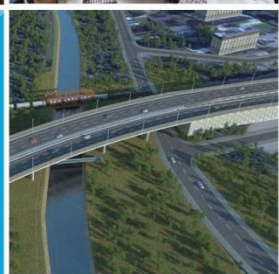
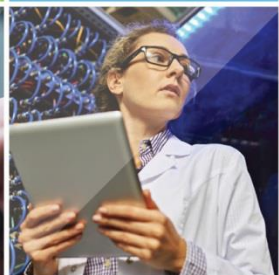
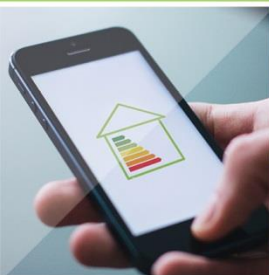




European
Commission



Bridging energy efficiency and finance - the EU perspective

Niels LADEFOGED, DG ENERGY

ROUNDTABLE ON FINANCE FOR ENERGY EFFICIENCY IN DENMARK
16 November 2017 - Copenhagen

Energy Efficiency is the most cost-effective way of achieving Energy Union objectives...



Security of supply



Global leadership in renewables



Decarbonization (Paris Agreement)



**SUSTAINABLE
GROWTH**

Promoting growth, jobs and investments

POLICY CONCLUSIONS FOR 2030 – ENERGY EFFICIENCY

Building renovation has to do more

- Review of EPBD
- Review of Art. 7 EED

Financing has a more important role to play

- Smart Finance for Smart Buildings

Digital/ICT has a big potential to contribute

- Development of a 'Smartness indicator for buildings'
- Review of Art. 9-11 EED

WHAT PIECES OF LEGISLATION?

- ❖ **Amending Directive 2012/27/EU on Energy Efficiency**
- ❖ **Amending Directive 2010/31/EU on Energy Performance of Buildings**
- ❖ **Ecodesign Working Plan 2016-2019**



THE "SMART FINANCE FOR SMART BUILDINGS" INITIATIVE

MAJOR GOALS

More effective use of public funds

- Deploying **Financial Instruments** and flexible energy efficiency and renewable financing platforms
- Building on EFSI blending with ESIF funds



Assistance and aggregation

- Supporting the project pipeline at EU and local level
- **Project Development Assistance** facilities
- "One-stop-shops"



De-risking

- **Understanding the risks and benefits** for financiers and investors
- The De-risking Energy Efficiency Platform
- Commonly accepted underwriting framework



I. More effective use of public funds deploying financial instruments

- ***Making more use of financial instruments, to achieve high leverage ratios.***
- ***Flexible financing platforms at national level, mixing different strands of public financing (i.e. **ESIF, EFSI**).***
- ***On-line **EU mapping tool** to understand how public funds can be used to support energy efficiency in Europe.***
- ***An initiative to make **the use of Energy Performance Contracting** more accessible to the public sector (Eurostat recently updated its guidance on the accounting treatment of Energy Performance Contracts).***
- ***Sustainable Energy Investment Forums**
Riga, Prague, Copenhagen, Madrid, Dublin, ...*



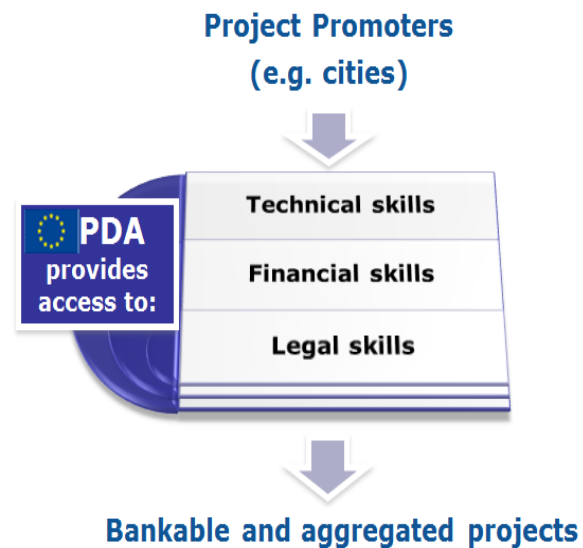
II. Providing aggregation and assistance for project development

Reinforce Project Development Assistance (PDA) facilities at the EU level to help project promoters bring their ideas to maturity.

- **ELENA**, via EIB (PDA facility funded through the European Commission's Horizon 2020 programme)
- PDA calls launched by EASME for smaller projects

Development of **dedicated local or regional one-stop-shops** for project developers.

➤ EU Project Development Assistance (PDA)



III. De-risking energy efficiency investments

Change the risks perception related to energy efficiency investments - in collaboration with the **Energy Efficiency Financial Institutions Group (EEFIG)**:

- **The De-risking Energy Efficiency Platform (DEEP)**, an open source database containing real performance data of energy efficiency projects (> 10.000 energy efficiency projects).

<http://deep.eefig.eu>



- **An Underwriting toolkit on the value and risk appraisal of energy efficiency investments** (released on 22 June 2017).

<http://valueandrisk.eefig.eu>





European Commission

ENERGY UNION



Thank you!

#EnergyUnion



Additional slides

ENERGY EFFICIENCY

ACHIEVING THE EU BINDING 30% ENERGY EFFICIENCY TARGET BY 2030



Energy Efficiency Directive

- A binding 30% energy efficiency EU target for 2030
- Extending existing energy savings obligations (1.5%/y)
- Empower consumers by granting access to information on their energy consumption.



Energy Performance of Buildings

- Clear vision for a decarbonised building stock by 2050;
- Smart & Efficient buildings through use of Information and Communication Technologies and Smart Technologies;
- Smart Finance for Smart Buildings initiative:
 - More effective use of public funding
 - Aggregation of funds
 - De-risking



Ecodesign Working Plan 2016-2019

- List of new product groups;
- Outline on how Ecodesign will contribute to circular economy objectives;
- Specific measures on air conditioning;
- Guidelines on voluntary agreements.

ENERGY EFFICIENCY DIRECTIVE energy savings obligations

(ARTICLE 7 EED)



Extending existing energy saving obligations beyond 2020 (1.5%/year)



- Attracting private investment for energy efficiency renovations



Strengthening the social dimension



- Lower energy bills for consumers and reduced energy demand
- Requiring MS to consider energy poverty in designing energy efficiency obligation schemes or alternative measures



Improving coherence with the EPBD



- Renovation according to EPBD can be counted under energy savings obligations
- Increasing buildings renovation rate

ENERGY EFFICIENCY DIRECTIVE

Metering and billing



Clearer, more frequent information on consumption of thermal energy:

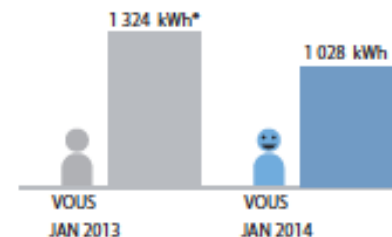
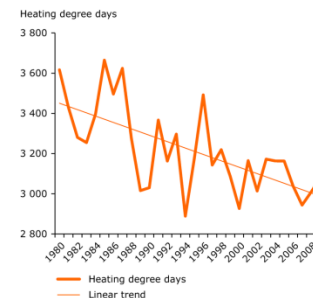


Consumption of heating and cooling shall be **climate corrected**.



Mandatory to provide **comparisons**:

- With consumption for same period in the **previous year**, in **graphic form**
- average normalised or **benchmarked final user in same category**



HOW YOU'RE DOING:

▶ **GREAT** 😊😊

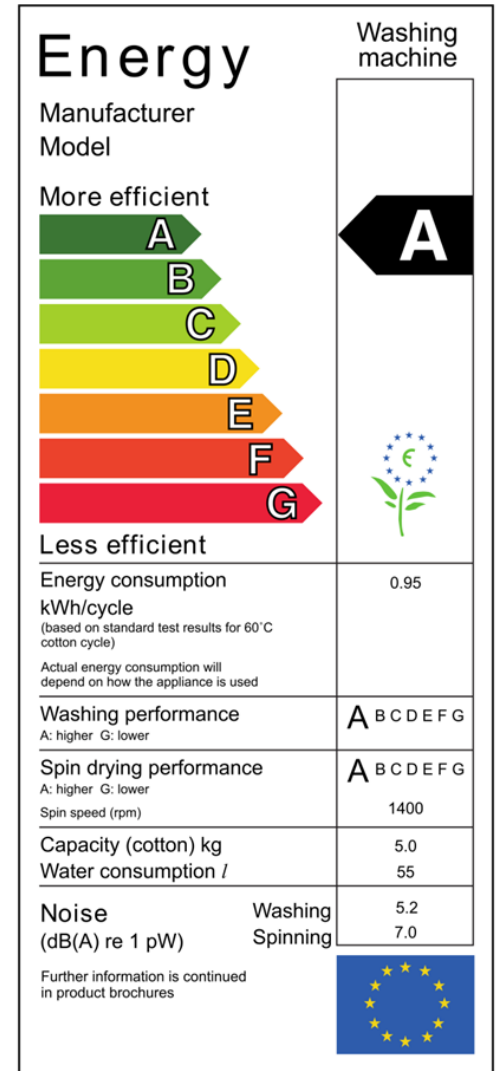
GOOD 😊

BELOW AVERAGE

Products Policies

Ecodesign and Energy Labelling - Results Achieved

- Delivers close to half of the 20% energy efficiency target for 2020
- 175 Mtoe primary energy savings per year by 2020, i.e. the annual primary energy consumption of Italy
- Savings of around € 500 per household per year
- € 56 billion extra revenue for industry, wholesale and retail sector



ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE



Long-term renovation strategies



- Vision of a decarbonised building stock by 2050
- Smart Finance for Smart Buildings approach to mobilisation of investment



Smartness indicator



aims at:

- the ability of a building to manage itself,
- to interact with its occupants,
- to take part in demand response and
- to contribute to smooth, safe and optimal operation of connected energy assets.



Electro mobility

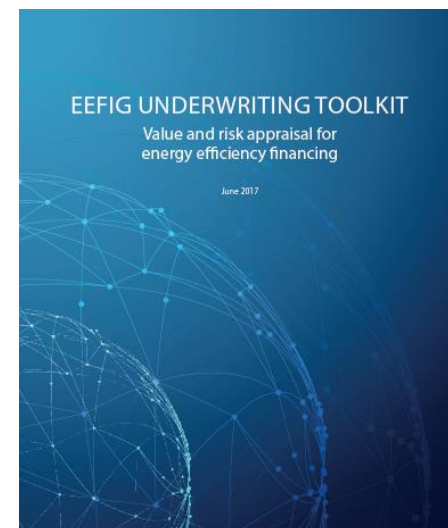
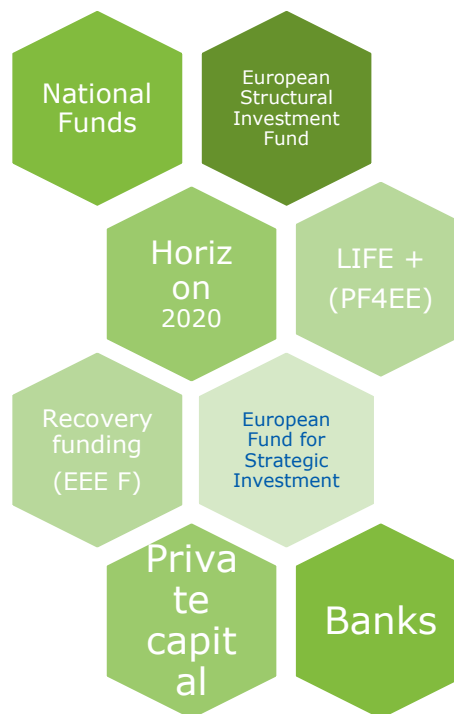


- Recharging points in commercial buildings
- Precabeling in residential buildings

Financing of Energy Efficiency

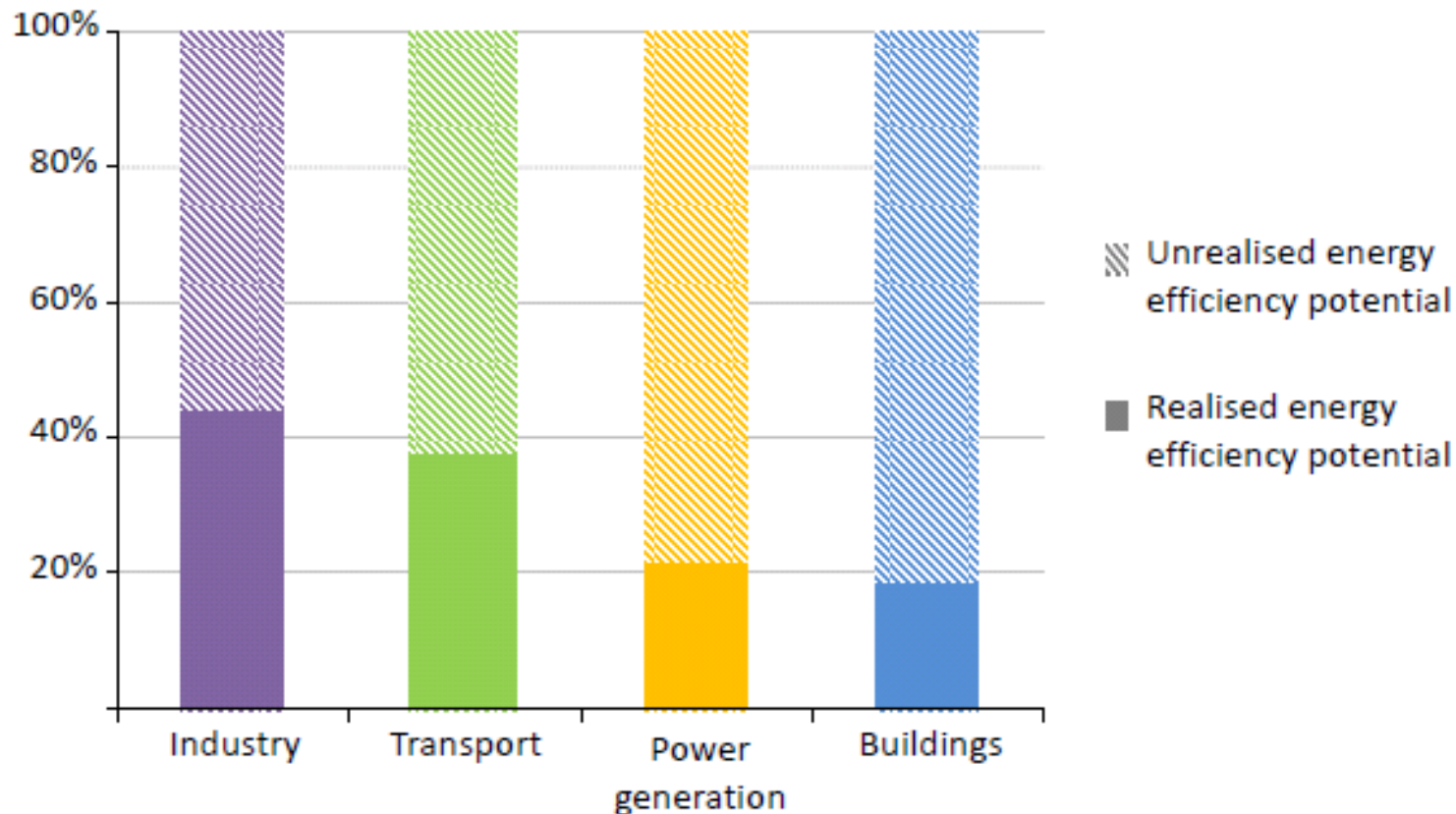
Challenges:

- Lack of knowledge and information
- Lack of performance data
- High upfront investments
- Fragmentation/transaction costs
- Complexity of financing
- Sometimes long payback periods
- The market is not "readable"
- Financing products do not reflect the EE fundamentals



Large potentials...

FINANCING ENERGY EFFICIENCY



Two thirds of cost effective energy efficiency potential remains untapped by 2035 with current policies

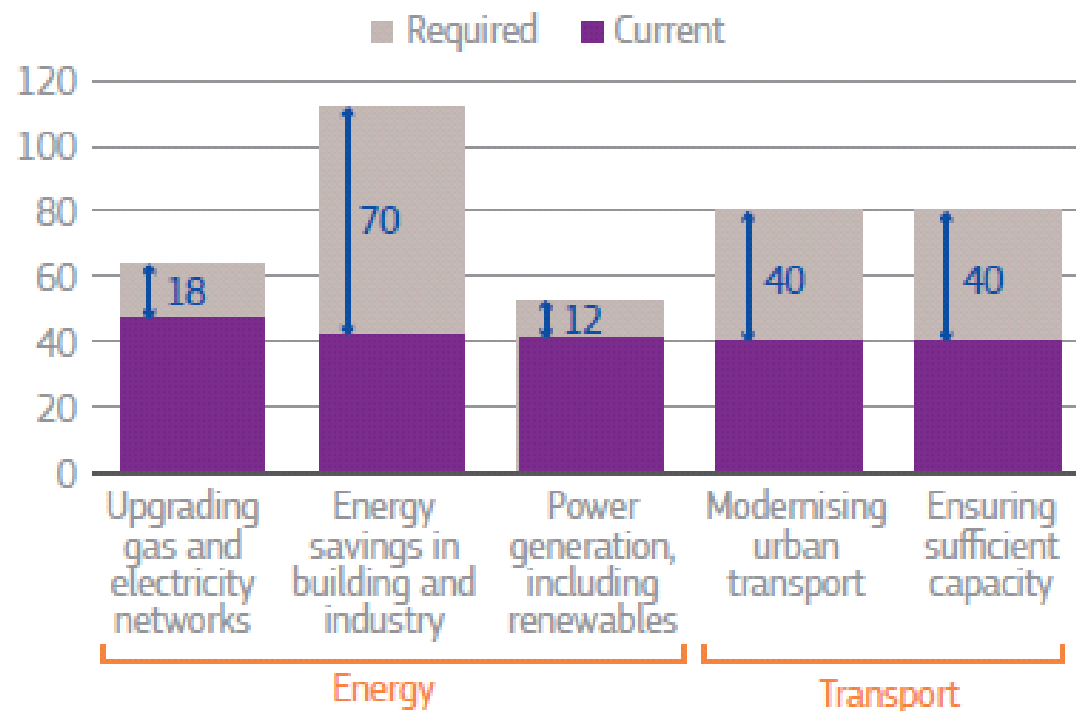
Source: IEA

... And major investment needs

FINANCING ENERGY EFFICIENCY

Figure 2: Investment needs in the EU's energy and transport sectors

Billion euro



https://ec.europa.eu/eps_c/sites/eps_c/files/strategic_note_issue_25.pdf

Source: European Investment Bank

Should we focus on buildings?

- People spend up to 90% of their lifetime indoors.
 - Around $\frac{3}{4}$ of our building stock is energy inefficient.
 - Buildings consume about 40% of the total energy consumed in Europe.
 - Renovation rates are low across the EU (> 1.5% only in Germany, France and Austria, while < 1% in Spain, Poland, Italy and Sweden)
 - We would need a renovation rate of around 2.4% per year to reach our energy efficiency targets for 2030 and decarbonise our buildings stock by 2050.
- ***Buildings are a central element of the Commission's energy efficiency policy.***

How about the industry?

- Industry remains very important
- Targets, Art.7 and 8 EED
- EEFIG workshop on energy efficiency in industry (19 October 2017)
 - **Core Industrial Processes vs side processes**
 - **How to turn energy audits into action**
 - **Energy efficiency policy**
 - **Energy efficiency networks**
 - **Earmark funds for energy efficiency investments**
 - **Insurance**
 - **Better standards and training**

More effective use of public funds deploying financial instruments

- An initiative to make **the use of Energy Performance Contracting** more accessible to the public sector

Eurostat recently updated its guidance on the accounting treatment of Energy Performance Contracts.

- **Sustainable Energy Investment Forums**
Riga, Prague, Copenhagen, Madrid, Dublin,

A series of regional and national events to:

Create momentum

Build capacity

EU networking



European Local ENergy Assistance (ELENA)

- *Established in 2009, managed by the EIB and the European Commission*
- *Grant for **preparation** (not implementation) of **investment programmes***
- *Minimum leverage: **20** for energy projects, e.g.*
 - EE renovations of public and private buildings
 - Street and traffic lighting
 - Integration of renewable energy sources into the buildings
 - Investments in district heating/cooling networks
- *Almost **EUR 100m** awarded to projects supporting approx. **EUR 3.8 bn** investments*