
4. ENGLISH SUMMARY

Energy Related Requirements and accompanying measures for the building stocks in the central European Neighbouring countries

4.1 Introduction

The European Energy Performance of Buildings Directive (EPBD) is currently undergoing a recast. Building refurbishment is a major topic, since CO₂ emission reduction potentials are undisputed, but current regulations are considered not being extensive enough, resp. implementation ought to be supported. Especially the topics scope of the directive (e.g. 1000m² threshold for refurbishment), ambition level (definition of minimum performance requirements, possibly by benchmarking mechanism) and strengthening of the directive regarding the building certificates are concerned.

In order to support the German delegation in the EU council negotiations, but also in the public discussion about optimal strategies for achieving the energy saving potentials of the building stock, knowledge and a comparative analysis of current requirements and various approaches to realize article 6 of the EPBD as well as individual accompanying measures in different European countries are an important precondition. This project was set up to deliver this information.

This report was therefore created with the objective of delivering and clearly depicting detailed and up-to-date information on the implementation of article 6 of the EPBD and its accompanying measures in the central European countries (support programmes, tax incentives, other legal instruments etc.). All existing regulations up to the key date 5.1.2009 have been taken into account.

Germany, France, Belgium (Flanders), The Netherlands, Denmark, Sweden, Austria, United Kingdom, Poland, Luxembourg and the Czech Republic have been examined. On the basis of a questionnaire, created by BBR and distributed to the partners in the according countries, this study has been made. The editors of the different country reports are mentioned in the respective partial reports which can be found in the annex of this study.

The distributed questionnaire can be finding below.

5. Country-specific history

Chronology of building regulations

Requirements for existing buildings

Requirements for the systems engineering (HVAC)

6. Legal instruments

New national building directives due to EPBD

Which of these directives contain regulations for existing buildings?

Interim arrangements

Motivation for energy retrofitting of existing buildings

Analysis of the reference to the technical rules

Clarification of the legal framework for existing buildings

Non-legal instruments for the promotion of energy retrofitting of existing buildings

Other legal standards except the EPBD that lead indirectly to the energetic improvement of the building stock

7. Support programs

Energy related support programs for existing buildings

What is funded?

Requirements

Amount of the funding

Application for funds

Different case-specific rules

Acceptance of support programs in the population

8. Outlook

4.2 Summarising comparison

The following chapter summarizes the results of the analysis in tabular form. It aims to deliver a clear and concise comparison of the examined countries. Seven tables represent the most important issues of the questionnaire. These topics are included:

Chronology of building regulations

Requirements for existing buildings

Requirements for the systems engineering (HVAC)

Legal instruments

Motivation for energy retrofitting of existing buildings

Energy related support programs for existing buildings

Acceptance of support programs in the population

Detailed results for each country as well as additional information on various aspects, not suitable for condensed presentation in a table, are to be found in the country reports in the annex.

4.3 Chronology of building regulations			
Country	Regulation	Description	Entered into force
Germany	Energieeinspargesetz	Law for the reduction of energy in buildings. With this law, the government is able to decree regulations for energy savings in buildings	1976, (1980, 2001), 2005, 2009
	Wärmeschutzverordnung	Regulation for an energy saving thermal insulation of buildings	1977, 1984, 1995
	Heizungsanlagenverordnung	Regulation for energy savings of heating systems	1982, 1989, 1994, 1998
	Energieeinsparverordnung	This regulation sets minimum requirements for energy savings in buildings	2002, 2004, 2007, (2009)
	Erneuerbare-Energien Gesetz	This law shall support the development of renewable energy technologies that generates electricity	2000, 2004, 2009
	Erneuerbare-Energien-Wärme-gesetz	This law shall support the development of produced heat from renewable energies	2009
	Kraft-Wärme-Kopplungsgesetz	This law shall support the development of CHP-plants	2002, 2009
France	Réglementation Thermique (RT)	Regulation for the reduction of the energy demand of buildings	1974, 1976, 1988, 2000, 2005, (2010)
	RT existant	Regulation for an energy saving thermal insulation of existing buildings	2007
Belgium (Flanders)	Energieprestatie decreet	Energy performance of a building Energy label of a building	2004, 2006, 2007, 2008
Netherlands	Bouwbesluit 1992	Calculation of the Energy performance for residential and non-residential buildings Minimal Energy performance requirements Improvement of the minimal Energy performance requirements	1992, 1995, 1997, 1998, 1999, 2000
	Wet milieubeheer	General environmental regulations	1993
	Bouwbesluit 2003	Building regulation	2003, 2006, 2007, 2008, 2009
	Besluit energieprestatie gebouwen	Building certification procedure	2006,2007

Table 099 - Chronology of relevant building laws, summary (Part 1)

Country	Directive	Description	Effective from
Denmark	BR	Building regulation	1961, 1972, 1977, 1995, 2006, 2008, (2010)
	(BR-S)	Building regulation for small buildings	1985, 1998
Sweden	(1947:385)	Building law	1907, 1931, 1947
	1987:10	Design- and Building law	1987
	SFS 1994:847	Law on technical properties of building structure	1994
	SFS 1994:1215	Regulation on technical properties of building structure	1994
	SFS 1931:364 (1947...)	Building regulation	1931, 1947, 1959, 1987
	PFS 1967:175 (1975...)	Building regulation SBN	1967, 1975, 1980
	BFS 1988:18	Building regulation NR	1988
	BFS 1993:57 (2002...)	Building regulation BBR	1994, 2002, 2006
Austria	On regional level		Bis 2007
	OIB-RL 6	Energy savings and thermal insulation of buildings	2007
United Kingdom	Building act	All building regulations are based on this first building act	1984
	Building regulations SI	Regulation concerning technical requirements for buildings	1991, 2000, (2006, 2009)
	The Building (Approved Inspectors etc.) Regulations SI	Regulation for the authorisation of approved building inspectors	1985, 1998
Poland	Tekst ujednoczony ustawy z dnia 7 lipca 1994 r. - Prawo budowlane	Building law	1994, 2008
	Rozporządzenie Ministra infrastruktury	Regulation on training and examination procedure for building inspectors	2008
Luxembourg	Règlement grand-ducal	Several regulations with all energy related topics for buildings : Thermal insulation requirements, Inspection, Promotion of REN, energy efficiency etc.	1987-2008
Czech Republic	ČSN 73 0540	Building regulation	1962, 1964, 1979, 1992, 1994, 2002, 2005

Table 0100 - Chronology of relevant building laws, summary (Part 2)

4.4 Requirements for existing buildings			
Country	Triggered by	Requirements on	Description
Germany	At least 20% of the area of one outer building component with the same orientation are changed	Total building	maximum primary energy demand
		or: component level	maximum U-value outer wall
			maximum U-value windows
			maximum U-value roof
maximum U-value ground			
France	Renovation of a building with a floor area > 1000m ² . The value of the retrofit measure is higher than 25% of the whole building value excluding the land	Total building	maximum primary energy demand
	Other	component level	maximum U-value outer wall
			maximum U-value windows
			maximum U-value roof
maximum U-value ground			
Belgium (Flanders)	Reconstruction or expansion of at least 800m ³	Total building	maximum k-level (average u-value)
			maximum e-level (efficiency)
		and: component level	maximum U-value outer wall
	maximum U-value windows		
	maximum U-value roof		
	Reconstruction or expansion of less than 800m ³ , new components, change of function of at least 800m ³	component level	maximum U-value outer wall
maximum U-value windows			
maximum U-value roof			
maximum U-value ground			
Netherlands	All refurbishment measures	component level	minimal Rc-value outer wall
			minimal Rc -value windows
			minimal Rc -value roof
			minimal Rc -value ground
Denmark	At least 20% of the area of the outer building component are changed, or the value of the retrofit measure is higher than 25% of the whole building value excluding the land	component level	Cost efficient energy saving measures have to be realised. (Wall, roof, windows, ground, heating system etc.)

Table 0101 – Requirements for refurbishment of the building stock, summary (Part 1)

Country	Triggered by	Requirements on	Description
Sweden	Renovation or expansion regardless of which scale	Total building	maximum end energy demand
		or: component level	maximum U-value outer wall
			maximum U-value windows
			maximum U-value roof
maximum U-value ground			
Austria	Renovation of a building with a floor area > 1000m ² . At	Total	maximum heating

Country	Triggered by	Requirements on	Description
	least 20% of the area of the outer building component are changed, or the value of the retrofit measure is higher than 25% of the whole building value excluding the land, or when three of the following components are changed at the same time: Windows, roof, outer wall, HVAC system	building	demand
United Kingdom	Expansion	component level	maximum U-value outer wall
			maximum U-value windows
			maximum U-value roof
			maximum U-value ground
	Expansion of a non-residential building (expansion of more than 100m ² and at least 25% of the existing floor area)	Total building	Target emission rate
			component level
maximum U-value windows			
maximum U-value roof			
maximum U-value ground			
Component is changed	component level	maximum U-value outer wall	
		maximum U-value windows	
		maximum U-value roof	
		maximum U-value ground	
Poland	Wert der Renovierungsmaßnahme ist größer als 25% des gesamten Gebäudewertes, abzüglich des Grundstücks-wertes	Total building	maximum primary energy demand
			component level
		maximum U-value windows	
		maximum U-value roof	
		maximum U-value ground	
Luxembourg	Expansion of at least 75m ³	Total building	maximum primary energy demand
			maximum heating demand
	Component is changed	component level	maximum U-value outer wall
			maximum U-value windows
			maximum U-value roof
maximum U-value ground			
Czech Republic	At least 20% of the total outer building surface is changed or the renovation leads to a change in the energy demand of the building of at least 25%	Total building	maximum end energy demand
			and: component level
		maximum U-value windows	
		maximum U-value roof	
		maximum U-value ground	

Table 0102 - Requirements for refurbishment of the building stock, summary (Part 2)

4.5 Requirements for the systems engineering (HVAC)		
Country	Requirements	Regulated in
Germany	Inspection of air conditioning units	EnEV 2007
	Starting of heating boilers	EnEV 2007
	Distribution systems and domestic hot water appliances	EnEV 2007
	Air conditioner and other ventilation systems	EnEV 2007
France	Renewable energy pellet systems	RT 2000/RT 2005/RT existent
	Heating boilers	RT 2005/RT existent
	Distribution systems and domestic hot water appliances	RT 2005/RT existent
	Radiators	RT 2005/RT existent
	Air conditioner and other ventilation systems	RT 2005/RT existent
	Efficiency of lighting systems in non-residential buildings	RT 2005/RT existent
Belgium (Flanders)	Inspection of air conditioning units	Vlarem
	Inspection of heating systems	Vlarem
The Netherlands	Inspection of air conditioning units in non-residential buildings	Wet milieubeheer
Denmark	Inspection of oil-fired heating systems	BR 2008
	Heating boilers	BR 2008
	Inspection of air conditioning systems and other ventilation systems	BR 2008
Sweden	Efficiency of electric heating systems	BFS 2008:20, BBR 16
	Efficiency of electric components	BFS 2008:20, BBR 16
	Ventilation systems	BFS 2008:20, BBR 17
Austria	Ventilation systems and domestic hot water appliances	RL 6
Great Britain	Heating boilers	Domestic Heating Compliance Guide; Non-domestic Heating, Cooling and Ventilation Compliance Guide
	Distribution systems and domestic hot water appliances	Domestic Heating Compliance Guide; Non-domestic Heating, Cooling and Ventilation Compliance Guide
	Starting of central heating systems	Domestic Heating Compliance Guide; Non-domestic Heating, Cooling and Ventilation Compliance Guide
	Air conditioner and other ventilation systems	Domestic Heating Compliance Guide; Non-domestic Heating, Cooling and Ventilation Compliance Guide
	Inspection Regulation	Domestic Heating Compliance Guide; Non-domestic Heating, Cooling and Ventilation Compliance Guide

Table 0103 – Requirements for systems engineering, summary (Part 1)

Country	Requirements	Regulated in
Poland	Air change rate	Prawo Pudowlane
	Inspection of air conditioning systems	Prawo Pudowlane
	Air conditioning systems and other ventilation systems	Prawo Pudowlane
	Insulation of pipes	Prawo Pudowlane
Luxemburg	Air-conditioning systems	Lux EeB
	Inspection of oil/gas fired heating systems	Lux EeB
Czech Republic	Heating systems	150/2001 Coll.
	Ventilation systems	193/2007 Coll
	Ventilation systems in non-residential buildings	193/2007 Coll
	Domestic hot water appliances	194/2007 Coll

Tabelle 0104 - Requirements for systems engineering, summary (Part 2)

4.6 Legal instruments			
Country	New national building directives due to EPBD	Which of these directives contain regulations for existing buildings	Interim arrangements
Germany	Existing EnEV has been adapted	EnEV	Inspection of old air conditions, depending on the year of commissioning, creation of certificates for non residential buildings only from 1.7.2009
France	RT 2005 RT existent	RT existent	Partly interim arrangements for ventilation systems and ovens until 30 th June 2009
Belgium (Flanders)	EPB Decreet, Vlareem	EPB Decreet, Vlareem	The last interim arrangements ended at 1st January 2009
The Netherlands	Besluit energieprestatie gebouwen (new), Bouwbesluit (adjusted), Wet milieubeheer (adjusted)	Bouwbesluit, Wet milieubeheer	The last interim arrangements ended at 1st January 2009
Denmark	SBI-decree 213, Adjustment of BR 95 and BR-S 98, Ley No. 585, Assimilation of decrees 217, 218, 339, 1296 and 1104	213, 217, 218, 339, 585, 1104, 1296	-
Sweden	SFS 2006:985, SFS 2006:1592, SFS 1994:847 > Building regulation BBR	Building regulation BBR	The actual swedish building regulation BFS 2008:20, BBR 16 (Boverket) entered into force at 1 st February 2009 with a transition period until 1st January 2010
Austria	OIB-RL 6 – Energy saving and insulation, OIB-guideline for the energy-technical behaviour of buildings, EAVG	OIB-RL 6, EAVG	The last interim arrangements ended at 1st January 2009
Great Britain	Building Regulation 2000 (Adjustment through part L)	Documents L1B and L2B of the building regulation	-
Poland	Prawo budowlane in 2007 and some later changes	Prawo budowlane	The last interim arrangements ended at 1st January 2009
Luxemburg	LuxEeB	LuxEeB	Requirements for non-residential buildings will enter into force on 1st January 2010
Czech Republic	Energiemanagementgesetz	Energiemanagementgesetz	The last interim arrangements ended at 1st January 2009

Table 0105 – Legal instruments, Summary

4.7 Motivation for energy retrofitting of existing buildings				
Country	Reference to CEN Standards	Legal framework for existing buildings (beyond EPBD)	Non-legal instruments for the promotion of energetic refurbishment	Other legal standards except the EPBD that lead indirectly to the energetic improvement of the building stock
Germany	Yes (from 2009)	Decree on heat cost allocation	Support program for energy consultancy	No
			Support for the combination of architectural and energy related quality	
			Demonstration program for energy related refurbishment of buildings	
France	No	For renovation works the building owner has to pay	National program for research and examination for energy in the built environment	No
		The landlord can transfer expenses for the general repairs to the tenant	White certificates Promotion for the improvement of energy efficiency and thermal protection	
Belgium (Flanders)	Yes	Exception in case of building certificate calculation	Advertising campaign for energy certificates	REG decree for the promotion of energy efficiency measures and sustainable energy supply
			Initiative for passive house schools	
			Promotion for energy consulting	
			Informational database for construction products	
			Loan for energy related renovation	
Netherlands	In process	In exceptional cases the communities can force building owners to improve the quality of their buildings (aanwizingsbevoegdheid)	Information campaign for the promotion of energy related renovation of existing buildings	Associations of residential building owners are obliged to build financial reserves for maintenance and improvements of their buildings
		The maximum rental is set by the ministry VROM		
Denmark	Yes	Right of the landlord to add the costs for energy investments to	Discontinuation of traditional double glazing and promotion	Heat supply law
				Law for

		the rental	of very efficient glazing	regional planning
Sweden	Not obligatory	-	Information campaign for energy saving in the residential sector	Voluntary opportunity for labelling of energy efficient windows

Table 0106 - Motivation for energy retrofitting of existing buildings, Summary (Part 1)

Country	Reference to CEN Standards	Legal framework for existing buildings (beyond EPBD)	Non-legal instruments for the promotion of energetic refurbishment	Other legal standards except the EPBD that lead indirectly to the energetic improvement of the building stock
Austria	Yes	None	Goal-oriented building promotion	No
United Kingdom	Yes	In the case of selling or renting of a building a Home Information Pack has to be presented	Energy consulting system for heating-and domestic hot water systems	No
		Landlord energy saving allowance	Social grants for the improvement of energy efficiency	
Poland	Yes	-	"Thermal-Modernisation-Fund" for the energetic modification of existing buildings	No other legal norms existent
Luxembourg	No	Without a construction project doesn't exist a legal obligation for energy related renovation Oil-fired heating boilers have to fulfil a minimum efficiency	- Promotion of energy consultings. For existing buildings the maximum grant is 1500€. These consultings are obligatory when grants for renovation are used - Campaigns of the ministries of economy and foreign trade	The LuxEeB is the only regulation that gives energy related requirements for existing buildings
Czech Republic	Partly, in process	Communes have to fulfil the legal requirements when doing energy related renovations but there is no legal obligation for conducting energy saving renovations	- Energy consulting and information centres initiated by the ministry of industry and trade - Campaign for the sensibilisation of possibilities to save energy in residential buildings	- Admission for experts for the certification of energy efficiency of buildings through the ministry of industry and trade - Law 458/2000 Coll –This

Country	Reference to CEN Standards	Legal framework for existing buildings (beyond EPBD)	Non-legal instruments for the promotion of energetic refurbishment	Other legal standards except the EPBD that lead indirectly to the energetic improvement of the building stock
				energy law controls the responsibilities and rights of the national energy attendance authority

Table 0107 - Motivation for energy retrofiting of existing buildings, Summary (Part 2)

4.8 Energy related support programs for existing buildings				
Country	Support program	Mechanism	Building type	What is supported
Germany	KfW-Programm Energieeffizient Sanieren (CO ₂ -Gebäudesanierungsprogramm)	credit & grant	Residential buildings	Overall energy related refurbishment on different levels as well as single measures
	KfW-Wohnraum modernisieren – Öko-Plus (Energieeffizient sanieren as from 1.4.2009)	credit	Residential buildings	Insulation, windows, heating and ventilation system
	Marktanreizprogramm (BAFA)	grant	All	Renewable energy technologies
	Programm zur energetischen Sanierung von Bundesgebäuden	grant	Public Sector	Overall energy related refurbishment on different levels as well as single measures
	Energetische Sanierung der sozialen Infrastruktur	grant	Public Sector	Overall energy related refurbishment on different levels as well as single measures
	KfW-Programm Energieeffizient Sanieren – Kommunen	grant	Public Sector	Overall energy related refurbishment on different levels as well as single measures
	KfW-Sozial Investieren- Energetische Gebäudesanierung	grant	Public Sector	Overall energy related refurbishment on different levels as well as single measures
	Regional support programs			
France	TVA à 5,5%	Tax reduction	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.
	-	Tax reduction	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.
	ANAH (Agence nationale de l'habitat)	credit & grant	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.
	DDE (Direction départementale de l'Équipement)	grant	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.
	OCIL Office Central Interprofessionnel du Logement	credit	Residential buildings	Insulation, windows, heating and ventilation system
	P.A.H. „Caisse d'Allocations Familiales“	credit	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.
	Plan d'épargne	credit	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.
	Pensionsfonds	grant	Residential buildings	Insulation, Heating

Table 108 - Energy related support programs for existing buildings, Summary (Part 1)

Country	Support program	Mechanism	Building type	What is supported
Belgium (Flanders)	Fiscale voordelen	Tax reduction	Residential buil.	Insulation, windows, heating and ventilation system
	Vlaamse Dakisolatiepremie	grant	Residential buil.	Insulation
Netherlands	UKR Naar energieneutraal wonen	grant	All	Renewable energy technologies and energy efficient technologies
	UKP Duurzame Warmte	grant	All	Renewable energy technologies and energy efficient technologies
	Regeling Duurzame Warmte	grant	Residential buildings	Renewable energy technologies and energy efficient technologies
	Hypotheekrenteaftrek	Tax reduction	Residential buildings	Overall energy related refurbishment on different levels as well as single meas.
	MIA	Tax reduction	Non-Residential	Overall energy related refurbishment on different levels as well as single meas.
	VAMIL	Tax reduction	Non-Residential	Overall energy related refurbishment on different levels as well as single meas.
	EIA		Non-Residential	Overall energy related refurbishment on different levels as well as single meas.
	- Regeling Groen Beleggen	credit	Residential buildings	Overall energy related refurbishment on different levels as well as single meas.
Denmark	-	Tax reduction	All	Overall energy related refurbishment on different levels as well as single meas.
Sweden	Solar heating support	grant	All	Solar thermal
	Modification of heating systems	grant	All	Change from electrical heating to new technologies
Austria	Wiener Tewosan	credit & grant	All	Overall energy related refurbishment on different levels as well as single meas.
	Niederösterreichische Eigenheim Sanierungsförderung	grant	Residential buildings	Overall energy related refurbishment on different levels as well as single meas.
	energie:bewusst Kärnten	grant	All	Overall energy related refurbishment on different levels as well as single meas.
	Oberösterreichischer Energiesparverband	grant	All	Overall energy related refurbishment on different levels as well as single meas. Especially renewable energies
	Landesenergieverein Steiermark	grant	Residential buildings	Overall energy related refurbishment on different levels as well as single measures. Especially renewable energies
	www.salzburg.gv.at	grant	Residential buildings	Overall energy related refurbishment on different levels as well as single meas.
	Energieausweiszentrale Vorarlberg	grant	Non-Residential	Overall energy related refurbishment on different levels as well as single meas.
	Energieausweis Burgenland	credit	Residential buildings	Overall energy related refurbishment on different levels as well as single meas.

Table 109 - Energy related support programs for existing buildings, Summary (Part 2)

Country	Support program	Mechanism	Building type	What is supported
United Kingdom	Carbon Trust	grant	All	Overall energy related refurbishment on different levels as well as single measures.
	Salix Finance	credit & grant	Non-Residential	Overall energy related refurbishment on different levels as well as single measures.
	Scottish Power Green Energy Trust	grant	Non-Residential	Renewable energy technologies
	Magic Boiler Scheme	grant	Residential buildings	Heating systems
	Warm Front	grant	Residential buildings	Energy efficiency and heating systems
	Carbon Emissions Reduction Target (CERT)	grant	Residential buildings	Energy efficiency and heating systems
	Low Carbon Buildings Program - Phase 1	grant	Residential buildings	Renewable energy technologies
	Low Carbon Buildings Program - Phase 2	grant	Public sector	Renewable energy technologies
Poland	Thermo-Modernisation-Fund Gospodarstwa Krajowego	grant	Public & Resid. sector	Overall energy related refurbishment on different levels as well as single measures.
	Thermo-Modernisation-Bonus Gospodarstwa Krajowego	grant	Non-Residential	Overall energy related refurbishment on different levels as well as single measures.
Luxembourg	Règlement grand-ducal du 21 décembre 2007	grant	Residential buildings	Blower-Door-Test, Insulation, windows, renewable energy heating systems, ventilation systems
Czech Republic	Governmental program A and B	grant	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.
	"Regeneration of prefabricated concrete slab real estates"	grant	Residential buildings	Efficient heating systems that replace old ones
	Support for the elimination of defects in prefabricated concrete slab real estates	grant	Residential buildings	-
	"PANEL"-Program	grant	Residential buildings	Efficient heating systems that replace old ones
	Českomoravská záruční a rozvojová banka	credit	Residential buildings	Overall energy related refurbishment on different levels as well as single measures.

Table 110 - Energy related support programs for existing buildings, Summary (Part 3)

4.9 Acceptance of support programs in the population		
Country	Acceptance/ Utilisation	Comments
Germany	High	High acceptance in the population. Especially the CO2 building renovation program and the market stimulation program
France	Medium/High	The acceptance is increasing continuously. Main stimulation systems are the tax reduction followed by the reduced VAT for renovation products
Belgium	Medium	Due to different promotion programs in the three regions of Belgium, there is no clear message to the people
Netherlands	Low	Some programs are not well-known by the building owners (e.g. Green loans)
Denmark	-	No promotional programs existent
Sweden	-	No adequate information available
Austria	Medium/High	Positive perception in the population. High utilisation rate especially by public developers. Private developers more reserved
United Kingdom	-	No adequate information available
Poland	-	No adequate information available
Luxembourg	Medium	The support programs are accepted very differently. Striking are especially the numbers for solar thermal systems, photovoltaic, central split logs boilers and wood-gasification
Czech Republic	High	Supported mortgages for young people under 36 years and support programs for renovations

Table 111 - Acceptance of support programs in the population, Summary

4.10 Conclusive Summary

Comparing the results of the assessed countries, big differences as well as numerous similarities regarding the implementation of article 6 EPBD can be found. Especially to be mentioned are the following fields:

Triggers for energy requirements in case of refurbishment

In most countries the current approach of the EPBD regarding the trigger for energy requirements (changes of more than 25% of the external surface of a building or renovation measures' costs are more than 25% of the buildings value) has been implemented. Another popular approach is based on energy saving renovation of components (façade, windows etc.). A regulation on the basis of components stresses the opportunities of cost efficiently linking energy saving and maintenance measures more than regulation on a building basis. Furthermore, a component related regulation prevents building owners, being afraid of the obligation to perform a complete refurbishment, from resigning from the project. An expansion of the energy efficient refurbishment to more or all parts and systems of a building is to be preferred and also makes, due to various synergy effects good economic sense. This should be emphasized by corresponding support instruments and advisory services.

Required level of energy efficient refurbishment

In some countries the level of energy saving requirements for the building stock is higher than in others. Thereby not only climatic differences play a role. It is obvious, that especially countries with longer history of energy regulations for buildings set higher standards.

Standards for refurbishment partly define very high, easy to reach maximum energy consumption values, which locks up large and economically feasible energy saving potentials.

Optimization potential in developing ambitious and economically viable standards can generally be found in various countries.

Incentives and information on energy-saving renovation

In terms of funding, massive differences among the countries are obvious. All, from continuous and well dimensioned support programmes to having no energy efficiency support programmes in place can be found. This is one of the reasons leading to partly very deviating refurbishment rates (in terms of energetic valorization) in the Central European countries.

Granting of soft loans, which can lead to a financial leverage with a factor >10, has proven to be successful.

Especially in Eastern Europe, resources from structural funds (e.g. via revolving funds) could be used.

Providing proper information for investors and executing companies additional to funding incentives plays an important role, information campaigns are set up in most countries. Capacity building (training of technicians, architects, engineers, etc) is a major element in order to avoid low quality implementation and bottlenecks regarding resources.

In general it can be stated, that within the European context, Germany is equipped with a well coordinated energy efficiency bundle consisting of legal framework (ENEV 2009 and its further development), funding (KfW funding programmes for energy saving refurbishments) and information campaigns (e.g. internet portal of BMBVBS for refurbishment) and thus may act as role model.