



Energy Efficiency

Financial Institutions Group

Energy Efficiency - the first fuel for the EU Economy

How to drive new finance for energy efficiency investments

Part 1: Buildings (Interim Report)

The Energy Efficiency Financial Institutions Group (“EEFIG”) was established as a permanent working group by the European Commission, in late 2013 as a result of the dialogue between **DG Energy** and **UNEP FI**, as both institutions were engaging with financial institutions to determine how to overcome the well documented challenges inherent to obtaining long-term financing for energy efficiency

EEFIG aims to create dialogue between policy makers and representatives of the financial sector as well as energy efficiency experts, and ultimately **increasing energy efficiency finance**.

The group is currently comprised of 51 individuals representing:

- Public and private financial institutions (banks, investors insurers etc.)
- Banking associations and investor groups
- Energy efficiency industry experts
- Energy efficiency services representatives
- Civil society experts representing diverse energy efficiency stakeholder groups
- European Commission
- UNEP FI

EEFIG is supported by Climate Strategy and Partners (www.climatestrategy.com) which was contracted to support the coordination and drafting of this report on behalf of **EEFIG** and whose Chief Executive is also a member of the group.

EEFIG meetings are convened and chaired by DG Energy

- Allianz Real Estate
- ASN Bank
- Bank Nederlandse Gemeenten (BNG)
- BNP Paribas Investment Partners
- Buildings Performance Institute Europe (BPIE)
- Caisse des Dépôts
- Cassa Depositi e Prestiti S.p.A.
- CDC Climat
- Cecodhas – Housing Europe
- Climate Strategy and Partners
- Deutsche Bank Group
- E3G
- European Commission
- EBRD
- EIB
- Energy Managers Association
- EuroACE
- EUROBANK ERGASIAS SA
- European Association of Public Banks (EAPB)
- Hermes Real Estate
- Institutional Investors Group on Climate Change (IIGCC)
- ING Commercial Banking
- KfW Bankengruppe
- Netherlands Enterprise Agency (RVO.nl)
- NRW.BANK
- Royal Institution of Chartered Surveyors (RICS)
- Société Générale
- Triodos Bank
- UniCredit Group
- United Nations Environment Programme (UNEP) and its Finance Initiative (UNEP FI).

Reference page in interim Report

1. Executive Summary
2. Framework
3. Drivers of Demand of and Supply for
Energy Efficiency Investments in EU Buildings
4. Approaches and Instruments
5. Recommendations and Conclusions
6. Q & A

4

7

12

22

35

1. Executive Summary

2. Framework

3. Drivers of Demand of and Supply for Energy Efficiency Investments in EU Buildings

4. Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

5. Recommendations and Conclusions

6. Q & A

Background:

- Energy Efficiency is of Increasing Strategic Importance for Europe
- EU is at Risk of Missing its 2020 and longer term Targets unless Energy Efficiency Investments Increase
- Strong economic and social rationale for scaling up energy efficiency investments in buildings in Europe

EU Commission tasked EFIG to deliver an Interim Report

- To increase the flow of energy efficiency investments from a financial institution's perspective by addressing three key questions:

1

What are the most important challenges to overcome?

2

Who would be the right party to address them?

3

What should the European Commission/EU do?

- Interim report summarizes work and thinking over 6 months - October 2013 and March 2014
- EFIG will deliver a final report in November 2014 which will deepen its work in the buildings sector and also consider energy efficiency investments in Small and Medium Sized Enterprises (SMEs) and Industry in Europe.

Summary of EFIG Recommendations:

1	The full benefits of energy efficient refurbishments of buildings must be captured and well-articulated, with evidence, and as a priority, to key financial decision makers (public authorities, buildings owners and managers and for householders)
2	Processes and Standards for Energy Performance Certificates, Energy Codes and their Enforcement need to be strengthened and improved
3	It must be easy to get the right data to the right decision makers
4	Standards should be developed for each element in the energy efficiency investment process
5	Priority and appropriate use of EU Structural and Investment Funds and ETS revenues through public-private financial instruments from 2014-2020 will boost investment volumes and help accelerate the engagement of private sector finance through scaled risk-sharing

1. Executive summary

2. Framework

3. Drivers of demand of and supply for Energy Efficiency Investments in EU Buildings

4. Approaches and instruments to Stimulate Energy Efficiency Investments in Buildings

5. Recommendations and Conclusions

6. Q & A

Rationale for scaling up Energy Efficiency Investments in Europe:

- Energy Efficiency is described as the EU's biggest energy resource
- One of the most cost effective ways to enhance the security of its energy supply and decrease the emissions of greenhouse gases and other pollutants

Energy efficiency investments are characterised by:

- a. Their capacity to bring direct energy returns
- b. Bring additional value streams to private owners and asset operators
- c. Significant public benefits in terms of:
 - Increased employment
 - Lower emissions
 - Increased energy security and reduced dependence on foreign energy imports
 - Improvements to a country's fiscal balance

Key Facts

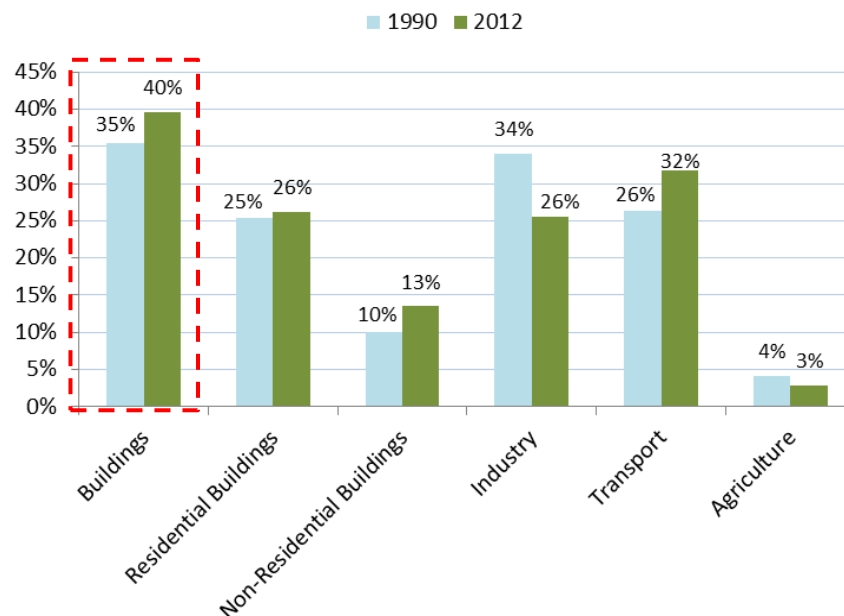
- a. 2011, **global energy efficiency investments** across all sectors totaled **\$300bn**
- b. A 2014 Ceres report denotes that the **additional investment required** beyond business as usual investment in buildings to limit temperature rises to a 2°C scenario are up to another **\$300 billion per annum between 2010 and 2020**, comparing with an overall investment in buildings of **\$620 billion per annum** for that period.
- c. Europe's **Energy Efficiency Plan** expects to deliver **2 million jobs**
 - Potential annual financial savings estimated at **Euro 1,000 per European household**

EU Buildings Market Investment Characterization

- Buildings are responsible for the largest share of European final energy consumption (40%)
- An increase of 14% from 1990
- Increased investments in energy efficient buildings refurbishment will not be attained just through “the market”
- Market forces will need to be complemented by:

- **A pragmatic and supportive regulatory environment**
- **A fundamental behavior change among sector stakeholders**
- **Public funds**

Share of buildings in final energy consumption in EU-28 (Source: Eurostat)



1. Executive summary

2. Framework

3. Drivers of Demand of And Supply for Energy Efficiency Investments in EU Buildings

4. Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

5. Recommendations and Conclusions

6. Q & A

What are the most important challenges to overcome?

EEFIG identified energy efficiency investment areas by following the steps below:

Step 1

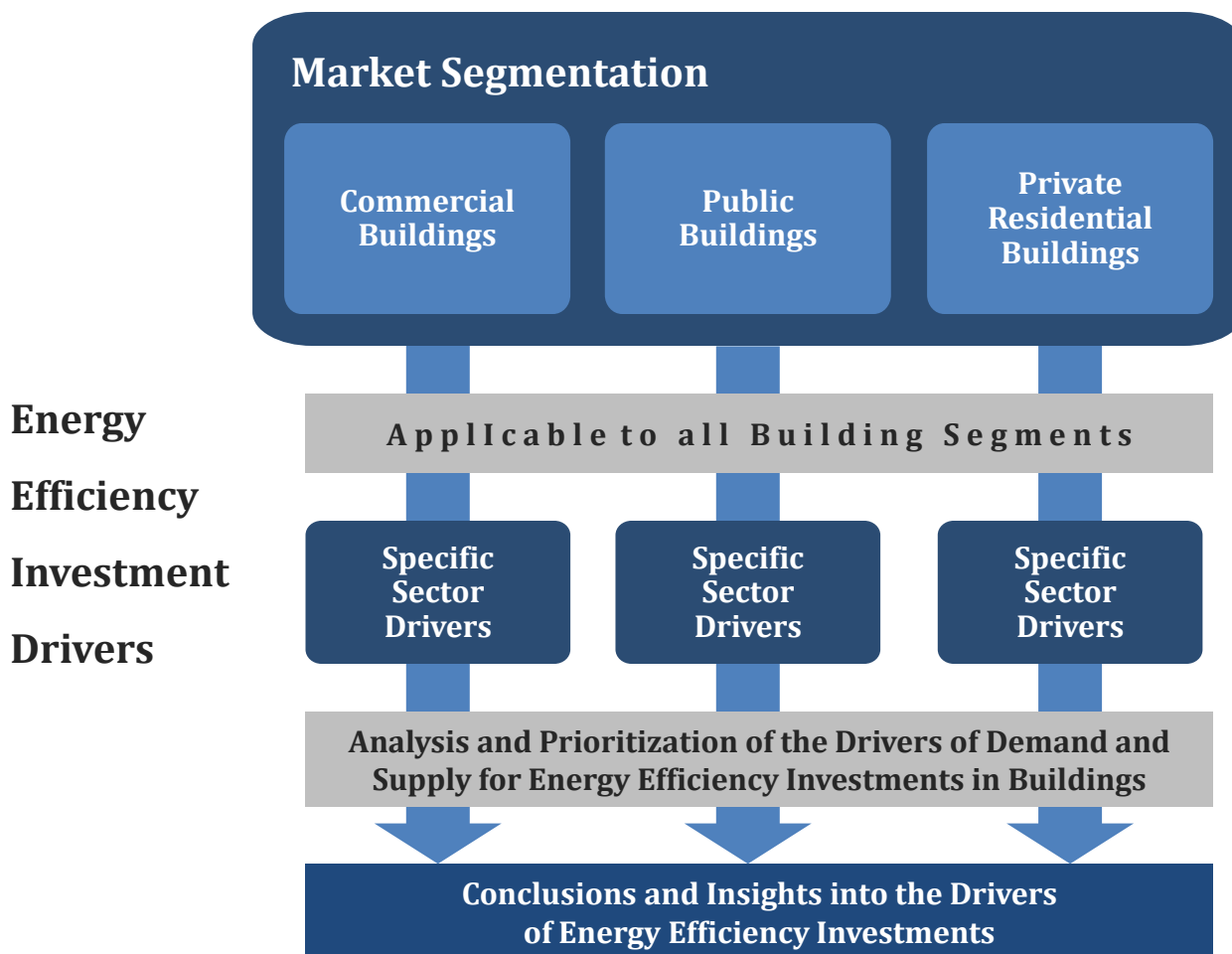
- **Identification of the key drivers** to convert energy efficiency into a preferred investment area
- Focus of discussion on the **drivers of demand for and supply of investment** in energy efficiency
 - approx. 25 different drivers/success factors identified
- **Sector specific approach** due to the different relevance of each driver in each building segment
 - private residential buildings,
 - commercial buildings,
 - public buildings

Step 2

- **Prioritisation of the importance of the drivers** through a **survey** to allow EEFIG members to rank them

Drivers of Demand for and Supply of Energy Efficiency Investments in EU Buildings

Methodology



- Definitions of the building sector segments and **various drivers** as **understood** and **agreed by consensus** by EFIG members and resulting from its survey work

- The group discussed and identified drivers affecting **demand (25)** and **supply (23)** for energy efficiency investment for buildings refurbishment through open debate

Drivers of Demand for and Supply of Energy Efficiency Investments in EU Buildings

Energy Efficiency Investment Drivers (Demand & Supply)

	Key Driver	
All Buildings Segments	<ul style="list-style-type: none"> • Availability and use of European Structural and Investment Funds 2014-2020 • Availability of Data • Buildings Regulation, Building Certification and Energy Performance Certificates • Effective Enforcement of Regulation • Increased Investor Confidence and Changes in Risk Perception • Leadership and Awareness at Key Decision Maker Level 	<ul style="list-style-type: none"> • Lenders' approach to energy efficiency investment risk (Recourse vs Non- Recourse Loans) • Measurement, Reporting & Verification and Quality Assurance • Regulatory Stability • Risk-Return Targets • Simplicity and Transaction Costs • Standardization
Commercial Buildings	<ul style="list-style-type: none"> • Clear Business Case for Energy Efficiency 	
Public Buildings	<ul style="list-style-type: none"> • Facilitation and Technical Assistance 	<ul style="list-style-type: none"> • Rules on Public Authority Procurement Accounting and Reporting
Private Residential Buildings	<ul style="list-style-type: none"> • Behavioural Economics • Fiscal Support • Individual Homeowner's Repayment Capacity 	<ul style="list-style-type: none"> • On-bill financing Mechanism • Tailored Financial Product Availability

Drivers of Demand for and Supply of Energy Efficiency Investments in EU Buildings

EEFIG ranking of key drivers affecting **demand** and **supply** of energy efficiency investment by market segment

Demand

1	Standardization
2	Clear Business Case
3	Effective enforcement of regulation
4	Awareness at Key Decision Maker Level & Leadership
5	Buildings Regulation, Labeling and Energy Performance Certificates

Supply

1	Standardization
2	Regulatory Stability
3	Increased Investor Confidence & Change in Risk Perception
4	Transaction costs / simplicity
5	Measurement, Reporting & Verification (MRV) and Quality Assurance

Drivers of Demand for and Supply of Energy Efficiency Investments in EU Buildings

EEFIG ranking of key drivers affecting demand and supply of energy efficiency investment by market segment

Demand

	All	Financial Institutions only
1	Standardization	Buildings Regulation, Labeling and Energy Performance
2	Clear Business Case	Clear Business Case
3	Effective enforcement of regulation	Standardization
4	Awareness at Key Decision Maker Level & Leadership	Transaction costs / simplicity
5	Buildings Regulation, Labeling and Energy Performance Certificates	Effective enforcement of regulation

Conclusion

1

There is no "silver bullet"

2

There is a base line of cross-cutting drivers

3

Specific Measures are required for Specific Segments

4

Financial Institutions see Energy Efficiency Investment Supply for Buildings as a Key Use of European Structural and Investment Funds 2014-2020

1. Executive Summary
2. Framework
3. Drivers of Demand of And Supply for Energy Efficiency Investments in EU Buildings
- 4. Approaches and instruments to Stimulate Energy Efficiency Investments in Buildings**
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Who is the right party to address them?

Need to distinguish between policy led vs. market led activities

Step 3

- EFIG members made over thirty written submissions containing examples and analysis of existing and emerging financial instruments, whose increased use and wider development could further stimulate the market for energy efficiency investment in buildings.

Policy led instruments & approaches

1. Optimize use of European Structural and Investment Funds for energy efficiency in buildings
2. Standardisation and Improvement of Buildings performance Certificates
3. Open source EU Buildings Database
4. Industry and Finance supported national Buildings Renovation Roadmap

Market led instruments & approaches

1. Common underwriting and investment procedures
2. Proactive engagement and continuous improvement and usage of Energy Performance Certificates from Financial Institutions to reflect positive impact on property portfolio value
3. "Operational" Energy performance database
4. Project ratings
5. Link between Building energy performance and investment performance
6. Life cycle portfolio-wide sustainability programmes

Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

EEFIG Assessment of Selected Financial Instruments

EEFIG sees these financial instruments as being among those likely to fill the energy efficiency investment gap and offers this list as guidance as to the group's thinking and to focus its subsequent conclusions.

	Existing Financial Instruments	Best practice examples
1	Dedicated Credit Lines	Numerous: KfW, NRW.BANK, Kredex, EBRD Sustainable Finance Facilities (SEFF) etc.
2	Risk Sharing Facilities (Guarantee Funds and First-loss Facilities)	<ul style="list-style-type: none"> • IFC's CEEF programme (Hungary, Czech Republic, Estonia, Latvia, Lithuania and Slovakia) • France's proposal to use the obligation from article 7 of EED to create a national guarantee fund for renovation loans • EERSF in Bulgaria • European Energy Efficiency Fund (EEEF)
3	Direct and Equity Investments in Real Estate and Infrastructure Funds	<ul style="list-style-type: none"> • Numerous: Listed and unlisted real estate investment fund • Real Estate companies • Infrastructure funds
4	Energy Performance Contracting (Demand Driver)	Numerous: Barts Health Care Trust ⁵⁰ , Peterborough Council ⁵¹ London's RE:FIT programme created by the Greater London Authority (UK); Rhone-Alps OSER for deep retrofits of public buildings and Croatian ESCO HEP.

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	Emerging Financial Instruments	Best practice examples
1	On-Bill Repayment (Supply Driver)	Numerous examples in the US (NY, PA, CT, VT) Green Deal in the UK and Picardie region, France.
2	Green Bonds for Green Buildings (Supply Driver)	<ul style="list-style-type: none"> • Unibail Rodamco green building bond • Climate Bond Initiative • Various Development Bank issuers (World Bank, IFC etc) for general green bonds.
3	Energy Services Agreement (Demand Driver)	US providers such as Transcend Equity, Metrus Energy, Green City Finance, Abundant Power. UK example of Sustainable Development Capital LLP

Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

Connecting the Key Drivers with Specific Approaches:

EEFIG members discussed and were able to connect some of the markets and policy-led approaches and the instruments identified in previous slides to some of the priority drivers of demand and supply of energy efficiency investments. The analysis, shown in the next slides provides the building blocks to develop a practical framework to stimulate energy efficiency investment in buildings:

Selected Example , Demand Driver - Standardization * Applicable to all building Segments

Approaches and/or Instruments Proposed

* "M" Markets-led; "P" Policy-led

Standardization	Develop Common Procedures and Underwriting Practice	M
	Clear investment protocols to covert national buildings roadmap vision into energy efficiency investments	M
	Increased flow of and standardized tenders for public buildings renovation	P
	Guidance and Education for Public sector buildings managers	P
	Development and dissemination of tool kits to asset owners and portfolio managers to elicit refurbishment demand	M/P

Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

Connecting the Key Drivers with Specific Approaches:

Demand drivers with relevance for	Connecting Key drivers with specific approaches	Approaches and/or Instruments Proposed * “M” Markets-led; “P” Policy-led	
All building segments	1. Building Regulation	<ul style="list-style-type: none"> • Performance Monitoring (P) 	<ul style="list-style-type: none"> • Performance Certification Process (M)
	2. Certification, Energy Performance Certificates	<ul style="list-style-type: none"> • Better Data (P/M) 	<ul style="list-style-type: none"> • “Building Passports” (P)
	3. Standardisation	<ul style="list-style-type: none"> • Common Procedures (M) • Investment protocols (M) • Standardized tenders (P) 	<ul style="list-style-type: none"> • Education for public sector buildings managers (P) • Tool kits for asset owners and portfolio managers (P/M)
	4. Strong, stable, well enforced regulatory framework	<ul style="list-style-type: none"> • Mandatory up-take of energy efficiency measures (P) • Strengthened measures and regulation within Member States (P) 	<ul style="list-style-type: none"> • Promotion Integrated Financial Reporting (P) • Regulatory focus on refurbishment cycle of buildings (P) • EU Investor Confidence projects (P/M)
	5. Tailored Financial Product Availability	<ul style="list-style-type: none"> • Demand for Finance is supported by the availability of the supply of appropriate finance product (M) 	<ul style="list-style-type: none"> • Support the further development of selected tailored financial instruments (M)

Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

Connecting the Key Drivers with Specific Approaches:

Demand drivers with relevance for	Connecting Key drivers with specific approaches	Approaches and/or Instruments Proposed <small>* "M" Markets-led; "P" Policy-led</small>	
Commercial & Public buildings	<ol style="list-style-type: none"> 1. Clear Business case, 2. Leadership and awareness at key decision maker level 	<ul style="list-style-type: none"> • Design Performance Database based on US Models (M) • Implement Performance Database based on US Models (P) • Integration of sustainability risks into Fundamentals (P) 	<ul style="list-style-type: none"> • Public funds in line with Renovation Strategies with cost optimal solutions (P) • EU Investor Confidence project (M) • Resolve privacy issues (P)
Public	<ol style="list-style-type: none"> 1. Rules on Public Authority Procurement, Accounting, Reporting 2. Facilitation / Technical Assistance 	<ul style="list-style-type: none"> • Key decision makers and facilities managers must be responsible for energy use reduction (M/P) • Public Sector procurement Rules must be reviewed in light of the need to renovate Public Buildings at scale (P) 	<ul style="list-style-type: none"> • Balanced view of the benefits as well as costs of energy efficiency investments in public buildings (P)

Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

Connecting the Key Drivers with Specific Approaches:

Supply drivers with relevance for	Connecting Key drivers with specific approaches	Approaches and/or Instruments Proposed <small>* "M" Markets-led; "P" Policy-led</small>	
All building segments	1. Standardisation	<ul style="list-style-type: none"> Standardise Energy Performance Contracts (M) Mandatory training for procurement officers (P/M) 	<ul style="list-style-type: none"> Consider specialized insurance coverage (M) EU Investor Confidence project (M)
	2. Strong, stable, well enforced regulatory framework	<ul style="list-style-type: none"> Energy Efficiency to be a cornerstone of Europe's 2030 Climate and Energy framework (P) Effective transposition of EU regulation (P) 	<ul style="list-style-type: none"> Upgrade Buildings Regulation Enforcement (P) Develop on-bill mechanism (P)
	3. Use of ESI Funds 2014-2020 and Horizon 2020	<ul style="list-style-type: none"> Can unlock investment supply (P) Used in conjunction with, or to promote, dedicated credit lines, on-bill finance, the use of energy performance contracts and risk sharing facilities (P) 	<ul style="list-style-type: none"> Emphasis on Technical Assistance (P) Look to promote replicable energy efficiency refurbishment models in each sector through Horizon 2020 programme (P)

Approaches and Instruments to Stimulate Energy Efficiency Investments in Buildings

Connecting the Key Drivers with Specific Approaches:

Supply drivers with relevance for	Connecting Key drivers with specific approaches	Approaches and/or Instruments Proposed * "M" Markets-led; "P" Policy-led	
Commercial & Public buildings	1. Increased Investor Confidence and changes in risk perception	<ul style="list-style-type: none"> Energy performance certificates and Green labels are of increasing use when they support "green value" (M) Integration of Sustainability, Energy Efficiency and Carbon emissions into investment processes (M) 	<ul style="list-style-type: none"> Energy efficiency needs to be embedded in standard risk assessment methods, selection and monitoring processes (M) Owners and lenders need better data (M/P)
	2. Measurement, Reporting & Verification (MRV) and quality assurance	<ul style="list-style-type: none"> Clear, reliable and accountable MRV processes to be included in design of Common Procedures and Underwriting Practice (M) 	<ul style="list-style-type: none"> Policy support to market organization and accreditation in support of high quality standards, best practice and transparency (P)
Residential	1. Simplicity / reduced transaction costs	<ul style="list-style-type: none"> Develop new, simple, easily accessible, low interest rate, tax efficient, retail energy efficiency offers is to be marketed widely through various trusted retail channels (M/P) 	<ul style="list-style-type: none"> Implement a supportive fiscal regime designed to change homeowners' behaviour with respect of investing in the energy efficient refurbishment of their homes (P)



1. Executive summary
2. Framework
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4. Approaches and instruments

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6. Q & A

Recommendations and conclusions to Policy Makers:

1	Existing Buildings Regulations should be fully implemented, harmonized and consistently enforced across EU Member States
2	Future Regulatory Pathways for EU Buildings should provide concerted and consistent regulatory pressure to improve buildings efficiency:
3	High quality decisions and low transaction costs can only be delivered by easily accessible data and standard procedures
4	Reporting, accounting and procurement procedures must facilitate, and not hinder, appropriate energy efficiency investments in public buildings
5	The “at-scale” energy efficiency upgrade of residential buildings can only happen with a concerted address of the specific investment demand and supply drivers of this segment and the engagement and alignment of retail distribution channels
6	The targeted address of energy efficiency investment supply and technical assistance through the smart deployment of Structural and Investment Funds 2014-2020 and Horizon 2020

What should the European Commission / EU do?

1	Ensure effective transpositions of the existing EU Directives and effective local enforcement procedures regarding energy performance in buildings (incl performance certification)
2	Deliver regulatory stability for EE investment in building by providing long term regulatory visibility re energy efficiency especially in the context of the 2030 Climate and Energy package
3	Address the need for high quality buildings performance data and standards through Commission support of best practice policies and initiatives within Member States
4	Initiate process to remove accounting, reporting and procurement hurdles for investment in energy efficiency investments; create standard procurement procedures for EU public buildings
5	Benchmark and compare relative success of retail residential ee investment programmes in the Member States to ensure sharing and replication of standards and best practices
6	Ensure that MS connect the funding streams for national Buildings Renovation Roadmap (EED Art. 4) with financial instruments available in the context of structural funds/horizon 2020 to support energy efficiency, funds deriving from Energy Efficiency Obligation Schemes (Art. 7 EED) and funds from ETS

1. Executive summary
2. Framework
3. Drivers of demand of and supply for Energy Efficiency Investments in EU Buildings
4. Approaches and instruments
5. Recommendations and Conclusions

6.Q & A

Links for more information

This report can be downloaded at:

ec.europa.eu/energy/efficiency/studies/doc/2014_fig_how_drive_finance_for_economy.pdf

Commission website on energy strategy:

http://ec.europa.eu/energy/index_en.htm

Please direct your comments to:

ENER-feedback-eefig-report@ec.europa.eu

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