

## **WP4 – COMMUNICATION TOWARDS PUBLIC AUTHORITIES**

### **FINAL REPORT – DEVELOPMENT IN PARTNER COUNTRIES**

**Title**

WP4 – Communication towards Public Authorities  
Final report – development in partner countries

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## **1. Introduction**

The housing market in most countries is highly regulated. This poses a substantial barrier for innovative building concepts, especially for passive and very low energy houses and technologies. As the housing market is a very sensitive political issue, public authorities (officials as well as politicians) behave very "conservative", meaning that they tend to keep regulation to protect the public from unreliable technologies.

This work package was focused on the know-how transfer towards public authorities (politicians and civil servants). This work package was strongly based on the specific situation in participating countries and an intensive exchange of experience within the consortium relevant stakeholders from public authorities.

The final report recapitulates the development of passive houses in partners' countries since the PASS-NET project started (11/2007), and is mainly focused on change of the attitude of public authorities toward passive houses and change of the subsidies in partners' countries.

This study was developed in the framework of the IEE project "PASS-NET".

## 2. Change of attitude towards passive houses

According to the EU goals towards energy efficiency in buildings, almost in all of the partners' countries there is a significant movement towards building of the public buildings (schools, kindergartens) in passive house standard. In some of the countries (Austria, Germany) is increasing the number of places (cities, lands) with obligation to construct new public buildings low energy or passive house standard.

### 2.1. Summary per country

Country	Description												
Austria	<ul style="list-style-type: none"> <li>• 01/2008 Lower Austria - Public buildings of the province have to be built in passive house standard.</li> <li>• 01/2008 Vorarlberg - The "Servicepaket Nachhaltig:Bauen" for communities led to a boom of high energy efficient public buildings - mainly in passive house standard including retrofits. Non-profit developers are obligated to build multi-family houses in passive house standard. Because of that the average heat demand of all multi-family houses (non-profit and private developer) improved considerably since 2007: <table border="1" data-bbox="507 958 1177 1115" style="margin-left: 20px;"> <thead> <tr> <th>Year</th> <th>Multi-family houses</th> <th>Single-family houses</th> </tr> </thead> <tbody> <tr> <td>2006</td> <td>42 kWh/m<sup>2</sup>a</td> <td>56 kWh/m<sup>2</sup>a</td> </tr> <tr> <td>2007</td> <td>38 kWh/m<sup>2</sup>a</td> <td>52 kWh/m<sup>2</sup>a</td> </tr> <tr> <td>2009</td> <td>21 kWh/m<sup>2</sup>a</td> <td>38 kWh/m<sup>2</sup>a</td> </tr> </tbody> </table> </li> <li>• 03/2009 Lower Austria - Lower Austria professes to energy efficiency and passive houses in it's climate program 2009 - 2012</li> <li>• 12/2010 Vorarlberg - Launch of the ecologic and energetic obligatory criterions for community subsidies.</li> <li>• Directive for federal buildings hasn't improved until now.</li> </ul>	Year	Multi-family houses	Single-family houses	2006	42 kWh/m <sup>2</sup> a	56 kWh/m <sup>2</sup> a	2007	38 kWh/m <sup>2</sup> a	52 kWh/m <sup>2</sup> a	2009	21 kWh/m <sup>2</sup> a	38 kWh/m <sup>2</sup> a
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Belgium	<ul style="list-style-type: none"> <li>• 2006: subsidies for certified Passive Houses in Flanders through some electricity service providers. Brussels minister for energy and environment Evelyne Huytebroeck proclaims a passive future for Brussels plans are revealed for a Belgian passive research station on Antartica first passive school building and first passive office building are certified Sp.a, the Flemish socialist party, launches a 10 point program focussing on Passive Houses.</li> <li>• 01-2007: Brussels announces a subsidy of 100€/m<sup>2</sup> for certified Passive Houses and low energy retrofits.</li> <li>• 02-2007: Flemish minister of Education Frank Vandebroecke announces the construction of 211 new school buildings, all energy efficient buildings, including 4 passive school pilot projects</li> <li>• 03-2007: Walloon minister for housing, transport and development André Antoine launches a Walloon subsidy for certified Passive Houses, amounting</li> </ul>												

	<p>to 3500 €</p> <ul style="list-style-type: none"> <li>• 03-2007: launch of a federal law giving a tax cut of 600 € per year for 10 years for certified Passive Houses.</li> <li>• 05-2007: Brussels launches call for sustainable pilot projects, promising the selected applications a subsidy of 100 €/m<sup>2</sup>.</li> <li>• 10-2007: Flemish minister of housing announces the development of a social housing Passive House pilot project.</li> <li>• 05-2008: the Flemish government announces a call for 25 passive school buildings, an important upgrade from the original 4.</li> <li>• 10-2008: the Triodos bank launches a reduced housing loan for Passive Houses and sustainable construction.</li> <li>• 11-2008: the city of Antwerp decides to build new schools in passive standard.</li> <li>• 1-2009: 3 pilot projects in the social housing sector are announced, in Heist-op-den-Berg, Dilsen-Stokkem and Wachtebeke. All will reach Passive House standard.</li> <li>• 11-2009: the Brussels region administration for energy and environment announce their building plans for a new office building: 15.000 m<sup>2</sup> of Passive office building will be built in Brussels.</li> </ul>
Croatia	<ul style="list-style-type: none"> <li>• City of Zagreb organized 1<sup>st</sup> Zagreb Energy Week with two day seminar on Factor 10 in 2010. Masterplan of City of Zagreb promotes and suggests energy efficient building. Croatian Chamber of Architects founded Council for Energy Efficiency and Sustainable Architecture.</li> </ul>
Czech Republic	<ul style="list-style-type: none"> <li>• 2006 - new government with Green party</li> <li>• 09/2008 - report of the independent commission about energy needs of Czech Republic - recommends low-energy standard from 2010, passive houses standard from 2015 for all buildings</li> <li>• 2009 - preparation of a renovation of the primary school using passive house components and principles, in Brno</li> <li>• 2010 - preparation of a nursing home project, which will be financed by the town Modrice (near Brno). First building in passive house standard financed by public authority</li> </ul>
Germany	<ul style="list-style-type: none"> <li>• In October the government in Germany changed from a large coalition (SPD and CDU/CSU) to a coalition of CDU/CSU and FDP. FDP is known as pro atomic energy. The knowledge of the public authorities in the area of energy efficient buildings is till today to less.</li> <li>• EnEv 2010 (minimum standard for new buildings) starts in the middle of 2010. The new regulation is more closed to passive house standard. The next version 2015 should be very closed to PH.</li> </ul>

<p>Slovenia</p>	<ul style="list-style-type: none"> <li>• 2008 - First kindergarten built in the passive house standard in north-western part of Slovenia.</li> <li>• 2010 - Launch of updated subsidy scheme through the national Eco Fund - Slovenian Environmental Public Fund. The subsidy rises from average 20% subsidies (2006-2009) to 25% subsidies in year 2010.</li> <li>• 2010 - Building a third passive kindergarten, this will be financed by the village Spodnji Duplek (near Maribor). Second Kindergarten in passive house standard will be financed by local authority and Government Office for Local Self-Government and Regional policy.</li> </ul>
<p>Sweden</p>	<ul style="list-style-type: none"> <li>• 2006 – The Swedish Program for Passive houses and very low-energy houses supported by the Swedish Energy agency starts</li> <li>• 2007 – The first version of the Swedish Passivhus criteria is launched by FEBY ( Forum for Energy Efficient Buildings)</li> <li>• 2008 – A revision of the Swedish Passivhus criteria</li> <li>• 2009 – Portvakten - a 8 story wooden construction residential building using passive house technique is completed. Developer the public housing company Hyresbostäder in Växjö. A certification and verification system for Swedish Passivhus is developed and launched by FEBY (Forum for Energy Efficient Buildings)</li> <li>• 2010 – The Swedish Program for Passive houses and very low-energy houses is reported in a workshop at the Swedish energy Convention in March 2010. A new program at the Swedish Energy Agency for support and promotion of low-energy buildings, LÅGAN, started. In accordance to rules from the EU commission the word passive house (or passivhus) is not included in the name.</li> </ul>

### 3. Change of the subsidies

In most of the countries are passive houses subsidised more the less energy efficient houses. The form of subsidies is different:

- loans
- direct payments
- tax reductions

As shown in the table below, the conditions to grant a subsidy are developing in time to be more strict to support only the most energy effective standards: from supporting low energy standards towards supporting of passive house standards. In some countries (Czech Republic) there are only passive houses (new erected) subsidised.

#### 3.1. Summary per country

Country	Description
Austria	<ul style="list-style-type: none"> <li>• 2007 Tyrol - Increase of the subsidies for passive houses.</li> <li>• 01/2008 Vorarlberg - Increase of the subsidies for passive houses.</li> <li>• 04/2008 Vienna - Multi-family houses are receiving an additional subsidy of € 60.-/m<sup>2</sup> which is not refundable. Additional costs are covered by this.</li> <li>• Development of aided multi-family buildings in passive house standard in Vienna: 2004 – 2009: 1.036 flats; 2010: 1.451 flats; 2011: 1.661 flats In total 2004 - 2011 4.148 flat in aided MFH in Vienna</li> <li>• 10/2008 Lower Austria - Increase of the subsidies for passive houses. Single-family houses in passive house standard are receiving a grant of € 50,000.--. That is 40% more than the next energetic stage of subsidy.</li> <li>• 02/2009 Vienna - Extensive increase of the subsidies for thermal retrofits. New stage model up to passive house standard.</li> <li>• 09/2009 Austria - Declaration (Art.15a) between the state of Austria and the provinces concerning the minimum building standards to gain subsidies.</li> <li>• 01/2010 Carintia - New subsidy directive with focus on passive houses. Single-family houses in passive house standard get a € 50.-/m<sup>2</sup> higher grant.</li> <li>• 04/2010 Vienna - Increase of the subsidies for passive houses.</li> <li>• 09/2010 Tyrol - New subsidy directive with focus on passive houses.</li> </ul>
Belgium	<ul style="list-style-type: none"> <li>• Federal level: tax cut for certified Passive Houses during 10 years of 600 € per year (indexed every year starting in 2006, current tax cut is 830 €/year).</li> <li>• Flemish region: tax cut via EPB: where E80 is the required maximum level, from E60 down tax cuts stimulate energy efficient building. Extra subsidies are given by the service providers and are directly linked to the E-points level (EPB calculation).</li> </ul>

	<ul style="list-style-type: none"> <li>• Walloon region: 1500 € for a certified Passive House, next to up to 5000 € of subsidies for low energy building.</li> <li>• Brussels region: 100 €/m<sup>2</sup> for a certified Passive Houses for the first 150 m<sup>2</sup>, 50 €/m<sup>2</sup> for the rest. Retrofitting a house to a certified Passive House earns the owner 150 €/m<sup>2</sup> for the first 150 m<sup>2</sup>, and 75 €/m<sup>2</sup> for the rest.</li> </ul>
Croatia	<ul style="list-style-type: none"> <li>• Environmental protection and energy efficiency Fund is giving subsidies for CO<sub>2</sub> emission reducing projects which includes refurbishment of energy inefficient buildings. In 2010 first loans with lower interest rate for energy efficient building and energy efficiency improvement.</li> </ul>
Czech Republic	<ul style="list-style-type: none"> <li>• 04/2009 - new subsidy scheme with support for i.e. new buildings in passive house standard (also thanks to the lobbying of CPD). Programme is financed from the Emission Trading System and shall be running till 12/2012.</li> </ul>
Germany	<ul style="list-style-type: none"> <li>• Till now the subsidies are on the same level as 2005. Builder of new houses get a credit with a smaller interest. For energy efficient renovations private and officials get grants. The grant depends on the energy standard after the renovation.</li> </ul>
Slovenia	<ul style="list-style-type: none"> <li>• 05-2010: Higher subsidies for construction or purchase of low energy and passive house buildings for a Passive Houses calculated with PHPP'07 (<math>Q_h \leq 25 \text{ kWh/m}^2\text{a}</math>). The rate of the subsidies changes for the first 200 m<sup>2</sup> for the single-family houses and first 150 m<sup>2</sup> for the housing units in two family houses or townhouses from 36 €/m<sup>2</sup> up to 125 €/m<sup>2</sup> in conjunction with PHPP'07 calculations from <math>Q_h \leq 25 \text{ kWh/m}^2\text{a}</math> to <math>Q_h \leq 10 \text{ kWh/m}^2</math>.</li> <li>• 05-2010: Higher subsidies for purchase of housing units in dwelling buildings constructed or renovated in passive house standard calculated with PHPP'07 (<math>Q_h \leq 15 \text{ kWh/m}^2\text{a}</math>). The subsidy is 250 €/m<sup>2</sup> for the first 100 m<sup>2</sup>.</li> </ul>
Sweden	<ul style="list-style-type: none"> <li>• 2009 The municipality of Östersund introduced reduction in administration costs for building permits for passive houses according the Swedish criteria.</li> <li>• 2010 The new program for very low-energy buildings LÅGAN provide subsidies for demonstration buildings using low-energy concepts such as the passive house concept and financial aid for establishing networks for very low-energy buildings on a local or regional level.</li> </ul>

## 4. Conclusion

During the three years, the development of passive houses in public sector has shown significant progress in most countries. The focus is by the end of 2010 set to implementation of EPBD recast to national legislation. It is very important to implement the directive in a very effective way not only in the most progressive countries (Austria, Germany, Belgium), but above all in other countries in EU27. The focus should be set not only to new building, but also to the refurbishment.

Support of high energy efficiency buildings leads to support the local economy (employment, top quality labour work, innovation) and improvements of local environment. There is also great opportunity to start with further education for professionals, and to initiate R&D projects in the field of energy efficiency in buildings.