EUROPEAN ENERGY SAVING GUIDE 2016

Energy efficiency as the “first fuel” for the European Union

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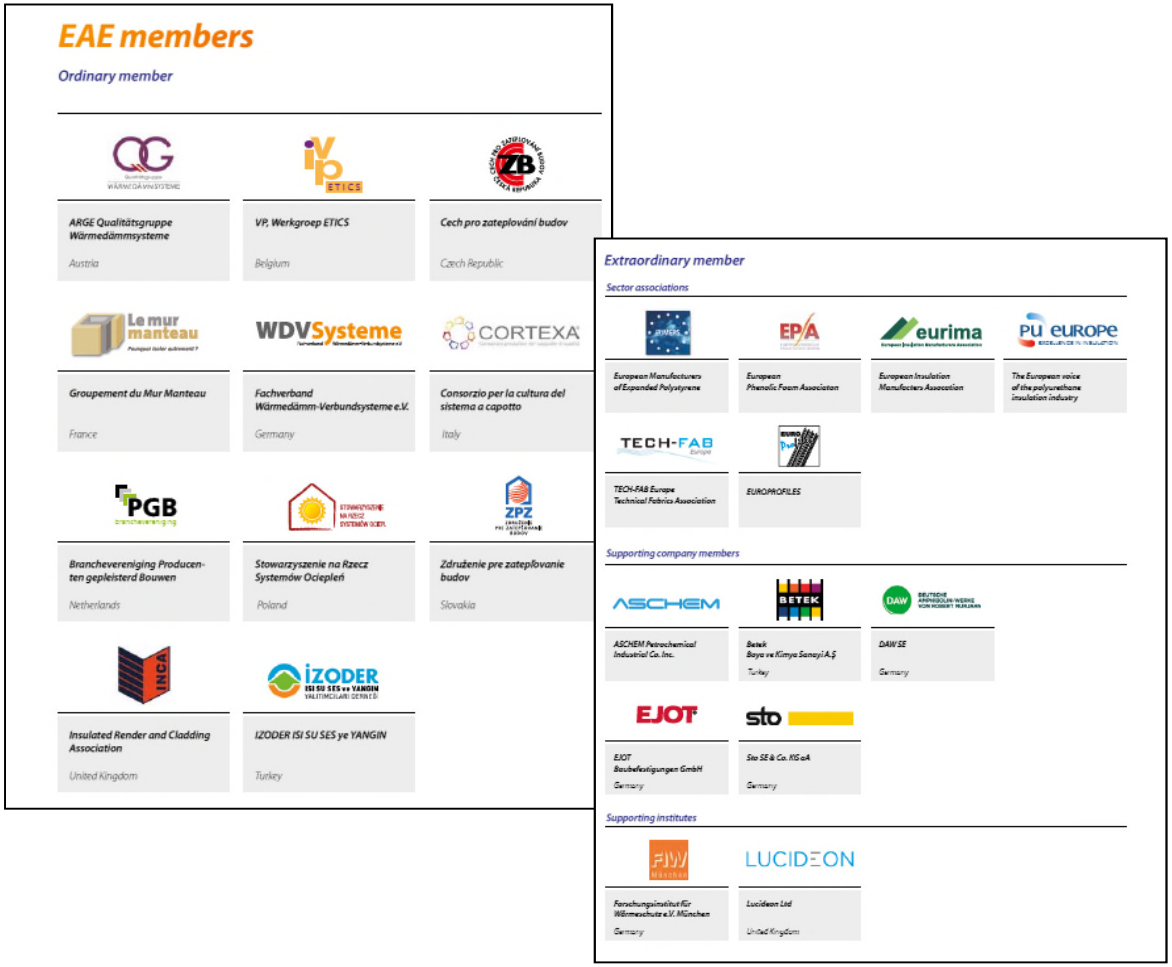
European Association for
External Thermal Insulation Composite Systems

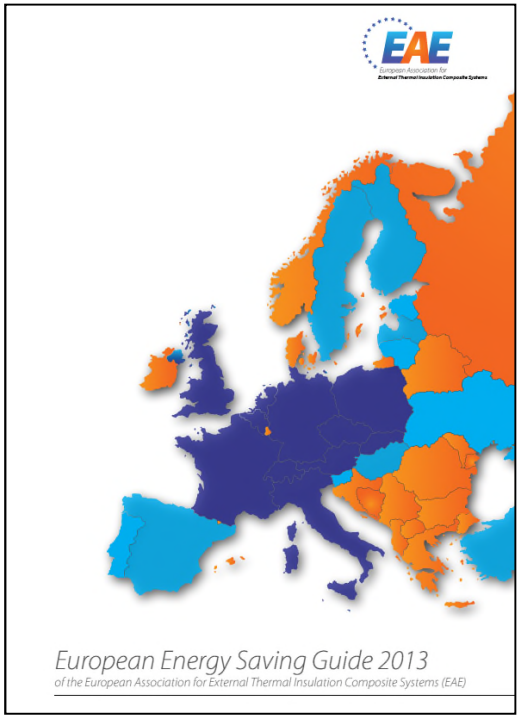
EAE

European Association for ETICS:
Partners for sustainable building and refurbishment in Europe invites to discuss their recommendations for creating an energy-efficient Europe



The Energy Saving Guide EAE is intended to multiply content and arguments for a wide range of policy-makers and all other interested public which seeks a profound summary of the most important facts, relationships and arguments in favour of greater energy efficiency in the building sector.

2012: First edition „ENERGY SAVING GUIDE“ from EAE



New Edition of the Energy Saving Guide 2016 as a publication

- gives an overview about how far we have got to achieve the 2020 and 2030 targets;
- explains why Member states are still far behind the schedule
- clearly points out the huge potential improvements of the thermal performance of buildings' envelopes offer for Europe's economic growth, employment and our environment

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Sources for the Energy Saving Guide:

Comprehensive analysis of 32 recent studies, publications and surveys on the subject of energy efficiency in Europe

Good news :
increasing political and economic awareness for thermal insulation and energy efficiency

Bad news :
In practice too little action and results

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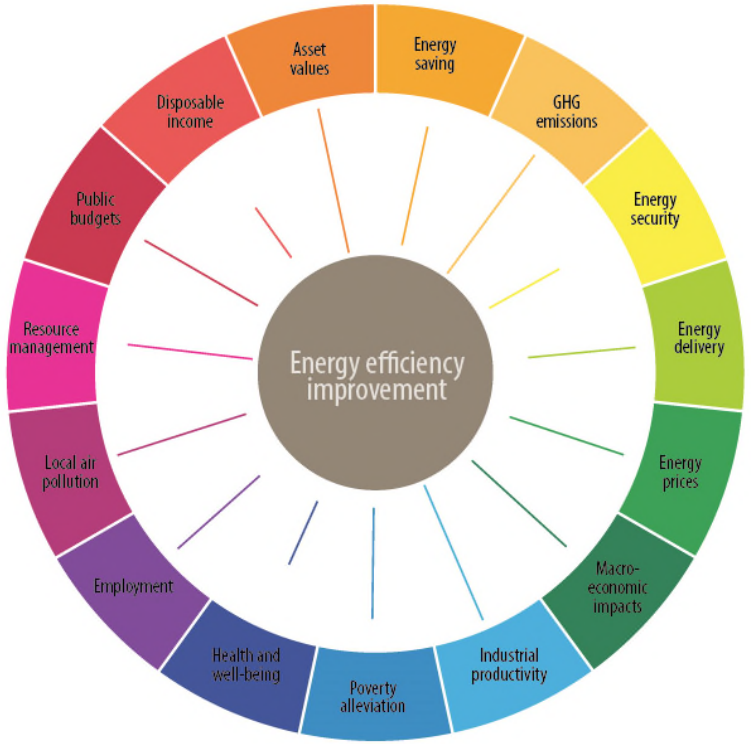
Content of the Energy Saving Guide 2016



Foreword by Claude Turmes, Member of European Parliament; working group for industry, research and energy:

“I´d like to argue that although there is no silver bullet, we have a whole toolbox consisting of a combination of regulation, technical assistance and third-party independent advice, financial support schemes combining tax incentives, low interest-rate loans and grants available in order to achieve our energy efficiency goals.
It is now up to the political leaders to show their commitment to an ambitious and binding energy efficiency target by 2030, backed by a robust governance system, to ensure that energy efficiency is indeed valued as the "first fuel" of the European Union.”

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Interview with Dr. Yamina Saheb – Scientific and technical project officer at the Research Center of the European Commission

On behalf of the European Commission Dr. Yamina Saheb analysed the role of the construction sector for Europe's economic development. In her study "Energy Renovation: The Trump Card for the new start for Europe" she demonstrates the huge potential, especially for energetic refurbishment if the building sock. To make use of this huge potential, however, a paradigm shift is necessary.

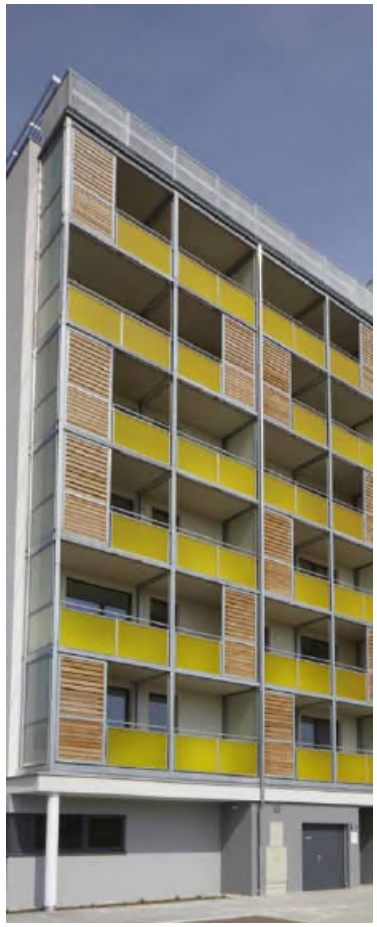
Rüdiger Schumann, Bottrop (DE)

“A city full of ideas”

- Project presentation of “Innovation City Bottrop” as German best-practise-example
- Annual rate of thermal renovation could be increased to about 8% in 2012/2013
- Examples of successful refurbishments include social housing sector

Article by Prof. Dr. Martin Treberspurg, Vienna (AT):
“More ideas, less energy consumption”

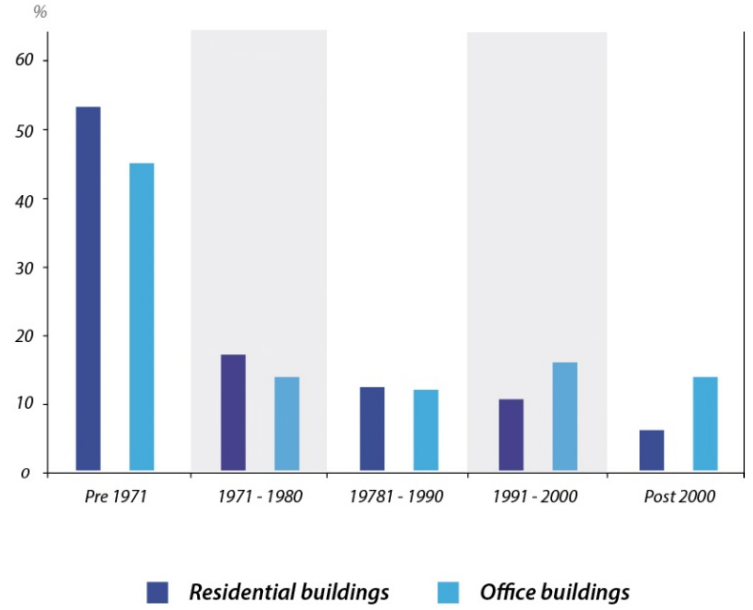
- the struggle between energy efficiency and architecture
- Convincing examples of symbiosis between architectural aesthetics and thermal refurbishment



Status quo – energy efficiency of Europe's building stock:

- Presentation of latest available facts & figures about Europe's building stock and energy consumption of buildings;

Year of construction / percentage of floor area (EU 27):



Source: BPIE model

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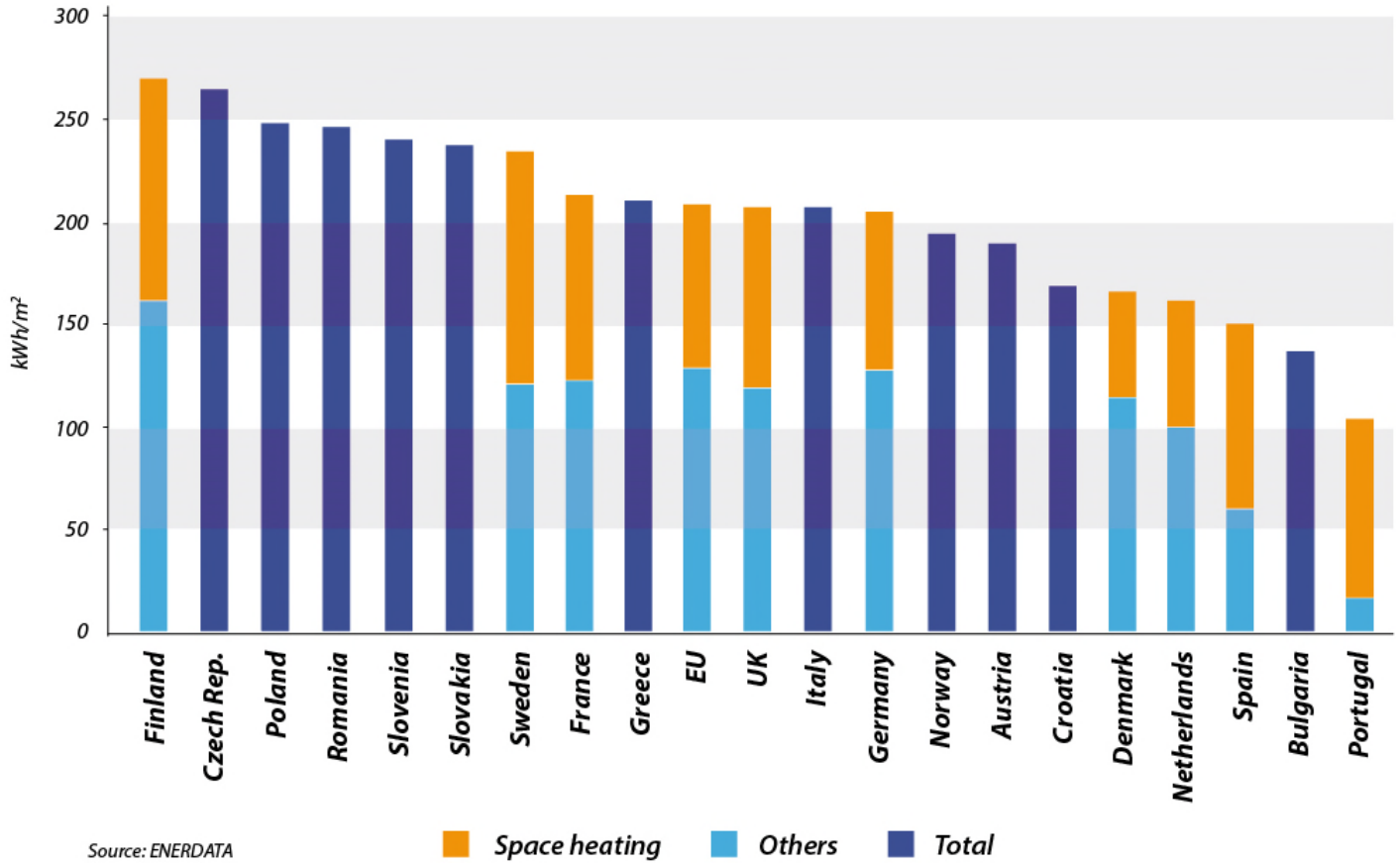
Specific energy consumption of buildings per m² (2012)



Source: ENERDATA

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Renovation measures modelled in Invert/EE-Lab.

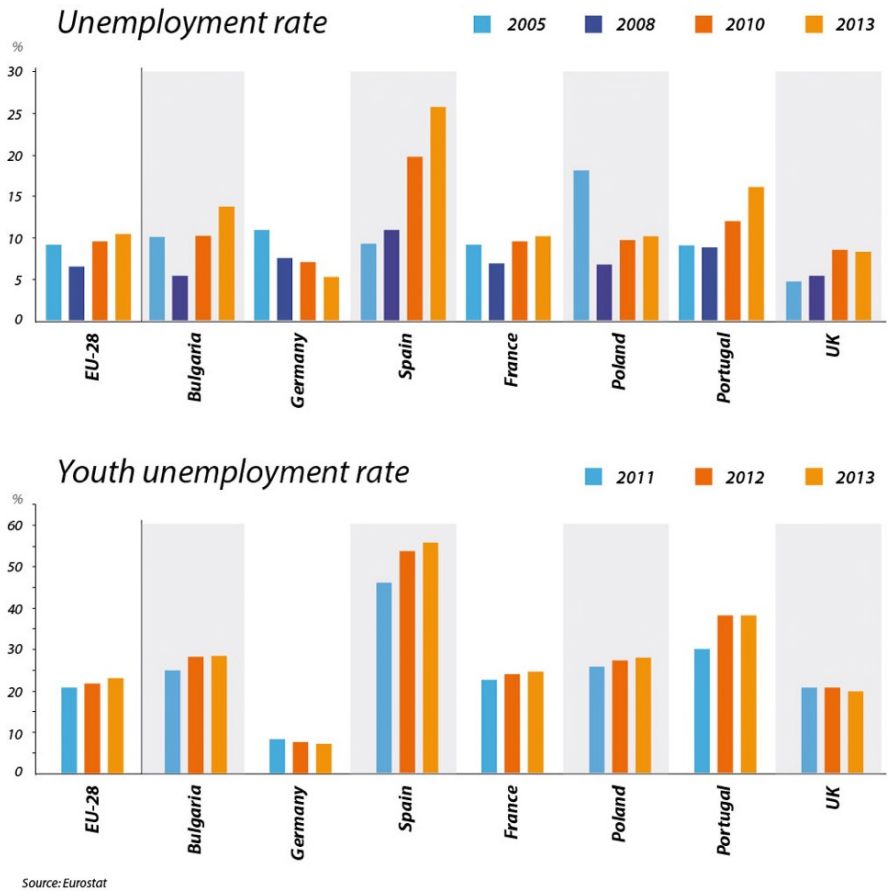
Differences in differnt countries and differend building categories occur due to different climate, traditions, building codes, barriers and technological opportunities.

	Standard	Good	Ambitious
Roof	10-15 cm of thermal insulation	20 cm of thermal insulation	30 cm of thermal insulation
Wall	5-10 cm of thermal insulation	15 cm of thermal insulation	20 cm of thermal insulation
Base	10 cm of thermal insulation	10 cm of thermal insulation	15 cm of thermal insulation
Windows	Double glass Ug=1.7-2.7 W/m²K	Double glass Ug=1-1.7 W/m²K	Triple glass Ug=0,65-1.7 W/m²K
Reduction space heating energy need (construction period <1950)	**21% - 47%**	**26% - 58%**	**44% - 85%**
Reduction space heating energy need (construction period 1950-1990)	**23% - 42%**	**25% - 52%**	**27% - 85%**
Reduction space heating energy need (construction period >1990)	**12% - 20%**	**10% - 39%**	**25% - 80%**

Argumentation: This is why Europe needs an energy efficiency offensive

Economy:

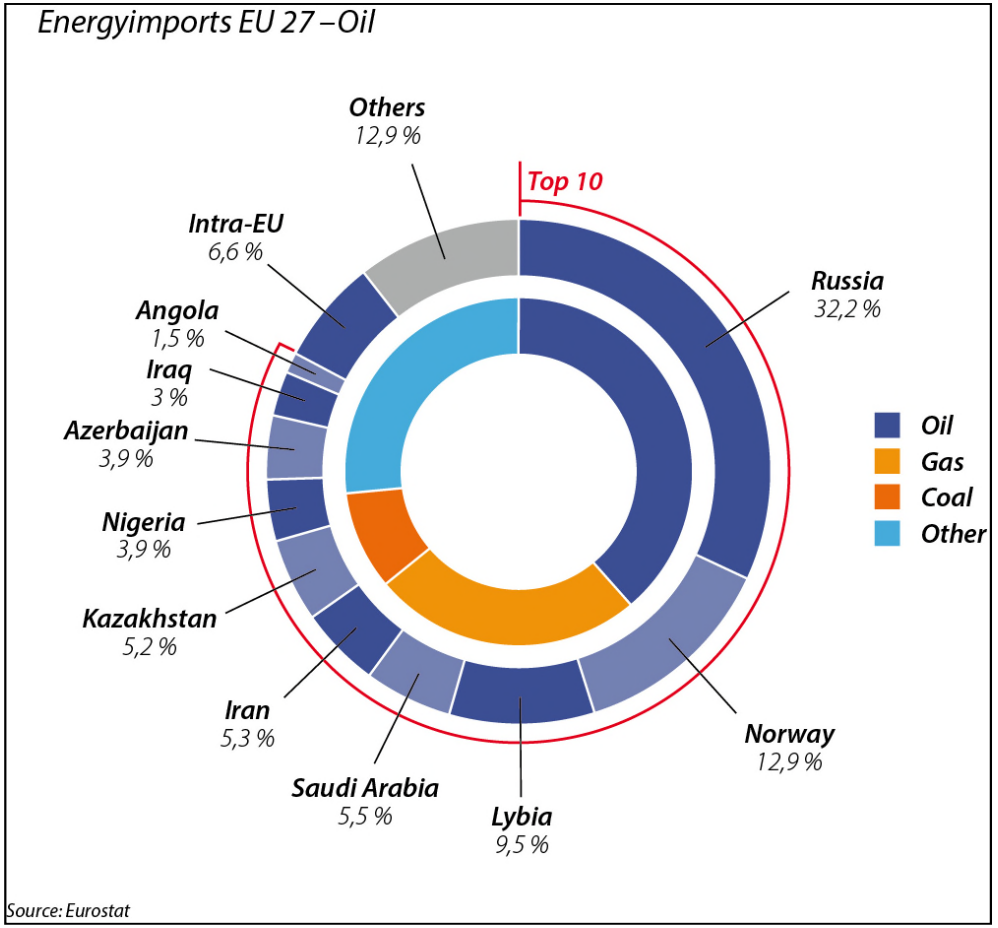
The economy of Member States would benefit from concerted action to increase the refurbishment rate; major benefit: work in the construction sector cannot easily be moved to other countries and regions; thus regions will benefit directly



Argumentation: This is why Europe needs more thermal refurbishment

Security of supply:

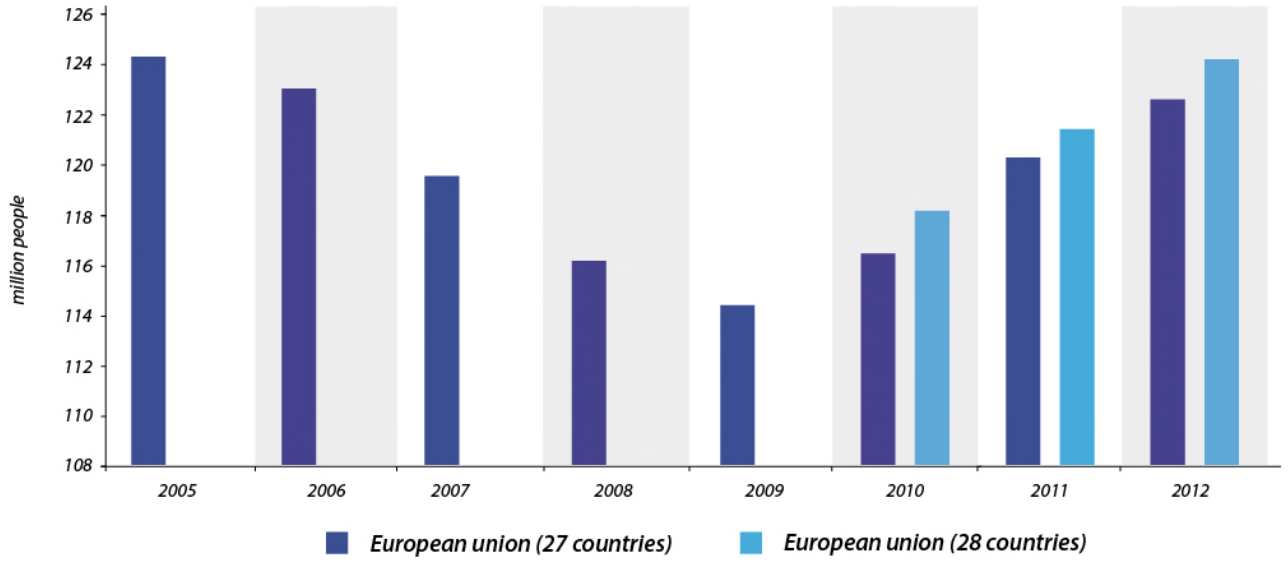
Europe significantly depends on energy imports from politically instable regions. This dependency can easily be reduced by energy savings.



Argumentation: This is why Europe needs more thermal refurbishment

Society: a comparison of European figures related to energy poverty clearly demonstrate the need to take action

Number of people at risk of poverty or socal exclusion, from 2005 to 2012



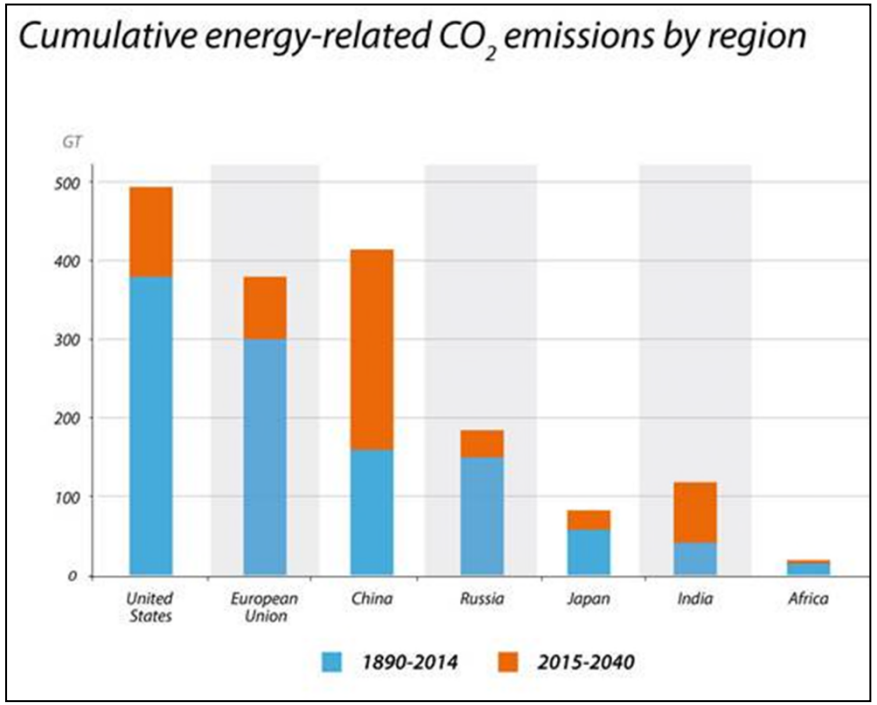
Source:Eurostat

Argumentation:

This is why Europe needs more thermal refurbishment

Environment:

The prevention of climate change is still one of the most important arguments for energy efficiency improvements achieved by thermal renovation



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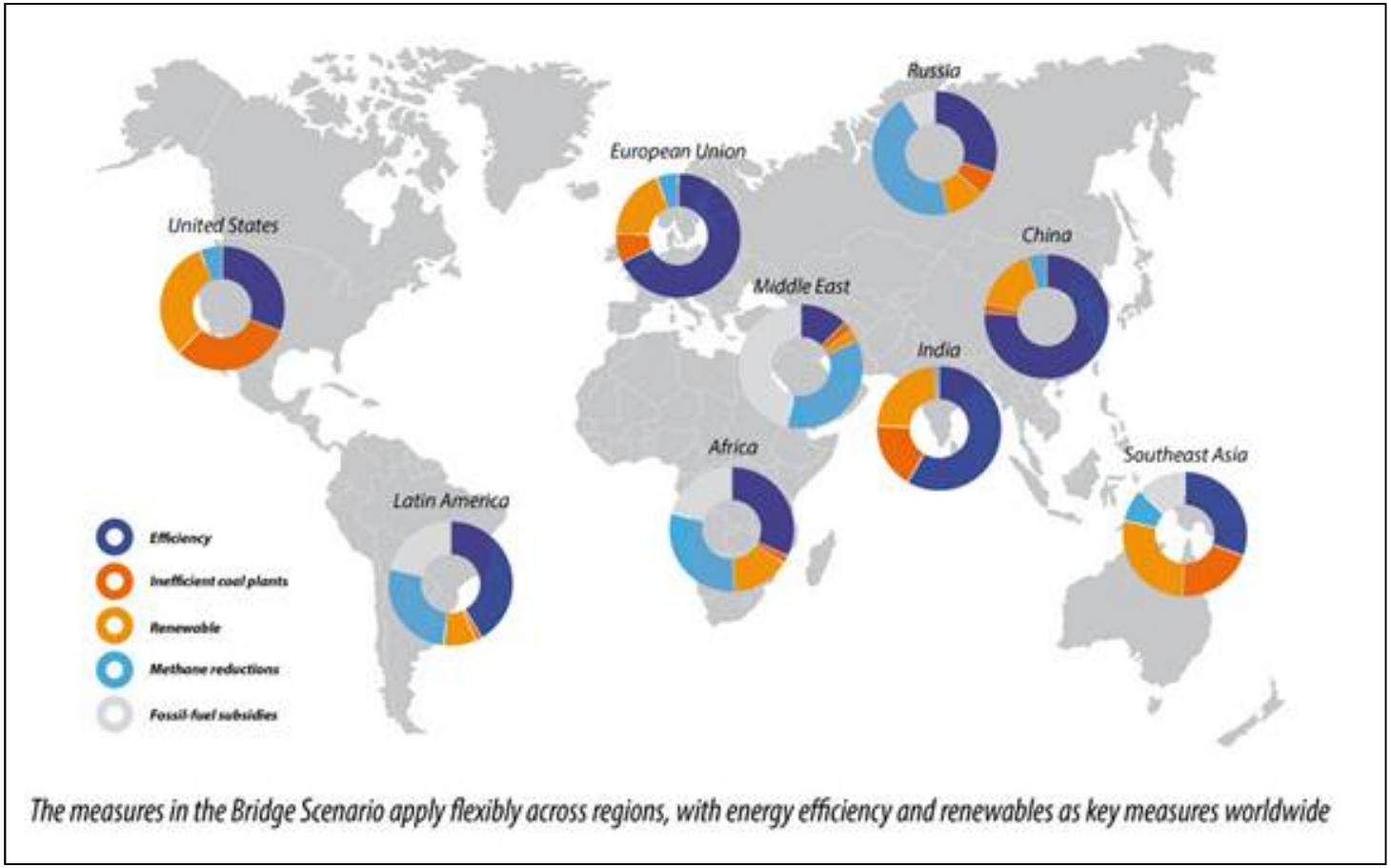
Proposal of the International Energy Agency for COP 21 in Paris 11/2015



Quelle: OECD/EA 2015

10 recommendations for creating an energy-efficient Europe

- Set new priorities
  Political measures focus almost only on new buildings. This should change towards renovation to develop the huge energy efficiency potential of buildings.

- Establish Europe-wide standards
  Energy efficient construction suffers from a lack of European harmonization. Member states have to intensify their efforts to establish uniform standards.

10 recommendations for creating an energy-efficient Europe

- Create investment security
  The sector needs long-term stable framework conditions in order to make economically sustainable investment decisions. Funding programs should also be open to technological advancements and not aim to benefit individual measures.

- Allow for new renting models
  Landlords do not want to invest in measures to the sole benefit of the tenants. Flat-rate rental contracts including heating costs could create an incentive for renovation.

10 recommendations for creating an energy-efficient Europe

- Promote renewable energies appropriately
  "Green energy forms" are still expensive. Therefore it is important with political commitment to promote energy efficiency by insulation – in order not to waste the eco-energy.

- Modernise social housing
  State / municipal investments in energy efficiency of social housing are a perfect win-win situation: Occupants would no longer face the risk of „energy poverty“ and in turn less public money would be required to subsidize the heating of apartments.

10 recommendations for creating an energy-efficient Europe

- Improvement in renovation quality
  Investments in education and training of planners, energy consultants and skilled craftsmen, and the definition of minimum standards will ensure quality and consumer confidence.

- Create modern funding instruments
  Modern funding instruments must therefore make use of subsidies or tax breaks for energy conscious building owners. Each euro invested in the funding would trigger a sum many times higher in terms of investment and tax income.

10 recommendations for creating an energy-efficient Europe

- Promote communication
  People need to become aware of energy efficiency. It is important to show the links between environmental protection, supply security and resource scarcity and energy-efficient apartments and offices

- Improve the data basis
  Comparability is the key to Europe's binding energy efficiency targets. It is essential to create a standardized framework conditions and monitor the implementation of efficiency guidelines.