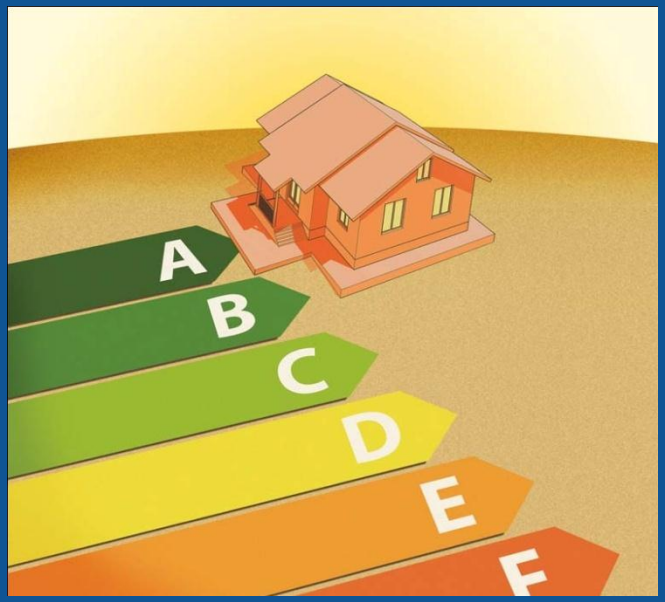

Energy Efficiency in Buildings

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Energy

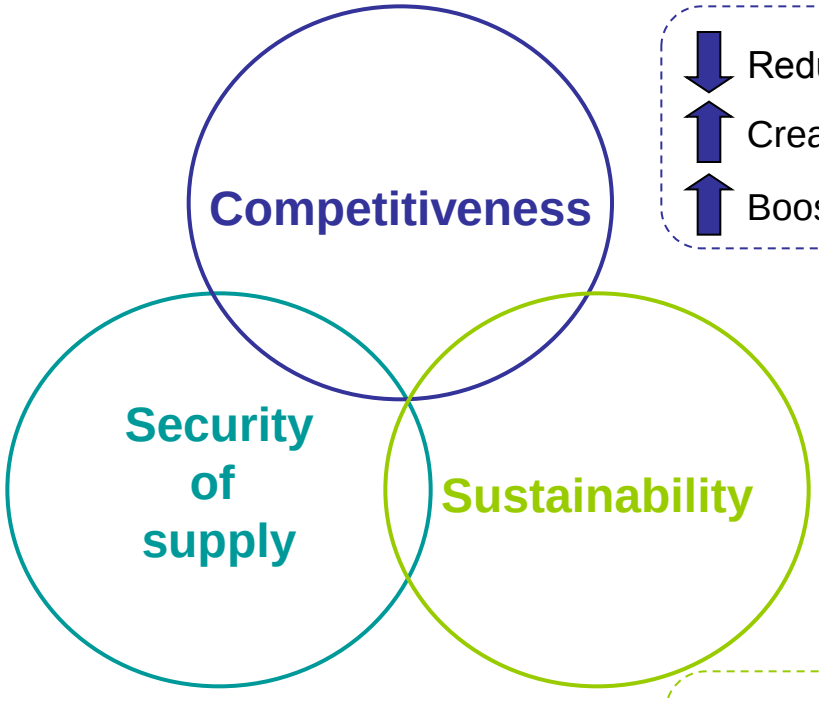
Major energy challenges in Europe

- Import Dependency
- High Energy Prices
- Decarbonisation

How to address

- Place consumers into focus
- Improve EE- attract investments, behaviour change
- Increase RES – lower technological costs, market integration, reform support schemes
- Make use of available energy resources, develop synergies between RES and fossil fuels (e.g. Power to Gas)
- Improve and develop infrastructure – interconnections, smart grids
- Complete the internal market

Why European energy efficiency policy?



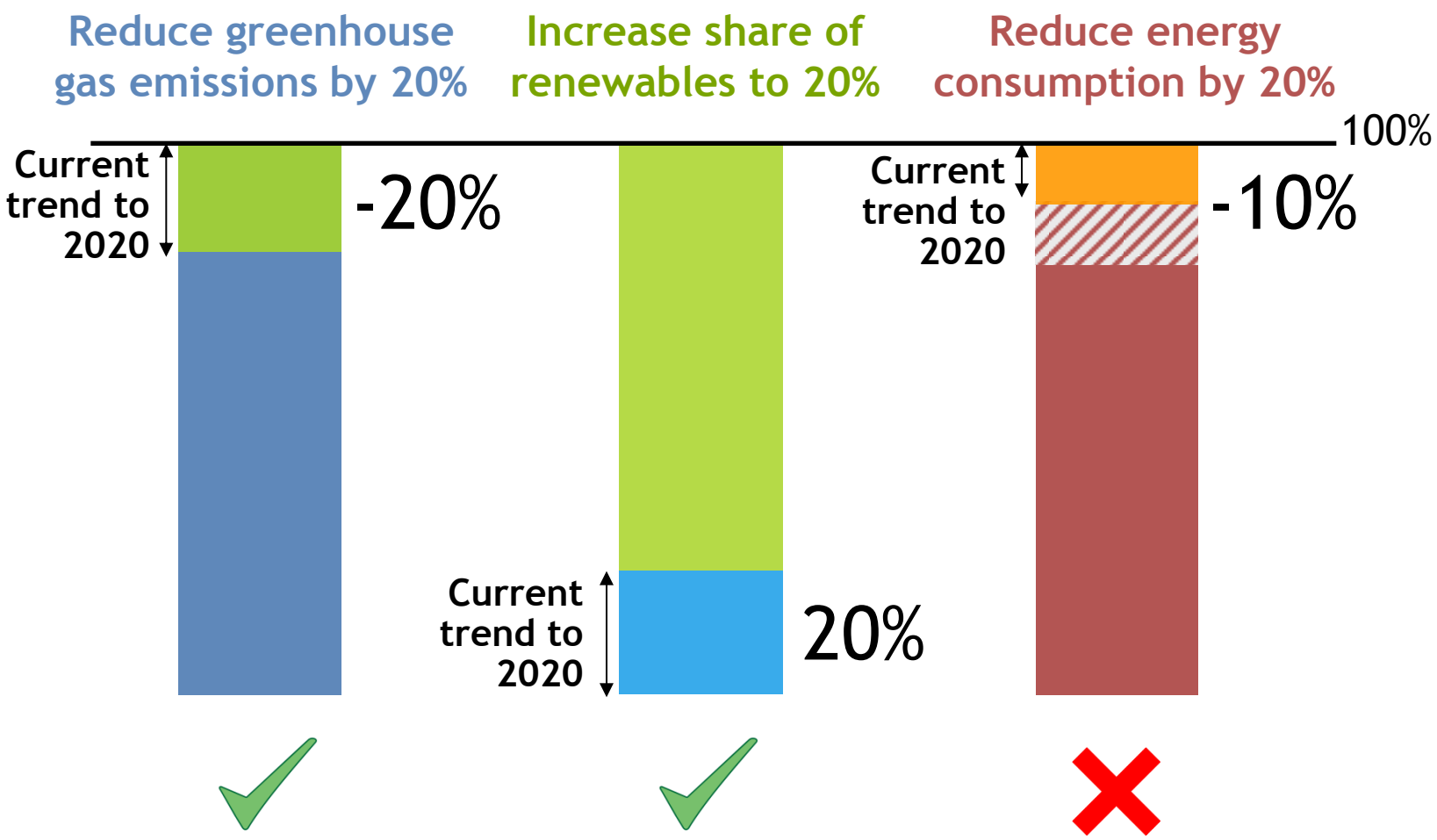
- Reduce EU's energy bill
- Create new business opportunities
- Boost R&D & markets for EU global leadership

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

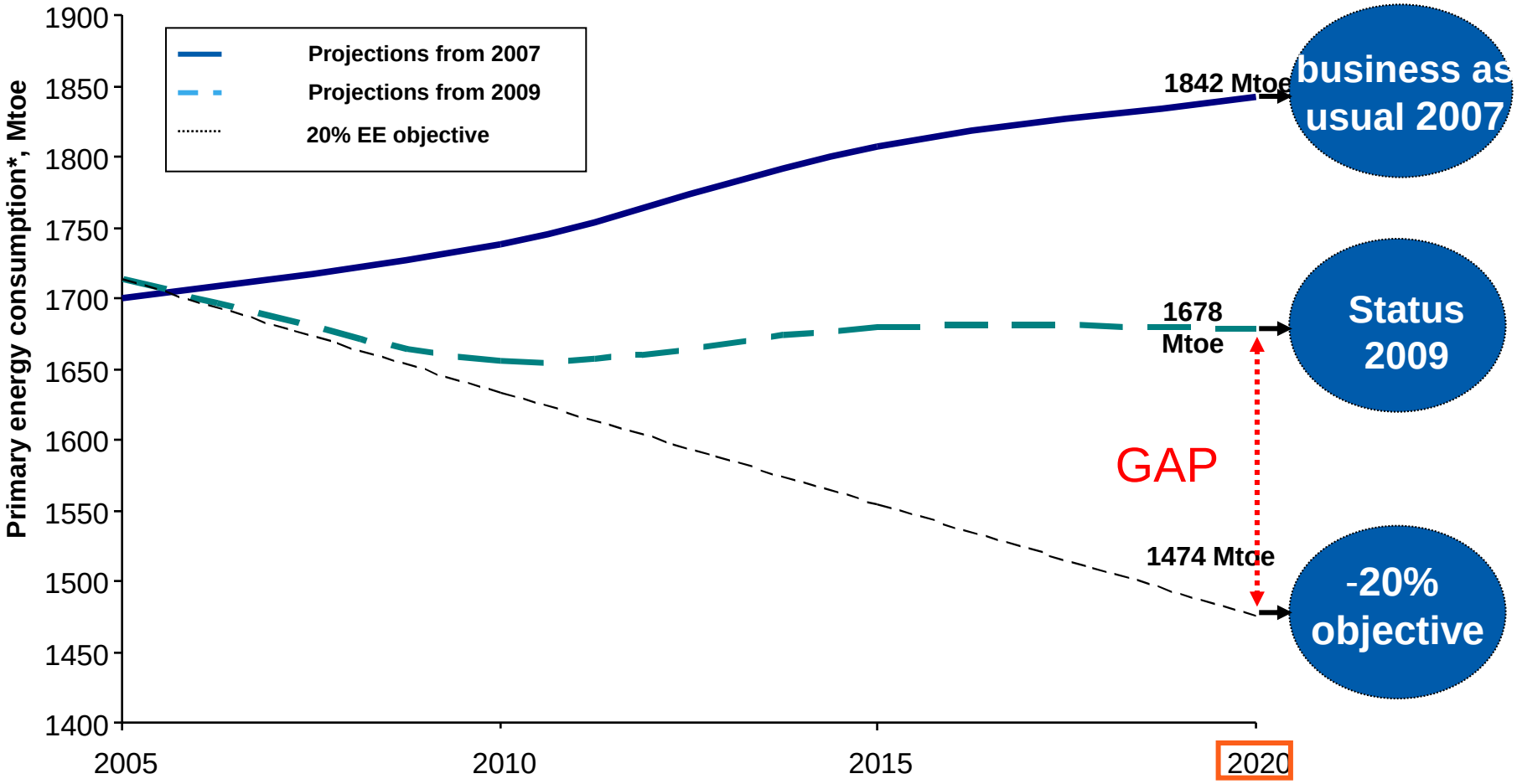
- Reduce CO_2 emissions
- Limit environmental degradation

MEETING "20-20-20 BY 2020": A MATTER OF URGENCY

European Commission

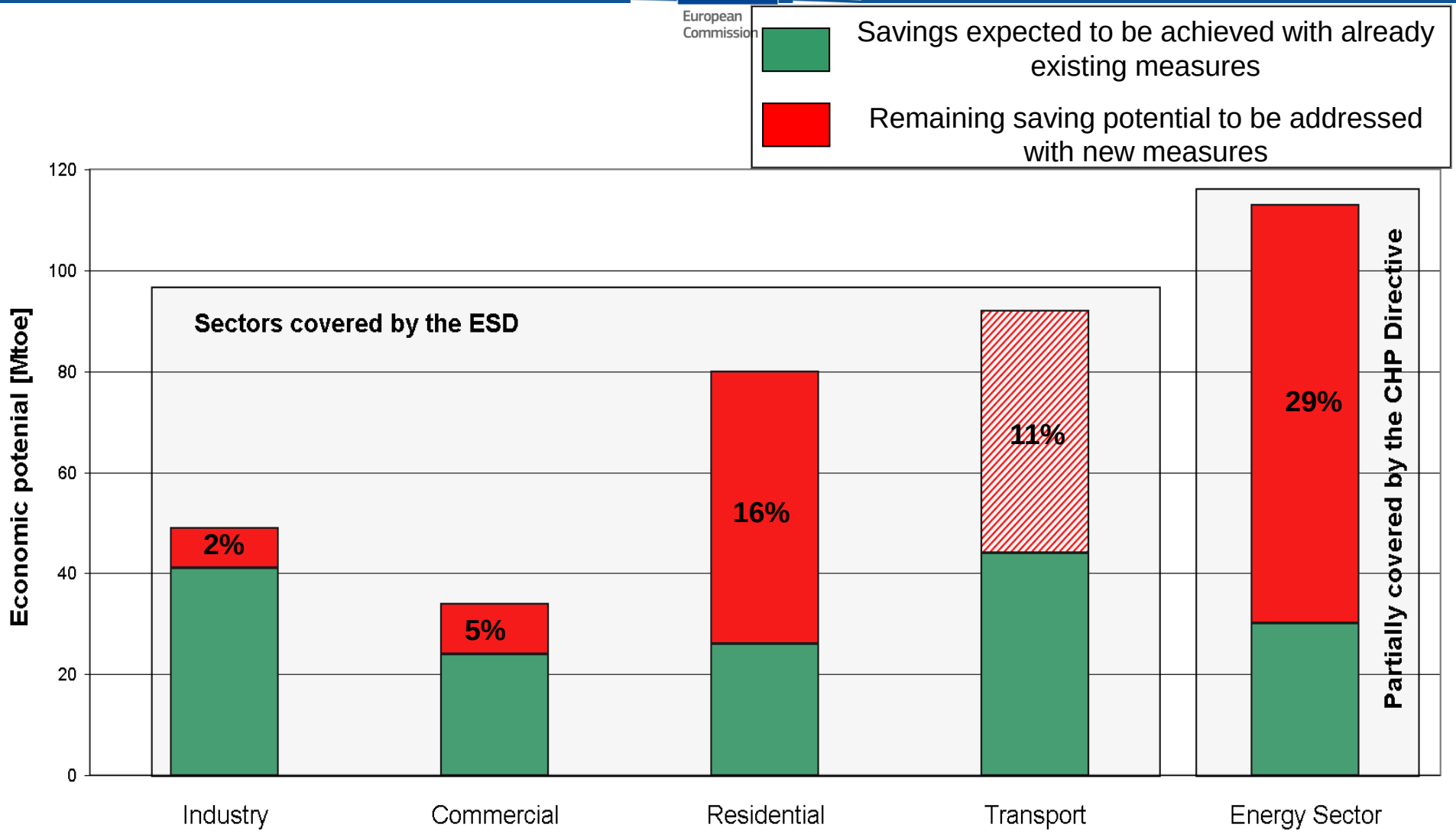


THE EU ENERGY EFFICIENCY TARGET



* Gross inland consumption minus non-energy uses

SIGNIFICANT COST-EFFICIENT SAVINGS



Source: IA EED, SEC(2011) 779, based on Fraunhofer ISI *et al.* 2009, PRIMES 2007 and 2009 and expert estimations

OVERVIEW OF EED

Publication in OJ – 14 November
Entry into force – 4 December 2012

Transposition deadline:

- **5 June 2014 (for most of the articles)**
- **5 December 2014 (for reporting on certain aspects)**

Commission supports the transposition:

- **Seven interpretative notes, NEEAPs template**
- **Concerted action, specific studies**

Milestones:

- **30 April 2013: national indicative targets reported within National report programmes reports**
- **30 April 2014: first EED NEEAPs**
- **30 June 2014: Commission Assessment of 20% target progress**

FOCUS ON BUILDINGS

Member States required to develop long-term strategies for building renovation, incl.:

- **Policies and measures to stimulate cost-effective deep renovations of buildings**
- **A forward-looking perspective to guide investment decisions and financial institutions**

Public sector to lead by example:

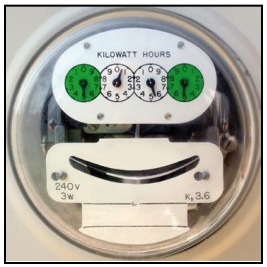
- **3% renovation target for central government buildings (incl. encouragement of public bodies to set local plans and use of EPC)**
- **Certain energy efficiency conditionalities for purchasing of central governments**

MOBILISING END-USE ENERGY SAVINGS (&ENERGY SERVICES)

- Member States to ensure **1.5%** cumulative annual final energy savings (-transport) over 2014-2020 period
- Savings to be achieved by policy measures, not market developments – e.g. energy efficiency obligation schemes and/or alternative policies (funds, fiscal, voluntary)
- Register of **ESCOs** and energy services
- Analysis and removal of barriers to energy performance contracting and in general, emphasis on qualification of experts

Comisión Europea

EMPOWERING AND INFORMING CONSUMERS

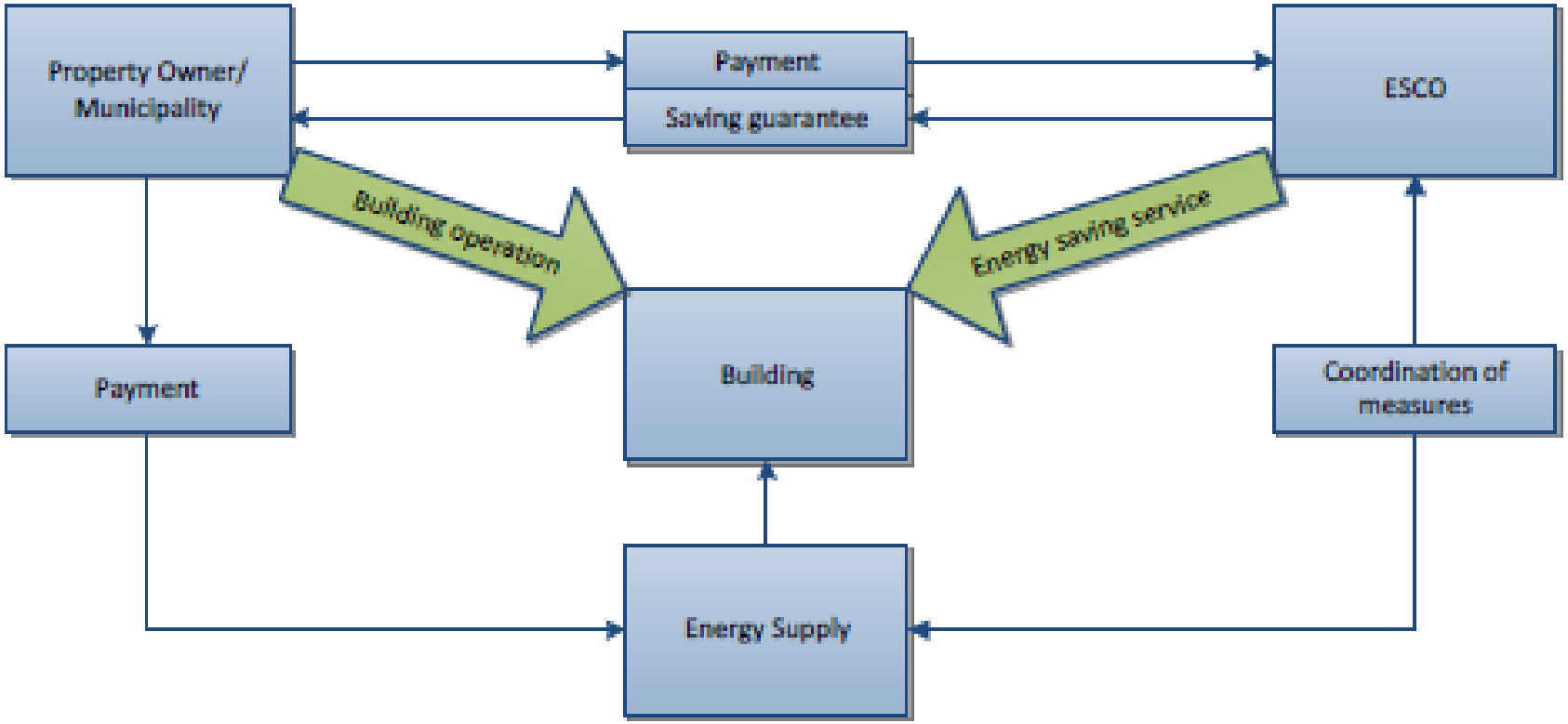


- Individual energy meters, giving energy consumption & time of use to be provided
- Accurate & minimum frequency billing based on use (incl. free data access)
- Incentives for SMEs to undergo energy audits and apply the results
- Mandatory audits for large companies
- Push towards the introduction of Energy Management Systems

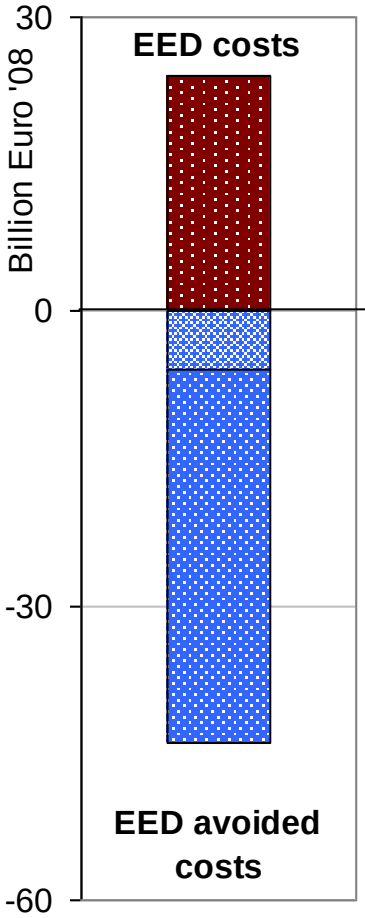
Energy Performance Contracting (EPC)

- A procurement model which supports demand-side EE measures in buildings.
- Brings a customised and integrated approach to delivering EE projects encompassing planning, construction, financing, and operation and maintenance of energy conservation measures.
- Benefits for property owners:
  - *No upfront capital investment;*
  - *Transferring technical and performance risk to a third party (Energy Service Company, ESCO);*
  - *Guaranteed cost savings in line with energy reduction;*
  - *Providing a means of renewing obsolete assets; and*
  - *Overcoming public procurement barriers.*

Illustration of "Guranteed savings" EPC model



Investments are required but benefits outweigh them (EED – €20 billion saved annually until 2020)



- **<u>increased</u> costs for investment in energy efficiency- €24 billion annually**

- **<u>reduced</u> costs for investment in energy generation and distribution - €6 billion annually**
- **<u>reduced</u> fuel expenditure - €38 billion annually**

+

- **<u>increased</u> EU GDP of € 34 billion in 2020**
- **<u>increased</u> net employment of 400 000 in 2020**

Energy Performance of Buildings– main points (1)

- Elimination of the 1000 m2 threshold for existing buildings
- New element in recast: **benchmarking methodology** framework for calculating **cost-optimal levels**
- **Energy Performance Certificates** by qualified experts: mandatory use of in advertisements; recommendations on how to improve the energy performance,
- to be issued to new buildings/building units and when existing buildings/building units are rented/sold
- Public authorities: > 500m² to display the certificate (> 250m² after 5 years)
- Commission to develop a **voluntary common European certification scheme** for non-residential buildings
- MS to establish **regular inspection** of accessible parts of heating system (> 20kW) and of AC system (> 12kW)

Energy Performance of Buildings– main points (2)

- New buildings: **nearly zero energy buildings (by 2018 or 2020)**
- MS to set Minimum energy performance requirements **for renovation of technical systems**, as well as for **building elements** (roof, wall, etc.) *if technically, functionally and economically feasible*, whenever they are retrofitted or replaced
- EPBD recast **underlines crucial role of financing for EE** (MS take into account cost-optimal levels of energy performances in funding decisions)

Cost optimal methodology

- → Framework on how to calculate cost-optimal minimum energy performance requirements
- → Aim: Shift focus from upfront investment costs to life cycle costs
- → Comparison of result with current requirements and adjust building codes if needed

- → Act established with publication in OJ on 21 March 2012
- → Guidelines published on 19 April 2012 in OJ
- → Report from MS by 21 March 2013

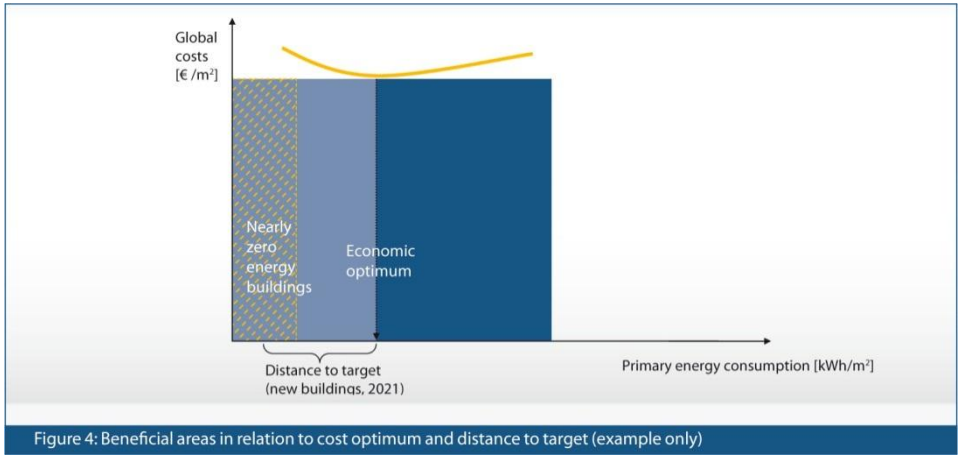


Figure 4: Beneficial areas in relation to cost optimum and distance to target (example only)

Commission study on NZEB

Towards nearly zero-energy buildings

- → **Finalised in Spring 2013**
- → **Objectives:**
  1. Clarification of concepts in the definition;
  2. Facilitation of COM's monitoring and reporting tasks
  3. Development of benchmarks for nearly zero-energy buildings for different European climate zones
  4. Analysis of the differences, consistencies and convergence between national cost-optimal levels and national nearly zero-energy buildings;

EU financial instruments for EE

→*Most EU financial instruments are in form of grants or technical assistance:*

- **Structural & Cohesion funds** (ERDF, Cohesion fund…)
  →Period 2007-2013: Reallocation of up to 4% of ERDF for EE measures in buildings
  →Period 2014-2020: Low carbon economy a high priority

- **Intelligent Energy Europe (CIP): € 730 mio (2007-2013)**
  →*Knowledge dissemination, Exchange of best practices*, 3 countries min. and no hardware or research development

- **Elena:** Technical assistance (ca. € 15 mio/y.)

Innovative instruments:

- **JESSICA**: creation of an Urban Development Fund with part of structural funds to make repayable investments in projects (part of sustainable urban development plan)

- **Investment funds**: EEE F…

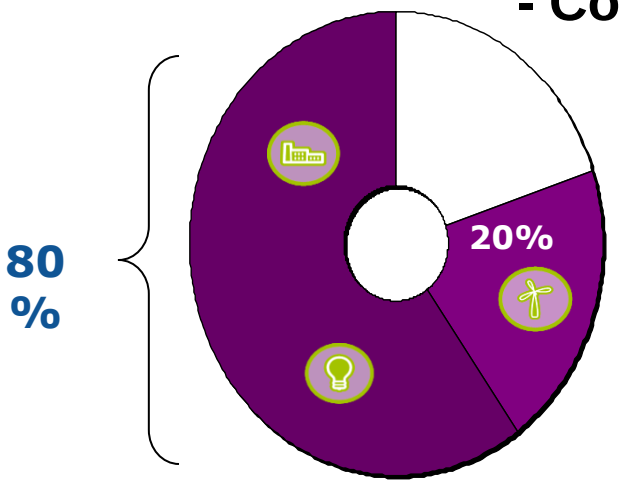
EU financial facilities in future

Next Multi-Annual Financial Framework (2014-2020) proposals:

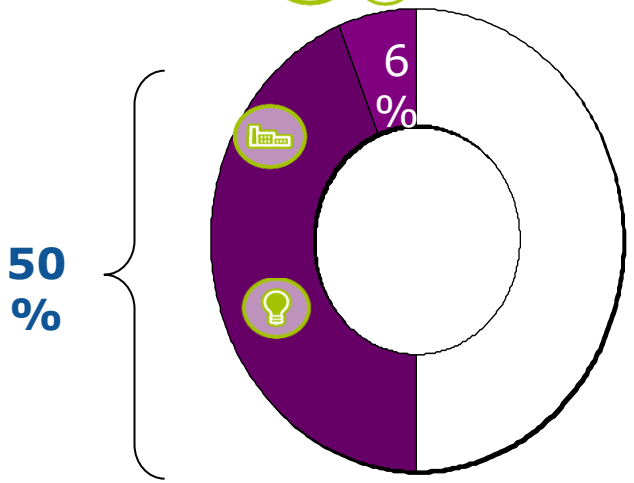
- **Cohesion funding to allocate some 17 billion € to energy efficiency and renewable energy (doubling current allocations)**
- **Horizon 2020: around 7 billion € is to be allocated to research and innovation in "Secure, clean and efficient energy" (includes IEE, EE PPP, Smart Cities and Communities)**

PROPOSED FOR 2014-2020: MINIMUM SHARE OF ERDF INVESTMNETS ON:

- Shift towards a low carbon economy
- Research & innovation
- Competitiveness of SMEs



More developed & transition regions



Less developed regions

Based on overall amounts proposed: Min. EUR 17 bn for low carbon economy in 2014-2020 (ERDF) – Large increase from 2007-2013 when EUR 9.4 bn allocated to energy efficiency (EE) and renewable energies (RES)
No more ceiling for investing in energy in housing (currently max 4% of ERDF)

European Commission

Thank you!