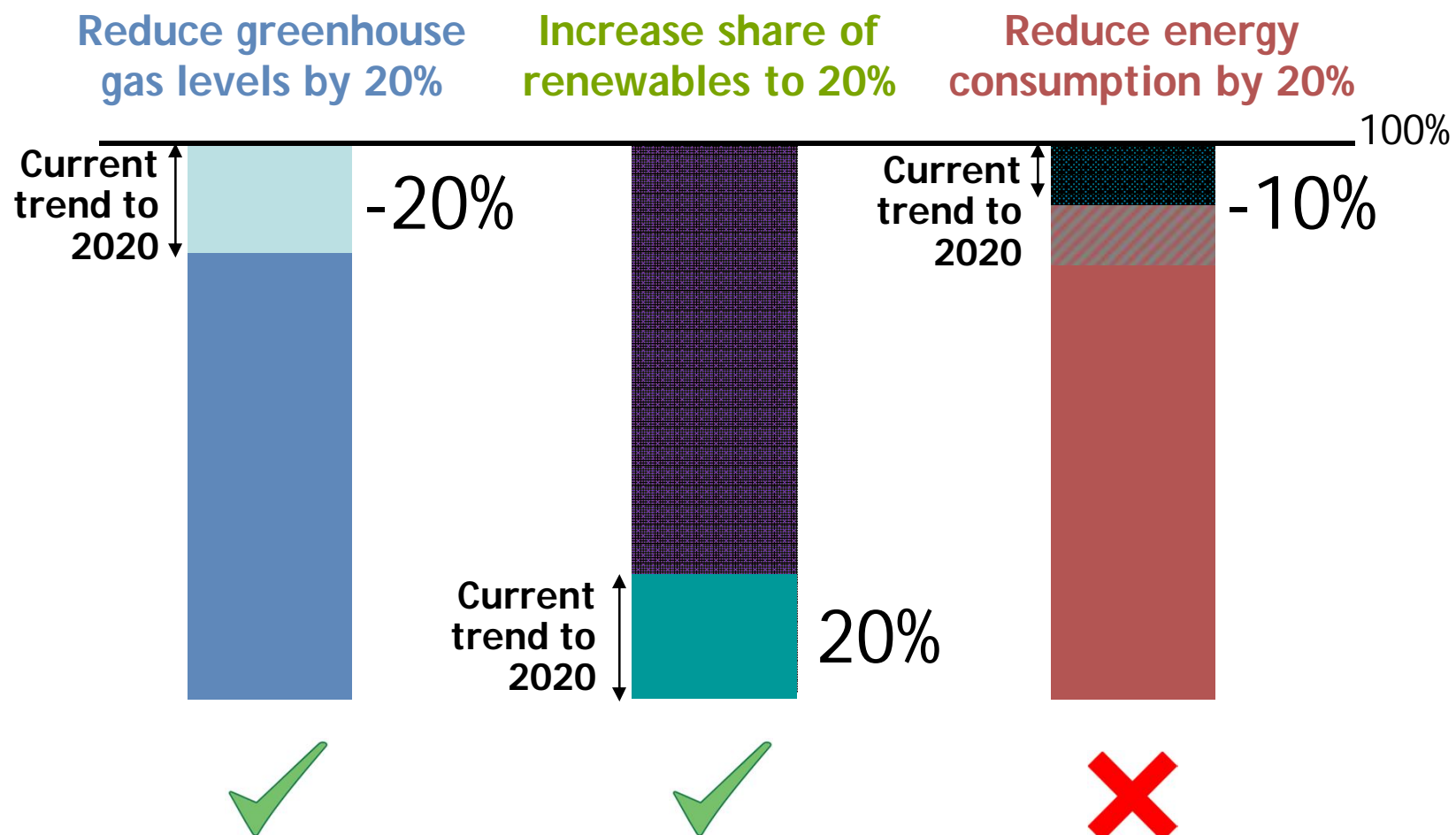
Unit C.3 (Energy efficiency & Intelligent energy)  
DG Energy. European Commission

## SO FAR THE EU IS NOT ON TRACK TO MEET ITS 20% ENERGY SAVING TARGET BY 2020



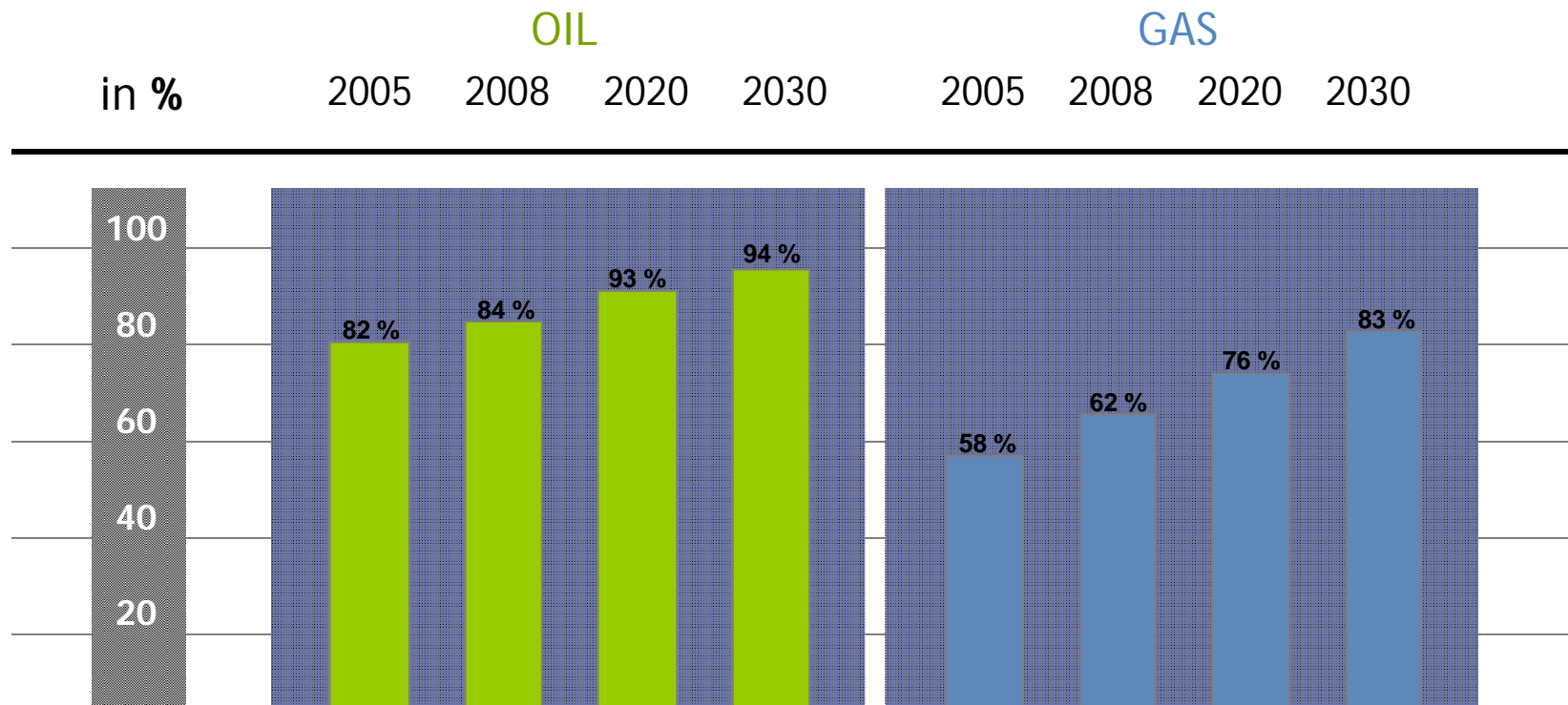
\* Gross inland consumption minus non-energy uses

## MEETING ALL THREE “20-20-20 BY 2020” GOALS BECOMES A MATTER OF URGENCY



## AS DEPENDENCE ON ENERGY IMPORTS IS LIKELY TO GROW

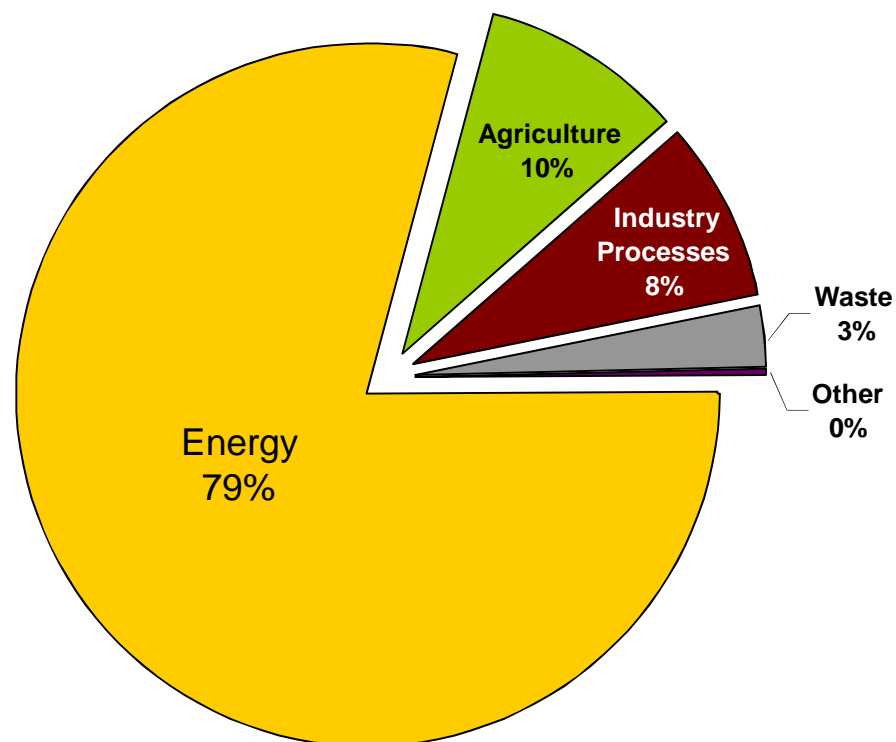
« Business as usual » scenario based on 2009 figures



Today, Europe imports more than half of the energy it uses. If nothing changes, our dependence on fossil fuel imports will rise by 2030.

## AND ENERGY USE IS A MAJOR SOURCE OF EMISSIONS

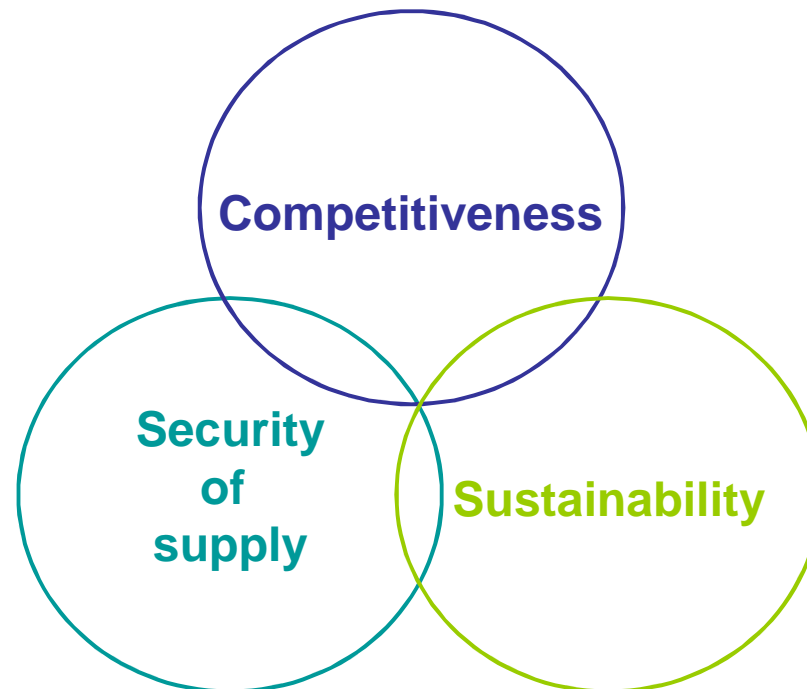
### Share of greenhouse gas emissions in 2008



The use of energy is responsible for the majority of greenhouse gas emissions, with the energy sector representing 31%, transport 19%, industry 13%, households 9% and others 7%.

## DESPITE ITS CRUCIAL BENEFITS FOR EUROPE ...

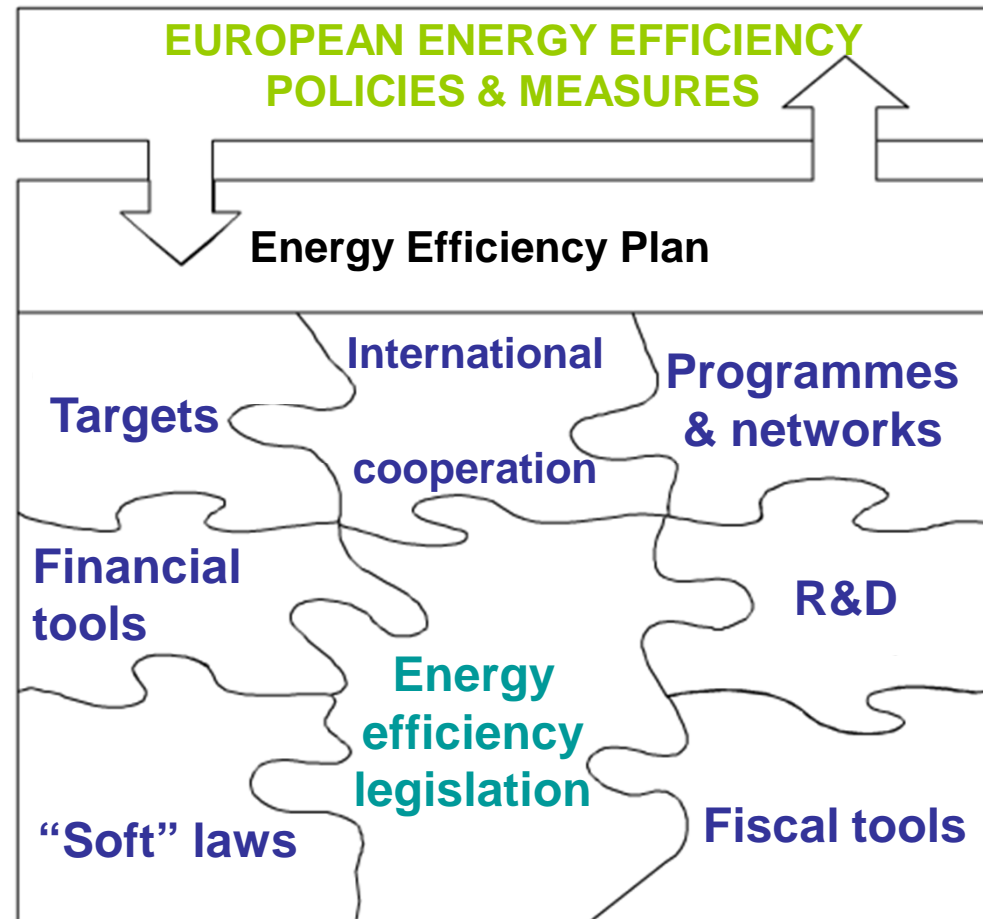
- ↓ Reduce EU's energy bill by about €200 bn annually in 2020
- ↑ Create up to 2 million new jobs by 2020
- ↑ Boost R&D & markets for EU global leadership



- ↓ Reduce EU's energy dependence
- ↓ Reduce investments in energy infrastructures
- ↑ Improve the energy trade balance

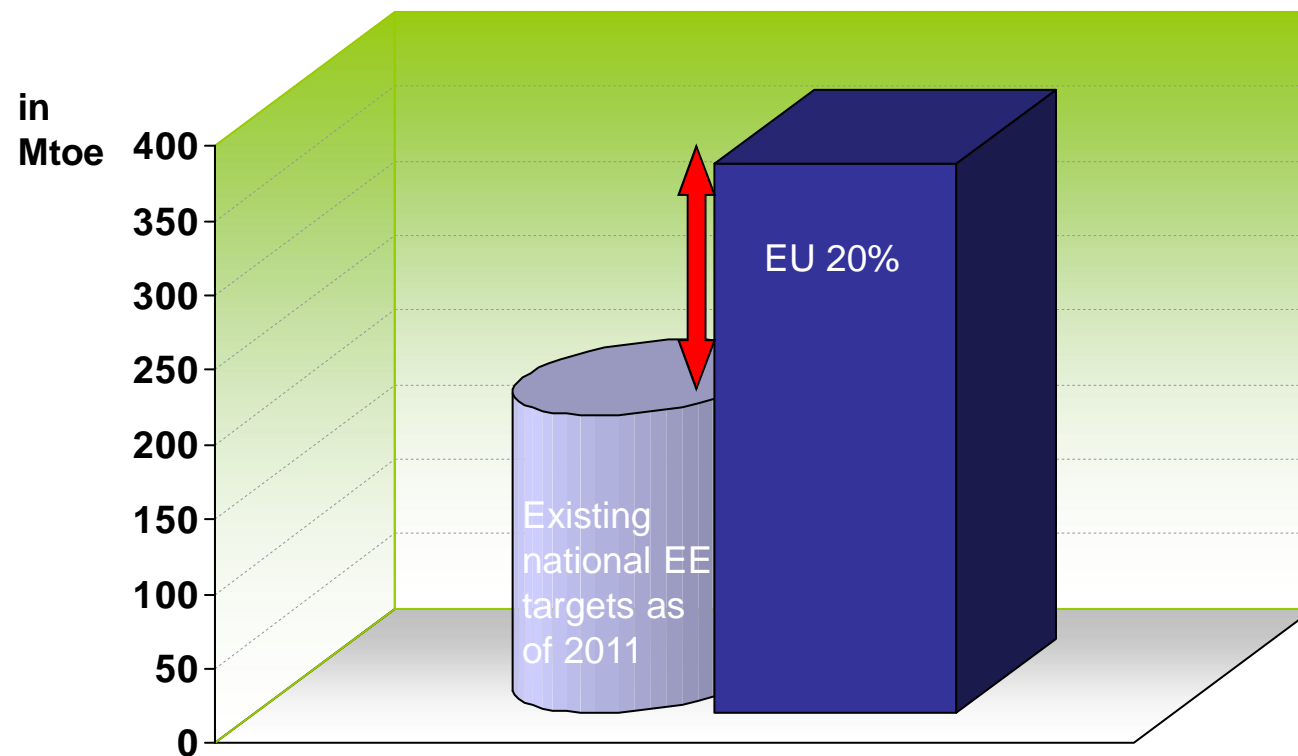
- ↓ Reduce CO<sub>2</sub> emissions
- ↓ Limit environmental degradation

**AND THE COMPREHENSIVE SET OF EUROPEAN POLICIES & MEASURES IN PLACE TO ADDRESS ENERGY EFFICIENCY IN ALL ITS ASPECTS**

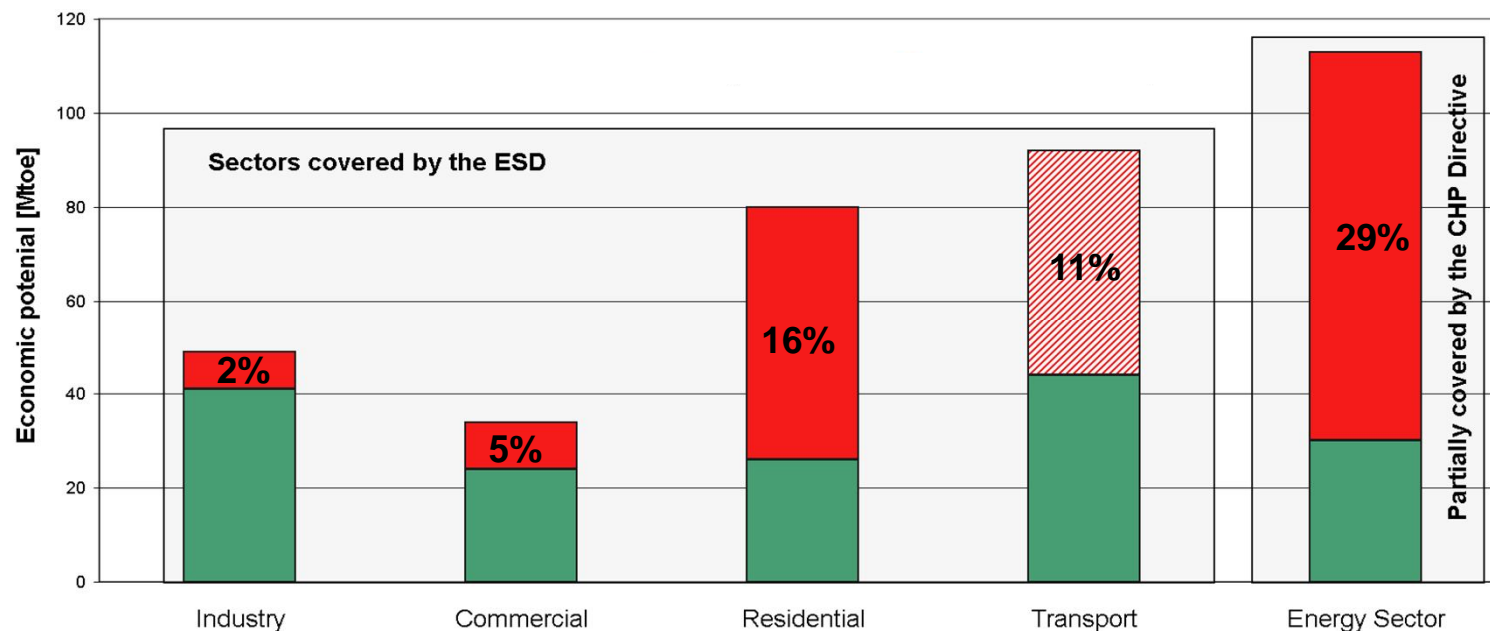
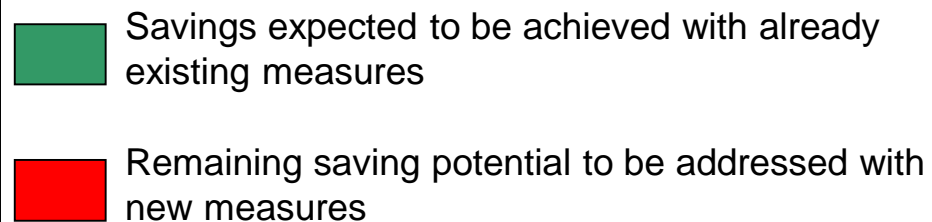




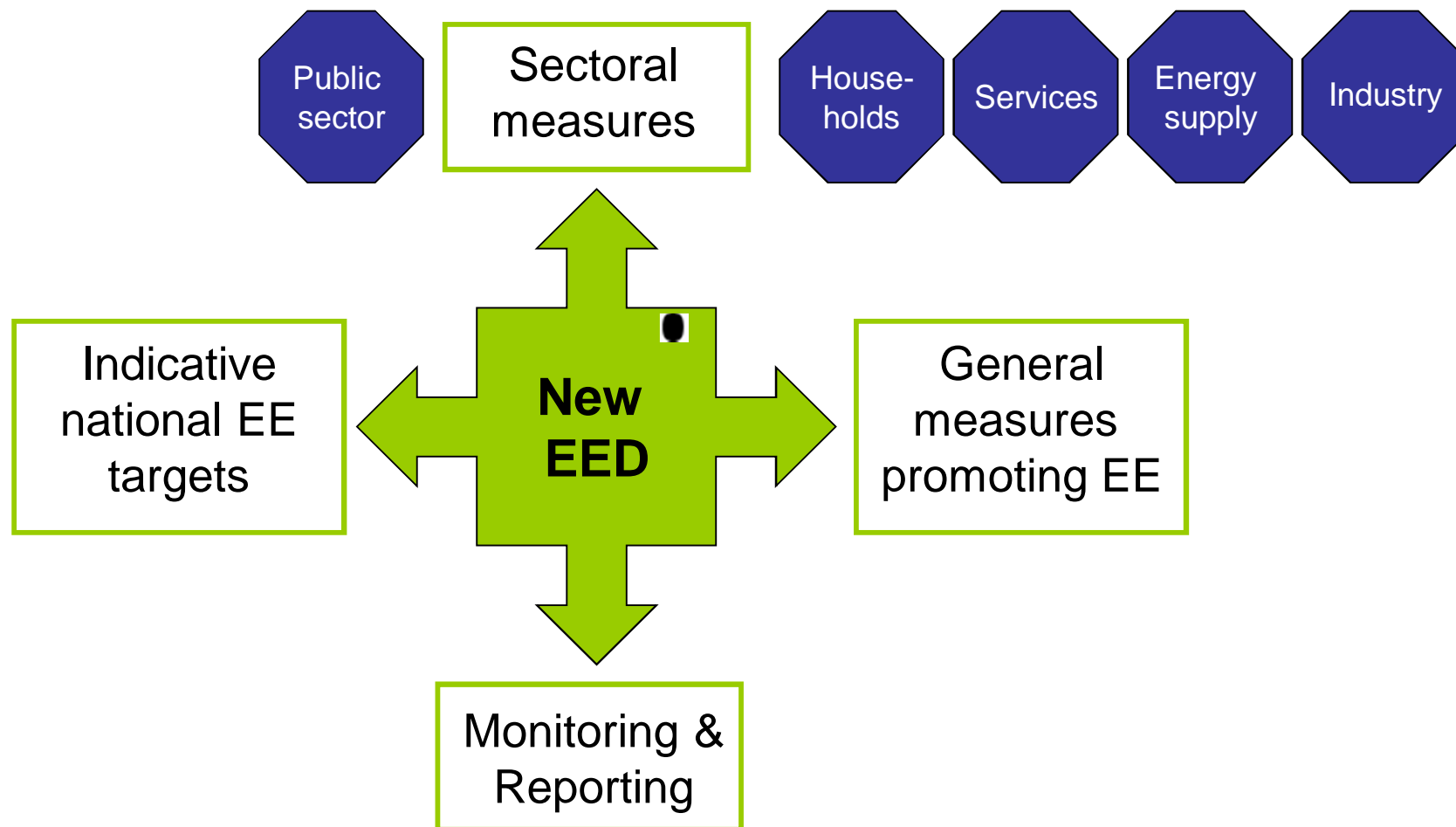
## COMBINED WITH NATIONAL INTENTIONS WILL NOT SUFFICE



## TO TAP THE REMAINING ECONOMIC ENERGY SAVING POTENTIALS FOR 2020 THROUGHOUT THE SECTORS



## A NEW IMPETUS IS NEEDED: COMMISSION PUTS FORWARD A NEW ENERGY EFFICIENCY DIRECTIVE

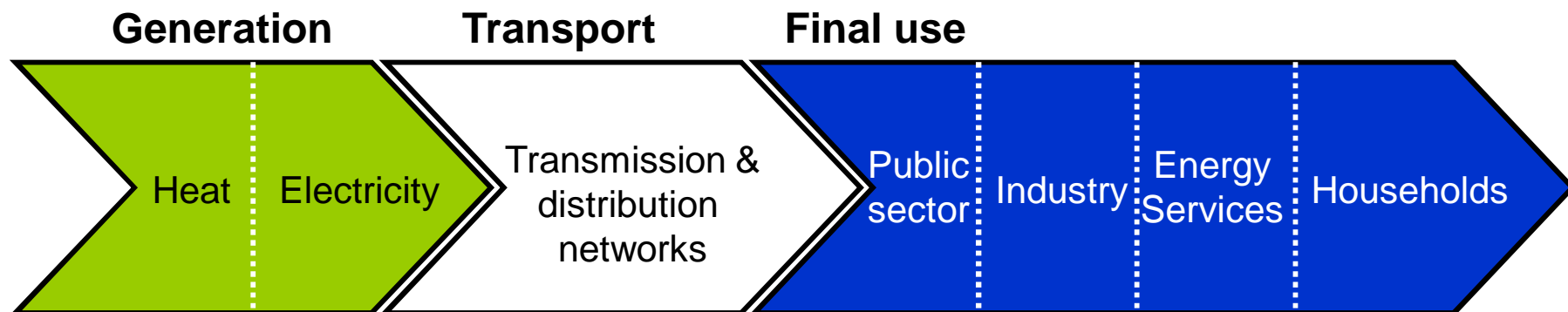


## SETTING TARGETS, SECTORAL MEASURES, HORIZONTAL MEASURES, AS WELL AS THROUGH MONITORING

### 1. INDICATIVE NATIONAL ENERGY EFFICIENCY TARGETS (chapter 1)

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### 2. SECTORAL MEASURES: ENERGY SUPPLY & DEMAND (chapter 2 - 3)





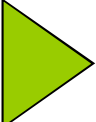



### 3. HORIZONTAL MEASURES (chapter 4)

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### 4. REVIEW & MONITORING (chapter 5)

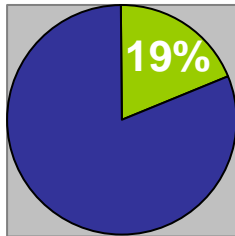
**SETTING TARGETS: The legislative proposal implements the 2-step approach set in the Energy Efficiency Plan (March 2011)  
(Art. 3)**

STEP 1: 2011/12	STEP 2: June 2014
 <b>MS set a national energy efficiency target for 2020 (Art. 3)</b>	 <b>COM assesses progress achieved towards 20% objective</b>
 <b>expressed as absolute level of primary energy consumption</b>	 <b>Taking into account the sum of the national targets</b>
 <b>taking into account:</b>	 <b>If 20% unlikely to be achieved: Binding national targets</b>

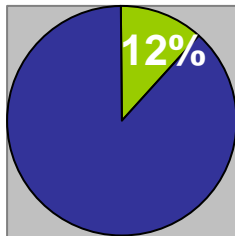
- Overarching EU 20% target
- measures provided for in this Directive
- measures adopted to reach the national energy saving targets in the ESD
- other measures at national and EU level

## PUBLIC SECTOR TO LEAD BY EXAMPLE

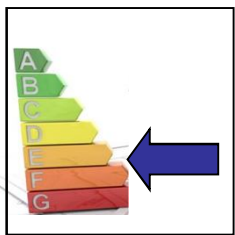
### Status



- Public sector consumption makes important share of EU's GDP



- Share of public buildings in building stock



- Low average energy performance of existing buildings stock, incl. public buildings



- Cost optimal renovation can bring up to 60% energy savings

### EED proposals

- Purchase of **products, services & buildings** with **high energy efficiency standards**
- Annual **renovation target of 3% for public buildings above 250 m<sup>2</sup>**
- Local energy **efficiency plans** and introduction of **energy management systems**
- More **systematic use of Energy Performance Contracting**

## SECTORAL MEASURES: ENERGY EFFICIENCY IN THE PUBLIC SECTOR

Buildings  
(Art.4)

EE Plans & EMS  
(Art.4)

Purchasing  
(Art.5)

- **As of 2014:**
  - Annual renovation of 3% of the total floor area of buildings over 250m<sup>2</sup> owned by public bodies to reach at least the national minimum energy performance requirements;
  - Inventory of owned buildings (information on floor area and energy performance).
- Promotion of energy efficiency plans and energy management systems among public bodies
- Purchase of products, services and buildings with high energy efficiency standards, as set in Annex III

# CREATING BENEFITS FOR CONSUMERS THROUGH THE PROVISION OF TAILORED ENERGY SERVICES AND INFORMATION

## Status



- Considerable saving potential unused in the residential and services sectors
- Slow uptake of market for energy efficiency services
- Lack of awareness & access to appropriate information on EE benefits
- Technological developments (e.g. smart meters/ grids) not sufficiently reflecting households interests

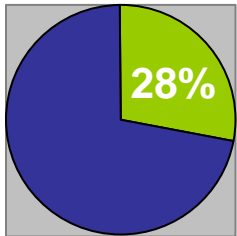
## EED proposals

- **National energy efficiency obligation** scheme for utilities
- **Obligation for individual energy meters**, reflecting actual energy consumption & information on actual time of use
- Ensure **accuracy & frequency** of **billing** based on **actual consumption**
- Appropriate information with the bill providing comprehensive account of current energy costs



# INCREASE AWARENESS FOR BENEFITS STEMMING FROM ENERGY EFFICIENCY IMPROVEMENTS IN INDUSTRY

## Status



- Important share in overall final energy consumption



- Considerable progress made but potential remaining



- Energy efficient technologies and EE best practices readily available

## EED proposals

- Member States to create incentives for SMEs to undergo energy audits
- Dissemination of best practices on benefits of energy management systems for SME businesses
- Mandatory audits for large companies & incentives for the implementation of recommended measures and the introduction of Energy Management Systems

## SECTORAL MEASURES: MEASURES TARGETING INDUSTRY & UTILITIES' INVOLVEMENT IN ENERGY EFFICIENCY SERVICES

### Energy Utilities (Art.6)

- **Energy efficiency obligation schemes** requiring energy distributors or retail energy sales companies to achieve among final customers annual savings of **1,5% of their energy sales**, by volume, in the previous year (possibility of alternative measures achieving the same amount of savings subject to COM acceptance)

### Large (> SME) enterprises (Art.7)

- **Mandatory energy audits** every three years and carried out in an independent manner (by 2014) (NB. Energy audits as part of energy management systems or voluntary agreements already fulfill this requirement)

### SME (Art.7)

- Promote availability to all final customers of affordable energy audits by independent qualified/accredited experts
- Encourage SMEs (& households) to undergo energy audits
- Best Practices exchange on effectiveness of energy management systems for SME business

## SECTORAL MEASURES: INDIVIDUAL METERS, INFORMATIVE BILLING & ACCESS TO CONSUMER DATA (Article 8)

### Individual meters for all final customers

- For **electricity, natural gas, DH&C & district-supplied domestic hot water**, reflecting **actual energy consumption & information on actual time of use**
- **Minimum functionalities of smart meters** to be set in line with energy efficiency objectives and final customer benefits
- Upon request, meter to account for electricity produced on the final customer's premises and exported to the grid

### Free & informative billing

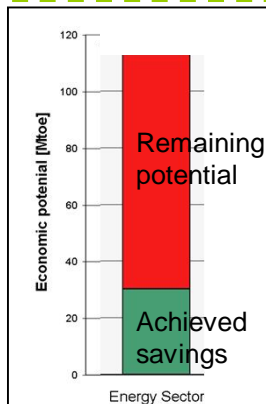
- **Ensure accuracy & frequency** of billing **based on actual consumption**, for all the sectors covered by this Directive
- Appropriate information with the bill providing customers with comprehensive account of current energy costs, also allowing detailed self-checks on historical consumption

### Access to metering & billing data

- Upon request, availability of metering data/ billing/ historical consumption to a third party (e.g. ESCO)

# IMPROVING ENERGY EFFICIENCY IN TRANSFORMATION AND DISTRIBUTION OF ENERGY

## Status



- Fragmented regulations & incentives to address waste across supply chain
- CHP uses 30% less fuel for the same amount of heat & power but level of use in EU low: **11% vs. 21%.**
- New generation installations not systematically reflecting level of Best Available Technologies

## EED proposals

- 10-year national heat & cooling plans: **transparency, predictability & alignment of policies** for investments
- **Waste heat recovery (CHP) obligation** for new and existing power & industrial plants
- **Network tariffs** design to encourage offering **services** for consumers **allowing them to save energy & control consumption**
- National annual inventories of generation installations to monitor efficiency levels

## SECTORAL MEASURES: INCREASING EFFICIENCY IN ENERGY SUPPLY

### Efficient heating & cooling (Art.10)

- **National heating and cooling plan** for development of HE cogeneration and efficient DH&C infrastructure
- New **thermal electricity generation installations** (>20 MW) to be equipped with high-efficiency cogeneration units and located in a place where waste heat can be used. Conversion to CHP as a condition for updating permit/licence of existing installations (>20 MW) undergoing substantial refurbishment or whose permit needs to be updated
- New or substantially refurbished **industrial installations** (>20 MW) generating waste heat to make use of it and be connected to DH&C networks
- **Guarantees of origin** for electricity from high-efficiency CHP

### Energy transformation (Art.11)

- **Inventory of installations** (for combustion of fuels (=>50 MW), refining of mineral oil and gas)

### Transmission & distribution (Art.12)

- Energy efficiency criteria in energy network regulation
- National **plans on energy efficiency potentials** of energy networks, identifying measures & investments for efficiency improvements
- Removal of incentives in network tariffs increasing volume of transported energy
- **Guarantee transmission & distribution; priority or guaranteed access and priority dispatching** of HE cogeneration electricity

## HORIZONTAL MEASURES

### **Certification/ qualification scheme (Art.13)**

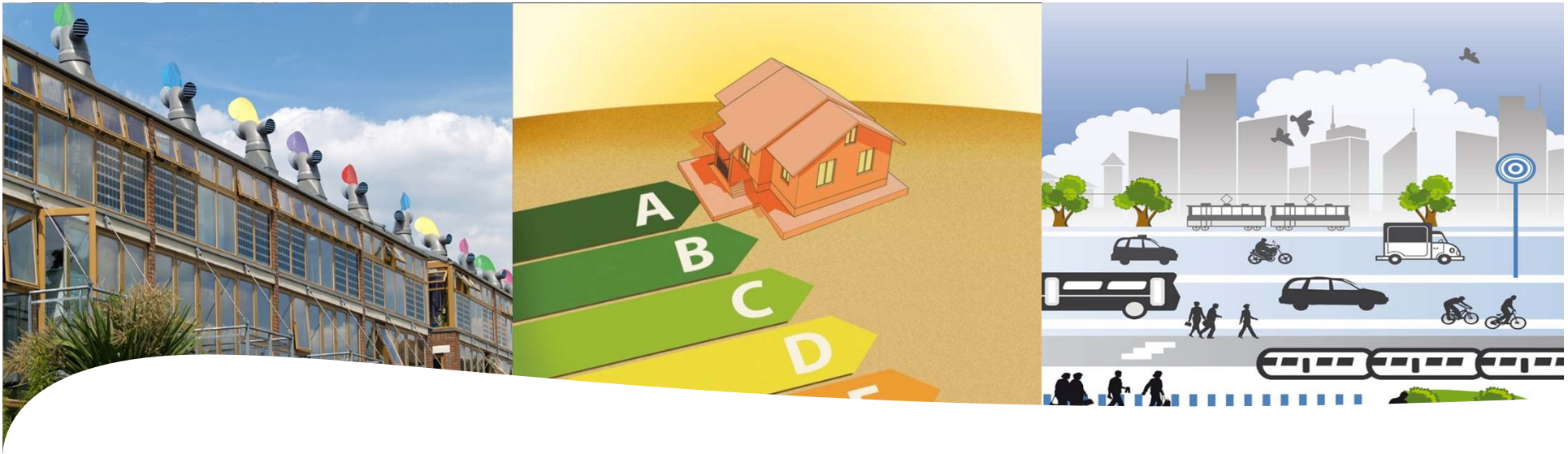
- **Certification/qualification schemes** for providers of energy services, energy audits & energy efficiency improvement measures
- Cooperation among MS & with COM on comparisons between and recognition of the schemes

### **Promotion of energy services market (Art.14)**

- Public **list of energy service providers** incl. energy services they offer (regular check & update)
- **Model contracts for Energy Performance Contracting** in the public sector
- Dissemination of information on energy service contracts, financial instruments, incentives, grants & loans to support energy service projects
- Promotion of voluntary quality labels

### **Removal of barriers to EE (Art.15)**

- To **take measures to remove barriers** to energy efficiency:
  - the split of incentives between the owner and the tenant of a building or among owners
  - legal and regulatory provisions, and administrative practices, regarding public purchasing and annual budgeting and accounting



**Thank you!**

**For further information on energy efficiency please consult our website:**

**<http://ec.europa.eu/energy/efficiency/>**

## POSSIBLE TIME PLANNING AFTER ADOPTION

July 2011

- European Parliament to nominate a rapporteur
- First presentation & discussions in the Council Energy Working Group under Polish Presidency

September  
- December  
2011

- Continuation of discussions in the Council Energy Working Group
- Discussion in the EP
- Energy Council (November)

January –  
June 2012

- Achieving of political agreement

June –  
December  
2012

- Finalization of the legislative text under the Cyprus Presidency
- Entering into force of Energy Efficiency Directive by the end of 2012

December  
2013

- Implementation of the new Directive in the MS

June 2014

- Assessment of progress towards 20% saving objective