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Implementation of the EPBD in Poland: Status December 2008

Recently Poland has adopted new measures towards implementing the EPBD into national law. On the 19th of September 2007, the Parliament accepted changes to the Construction Act that, together with three Ministerial Ordinances published in November 2008, constitute the transposition of the EPBD into national law. The certification of new and existing buildings will start in January 2009.

1 > Legal context

The implementation of the EPBD in Poland is executed by the Ministry of Infrastructure (former Ministry of Construction), under the supervision of the Ministry of Economy.

The legal framework of implementation is based on the national act and accompanying ordinances. On the 19th of September 2007, the Polish Parliament accepted several changes to the Construction Act. The changes define rules for the creation of an energy assessment and certification system for buildings and the inspection of building systems' energy efficiency by:

- > regulating the legal situations in which the obligation to possess a certificate of energy performance for buildings and apartments applies, by introducing new duties for investors, building managers and owners,
- > defining the requirements and conditions for groups of experts mandated to prepare certificates of energy performance and,
- > defining the conditions for inspection of boilers and air-conditioning systems, and a one-off inspection of heating installations with boilers older than 15 years.

As of January 1st 2009, according to a regulation in the Construction Act, the certificate of energy performance will be required for:

- > new buildings licensed for operation,
- > modernised or renovated buildings, if as a result a change of energy performance took place,
- > buildings for sale or rental.

Similarly, from the 1st of January 2009, the obligation to possess a certificate of energy performance will also be required for apartments that are placed for sale.

Additionally, beginning on the 1st of January 2009, the following two obligations are introduced:

- > periodical inspection of the energy efficiency of boilers and air-conditioning systems,

ŚWIADECTWO CHARAKTERYSTYKI ENERGETYCZNEJ
dla budynku mieszkalnego IT.....

Ważne do:

Budynek oceniany:
 Rodzaj budynku: _____
 Adres budynku: _____
 Czyność/Część budynku: _____
 Rodzaj obiektu budowlanego: _____
 Rodzaj budynku mieszkalnego: _____
 Rodzaj budynku mieszkalnego: _____
 Rodzaj budynku mieszkalnego: _____
 Powierzchnia użytkowa (m²): _____
 budynek nowy budynek istniejący
 najem/sprzedaż rozbudowa

Obliczeniowe zapotrzebowanie na nieodnawialną energię pierwotną
 EP - budynek oceniany
 123,2 kWh/(m²rok)

Wg wymagań WT2008¹⁾ Wg wymagań WT2008²⁾
 budynek nowy budynek istniejący

Świadectwo charakterystyki wyznaganej wg WT2008
 Zapotrzebowanie na energię pierwotną (EP)
 Budynek oceniany 123,2 kWh/(m²rok) Zapotrzebowanie na energię końcową (EK)
 Budynek wg WT2008 123,2 kWh/(m²rok) Budynek oceniany 123,2 kWh/(m²rok)

1) Wytyczne Europejskiej Wspólnoty Gospodarczej w sprawie promowania próżniowego ciepła i chłodu niskotemperaturowego. 2) Wytyczne Europejskiej Wspólnoty Gospodarczej w sprawie promowania próżniowego ciepła i chłodu niskotemperaturowego. 3) Wytyczne Europejskiej Wspólnoty Gospodarczej w sprawie promowania próżniowego ciepła i chłodu niskotemperaturowego. 4) Wytyczne Europejskiej Wspólnoty Gospodarczej w sprawie promowania próżniowego ciepła i chłodu niskotemperaturowego. 5) Wytyczne Europejskiej Wspólnoty Gospodarczej w sprawie promowania próżniowego ciepła i chłodu niskotemperaturowego.

Sprzedający świadectwo:
 Imię i nazwisko: _____
 Data wystawienia: _____
 Data: _____
 Podpis: _____

- › one-off inspection of heating installations equipped with boilers of nominal capacity over 20 kW or older than 15 years.

2 > Status of the implementation

The following regulations were prepared as secondary legislation defined in art. 5 paragraph 9 and art. 55a of the Construction Act:

1. An ordinance on the training and examination of experts allowed to prepare energy performance certificates for buildings, apartments and building parts that constitute separate technical/functional areas, signed on the 21st of January 2008 by the Minister of Infrastructure and published in the Official Journal, nr. 17 position 104, and including the list of required qualifications for those experts,
2. An ordinance on the methodology of energy performance calculations for whole buildings, separate apartments or building parts that constitute separate technical/functional areas, along with the scope of and a template for the energy performance certificates, signed on the 13th of November 2008 by the Minister of Infrastructure and published in the Official Journal nr. 201 position 1240,
3. An ordinance on amendments to an Ordinance of the Ministry of Infrastructure from the 12th of April 2002 on the technical criteria to be met by buildings and their location, signed on the 13th of November 2008 by the Minister of Infrastructure and published in the Official Journal nr. 201 position 1238,
4. An ordinance on amendments to an Ordinance of the Minister of Infrastructure from the 3rd of July 2003 on the detailed scope and form of buildings' designs, signed on the 13th of November 2008 by the Minister of Infrastructure and published in the Official Journal nr. 201 position 1239.

The Ordinance on the methodology of energy performance calculations and the template of the certificates, together with the regulations included in article 5, paragraph 3-5, and in article 63a of the Construction Act, are implementing articles 3 and 7 of the Directive. The Ordinance defines energy performance requirements (different for new and existing buildings) and the methodology for the energy assessment of buildings/apartments that will function as a guideline for the preparation of energy performance certificates, according to the results of detailed assessments. Additionally, the Ordinance determines the scope of and a template for the energy performance certificates.

The Ordinance on amendments to the Ordinance of the Minister of Infrastructure from the 12th of April 2002 on the technical criteria to be met by buildings and their location (Official Journal nr. 75 position 690, with later changes published in the Official Journal 2008 nr. 201 position 1238) determines the corrected energy standard requirements for both buildings and technology to be used in preparing the procedures of the energy assessment. Mandatory obligations to fulfil new more stringent technological and building-related requirements will also apply to existing buildings with a total useful area exceeding 1000 m² that undergo renovation, reconstruction, modernisation or extension. The Ordinance corresponds to articles 4 and 6 of the EPBD, on setting new energy requirements.

The Ordinance on amendments to the Ordinance of the Ministry of Infrastructure from the 3rd of July 2003 on the detailed scope and form of buildings' designs (Official Journal nr. 120 position 1133, with later changes published in the Official Journal 2008 nr 201 position 1239) comes as a response to the obligation created by article 5 of the Directive for new buildings exceeding 1000 m² of useful area, requiring a technical, environmental and economic feasibility analysis of alternative energy solutions for heating, cooling or hot water supply during the design stage.

Moreover, this Ordinance lists the required information that designers have to supply to show that the adopted technical solutions fulfil all prescriptive

requirements for security features, hygiene and health, as well as efficient use of energy. Designers are also required to prepare an inventory and a verification of the indices of the building's energy standards, to allow the preparation of their energy certificates.

3 > Calculation procedures

In Poland, the newly introduced regulations on the methodology of energy performance calculations and energy certificates are based on the following assumptions:

1. Calculations of delivered energy are corrected using factors, depending on the type of fuels or energy carriers used in a building. The correction factors try to promote the use of renewable energy.

No.	End energy carrier		Coefficient w_i
1	2		3
1	Fuel/Energy source	Oil	1,1
2		Natural gas	1,1
3		LPG	1,1
4		Hard coal	1,1
5		Brown coal	1,1
6		Biomass	0,2
7		Solar collector (thermal)	0,0
8	Heat from cogeneration ¹⁾	Hard coal, natural gas ³⁾	0,8
9		Renewable energy (biogas, biomass)	0,15
10	Local district heating systems	Heat from coal fired heat stations	1,3
11		Heat from gas/oil fired heat stations	1,2
12		Heat from biomass fired heat stations	0,2
13	Electricity	Mixed production ²⁾	3,0
14		PV systems ⁴⁾	0,70

¹⁾ combined production of electricity and heat,
²⁾ relates to the electricity supply from the national network ,
³⁾ in case of lack of information on energy parameters of heat from a cogeneration plant, the assumed value is $w_H = 1,2$,
⁴⁾ photovoltaic panels (production of electricity from solar energy)
 Note: Solar collector (thermal)- $w_H = 0,0$

2. The delivered energy assessment is based on calculations for a standardised building, rather than a real one. As energy use measurements strongly depend on individual use and the actual climate, they are not regarded as an objective basis for assessment of the building.
3. The determination of the building's energy performance is based on a comparison of the performance of the assessed building to the performance calculated assuming that the building is fulfilling the minimal permissible requirements defined in the secondary legislation. The assessment is performed by calculating the specific non-renewable primary energy use EP, expressed in kWh/(m²year), that is necessary to ensure proper heating, ventilation, cooling, hot water supply and lighting.
4. The assessment procedure does not make use of energy classes. The results of the assessments are presented on a linear analogue scale. Two additional arrows indicate the energy performance for a building similar to the assessed, but assuming that only minimal requirements

(summary presented in chapter 4) are met (case one for a newly constructed building and case two for a renovated building).

5. Residential buildings and apartments in these buildings are subject to independent assessment according to the annex 3 to the Ordinance on methodology. Thus, the building assessment is not automatically the assessment of each separate apartment. The assessment of the apartments will be done according to the same methodological rules as for the building, but using the specific data for the apartment. An apartment may have a different EP than the building, and different apartments in the same building may have different EPs.
6. The reference performance is calculated for each building assuming that the building is fulfilling the requirements defined in the secondary regulations, mainly in the recently reviewed Ordinance of the Minister of Infrastructure from the 12th of April 2002 on the technical criteria to be met by buildings and their location, which constitutes a significant backup to the methodology-related Ordinance. Some of the energy features are determined directly through a calculation methodology of energy performance.
7. The most important calculations relating to the determination of the energy performance of a building correspond to the energy use for heating, ventilation and cooling. They are generally based on standard PN-ISO-EN 13790, using a new database of climate parameters (suitable for both monthly and hourly methods) that has been put into a text file and is freely available on the Ministry of Infrastructure's website (www.mi.gov.pl/2-48203f1e24e2f-1787735-p_1.htm)
8. Thermal protection calculations use two new regulations in Poland, the coefficients H_T (heat loss through the envelope) and H_V (heat loss through ventilation). The methodology for the calculation of H_T is described in standard PN-EN ISO 13789.

4 > Requirements for new and modernised buildings

Polish regulations make provision for two alternative ways of fulfilling energy requirements. The first method is prescriptive and consists of a list of detailed requirements for different building components. The second method has a performance character and defines permissible values of specific non-renewable primary energy use EP, expressed in kWh/(m²year). The second method offers more freedom for designers. For instance, lower quality thermal insulation can be compensated with better systems or utilization of a more environmentally friendly source of energy.

Both methods allow for lower quality energy performance of modernized buildings, in comparison to new buildings identical in form and use. In the first method, the mean heat transfer coefficient for the whole building envelope can be 15 % higher than in the new building. In the second method, modernized buildings can also have a 15% higher primary energy use (EP).

Prescriptive method

The energy requirements for all the new buildings and for modernised buildings with a useful area over 1000 m² encompass:

- > maximum permissible U-value, 0,3 W/m²K for external walls, 1,7-1,9 W/m²K for windows;
- > maximum solar radiation coefficient for windows and glazed or transparent partitions, $g_c < 0,5$ (total energy transmittance corrected by shading factor), but in case of windows or transparent partitions that exceed 50% of the external wall area, the requirement becomes $f_G \cdot g_c < 0,25$, where f_G is the share of transparent parts in external wall;

A_z - sum of areas of horizontal projection of all levels above the ground that are closer than 5 m to external walls

A_w - sum of areas of horizontal projection of all levels above the ground reduced by A_z .

Air flow for an apartment is the sum of the air flows extracted from its different spaces. Examples:

- 1) for kitchens with external windows using gas or coal cookers: 70 m³/h
- 2) for bathrooms (with or without toilet): 50 m³/h
- 3) for toilets: 30 m³/h
- 4) In public utility buildings, ventilation requirements are defined by a minimum ventilation rates (outdoor air) per person. Examples for spaces where smoking is not allowed:
 - > rooms permanently or temporarily occupied by people -20 m³/h
 - > kindergartens, day nurseries- 15 m³/h
 - > air conditioned rooms or rooms with no operable windows: 30 m³/h.

- > maximum area of windows and glazed or transparent partitions with U-value > 1,5 W/m²K cannot exceed

$$A_{0max} = 0,15 A_z + 0,03 A_w$$

For public buildings, the area of windows can be larger, if it is required by other regulations addressing daylighting. The requirement does not apply to industrial buildings or storage facilities (for these types of buildings, the regulation defines only the maximum share of transparent partitions: 15% of external walls in case of single-storey buildings and 30% in case of multi-storey buildings);

- > parameters of indoor air quality: introduction of the requirement to provide the necessary rate of outdoor air, through vents mounted in external partitions or through mechanical supply ventilation (see details on left);
- > minimum efficiency and requirements for the components of heating and cooling installations, as well as lighting, e.g., maximum permissible specific fan power, minimal thickness of thermal insulation;
- > a reference electric specific power P_N depending on time of electric light utilization.

Performance method

The regulations define an alternative way of fulfilling the requirements by allowing that the permissible values of specific non-renewable primary energy use EP, expressed in kWh/(m²year), are not exceeded. The permissible values depend on the type of the building and the building shape coefficient:

- 1) In residential buildings the energy use for heating, ventilation and hot water supply (EP_{H+W}) is calculated for a whole year:
 - a) for $A/V_e \leq 0,2$; $EP_{H+W} = 73 + \Delta EP$; [kWh/(m² · year)],
 - b) for $0,2 \leq A/V_e \leq 1,05$; $EP_{H+W} = 55 + 90 \cdot (A/V_e) + \Delta EP$; [kWh/(m² · year)],
 - c) dla $A/V_e \geq 1,05$; $EP_{H+W} = 149,5 + \Delta EP$; [kWh/(m² · year)]

where:

$\Delta EP = \Delta EP_W$ - the addition to specific use of non-renewable primary energy for supply of hot water during the year,

$$\Delta EP_W = 7800 / (300 + 0,1 \cdot A_f); \quad [\text{kWh}/(\text{m}^2 \cdot \text{year})],$$

A - the sum of surface areas of all outer partitions which separate the building's heated parts from ambient air, ground or adjacent unheated spaces defined along outer boundaries,

V_e - the cubic capacity of the building's heated section defined along outer boundaries, diminished by the volume of balconies, loggias and galleries,

A_f - the useful heated area of the building (apartment).

- 2) In residential buildings, the energy use for heating, ventilation, cooling and supply of hot water (EP_{HC+W}) is calculated for a whole year:

$$EP_{HC+W} = EP_{H+W} + (5 + 15 \cdot A_{w,e}/A_f) (1 - 0,2 \cdot A/V_e) \cdot A_{f,c}/A_f; \quad [\text{kWh}/(\text{m}^2 \cdot \text{year})]$$

where:

$A_{w,e}$ - the sum of surface areas of all outer walls defined along outer boundaries

$A_{f,c}$ - the useful cooled area of the building (apartment)

A_f - the useful heated area of the building (apartment)

V_e - the cubic capacity of the building's heated section defined along outer boundaries, diminished by the volume of balconies, loggias and galleries

3) In residential buildings for groups (temporary residence, e.g. for students), public utility buildings and industrial buildings, the energy use for heating, ventilation, cooling, hot water supply and lighting (EP_{HC+W+L}) is calculated for a whole year:

$$EP_{HC+W+L} = EP_{H+W} + (10 + 60 \cdot A_{w,e}/A_f) (1 - 0,2 \cdot A/V_e) \cdot A_{f,c}/A_f; \\ [\text{kWh}/(\text{m}^2 \cdot \text{year})]$$

where:

$A_{w,e}$ - the sum of surface areas of all outer walls defined along outer boundaries

$A_{f,c}$ - the useful cooled area of the building (apartment)

EP_{H+W} - as defined in p. 1), but $\Delta EP = EP_W + EP_L$

EP_W - the addition to specific use of non-renewable primary energy for supply of hot water during the year, for buildings with building parts constituting separate technical - functional areas, the average value EP_W is defined:

$$EP_W = 1,56 \cdot 19,10 \cdot V_{CW} \cdot b_t/a_1; \quad [\text{kWh}/(\text{m}^2 \cdot \text{year})]$$

where:

V_{CW} - the specific daily use of hot water, [$\text{dm}^3/((\text{j.o.}) \cdot \text{day})$], according to designing assumptions,

a_1 - the ratio of area A_f to reference unit (j.o.), typically per person, [$\text{m}^2/\text{j.o.}$], according to designing assumptions,

b_t - the dimensionless time of operation of the hot water system during a year, according to designing assumptions.

For new buildings, the assessment of conformity with the regulations is performed in two steps:

- > upon the application for a building permit, the energy performance of the design has to be presented,
- > upon preparation of the energy performance certificate, the assessment of energy performance is compared to the performance calculated for the reference building.

5 > Certificates of energy performance for public buildings - requirements for new and existing buildings of useful area over 1000 m²

According to article 63 p. 2 of the Construction Act, when preparing a certificate for a building offering public administration services or providing services for the wide public, e.g., railway stations, airports, museums, exhibition halls, etc., the energy certificate should be placed where it is visible to the public.

The Ordinance on the methodology of energy performance calculations for whole buildings, an individual apartment or a building part that constitutes a separate technical/functional area, along with the scope and template for energy performance certificates, defines 4 types of certificates:

- > Certificate of energy performance for residential buildings
- > Certificate of energy performance for whole buildings
- > Certificate of energy performance for apartments

- > Certificate of energy performance for building parts constituting separate technical/functional areas

All types of certificates are similar in structure and contain:

- > Page 1: Basic information on the building; Calculated specific non-renewable primary energy use; EP with information on reference buildings; Information on the expert (energy auditor).
- > Page 2: Technical characteristics of the building and its use; Calculations of energy performance: energy demand, delivered energy and non-renewable primary energy.
- > Page 3: Possibilities of improving the energy quality of the assessed building or apartment (building envelope, energy source and installations, lighting, reduction of the calculated specific non-renewable primary energy use EP).
- > Page 4: Descriptions; Additional information.

The next figure shows the template of the Certificate of energy performance for residential buildings (Front page).

ŚWIADECTWO CHARAKTERYSTYKI ENERGETYCZNEJ dla budynku mieszkalnego nr							
Ważne do:							
Budynek oceniany:							
Rodzaj budynku	fotografia budynku						
Adres budynku							
Całość/Część budynku							
Rok zakończenia budowy/rok oddania do użytkowania							
Rok budowy instalacji							
Liczba mieszkań							
Powierzchnia użytkowa (A_u , m^2)							
Cel wykonania świadectwa	<input type="checkbox"/> budynek nowy <input type="checkbox"/> budynek istniejący <input type="checkbox"/> najem/sprzedaż <input type="checkbox"/> rozbudowa						
Obliczeniowe zapotrzebowanie na nieodnawialną energię pierwotną¹⁾							
<p style="text-align: center;">EP - budynek oceniany 123,2 kWh/(m²rok)</p> <p style="text-align: center;">0 50 100 150 200 250 300 350 400 450 500 >500</p> <p style="text-align: center;"> <input type="checkbox"/> Wg wymagań WT2008²⁾ budynek nowy <input type="checkbox"/> Wg wymagań WT2008²⁾ budynek przebudowany </p>							
Stwierdzenie dotrzymania wymagań wg WT2008²⁾							
<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Zapotrzebowanie na energię pierwotną (EP)</td> <td style="width: 50%;">Zapotrzebowanie na energię końcowa (EK)</td> </tr> <tr> <td>Budynek oceniany 123,2 kWh/(m²rok)</td> <td>Budynek oceniany 111 kWh/(m²rok)</td> </tr> <tr> <td>Budynek wg WT2008 130,0 kWh/(m²rok)</td> <td></td> </tr> </table>		Zapotrzebowanie na energię pierwotną (EP)	Zapotrzebowanie na energię końcowa (EK)	Budynek oceniany 123,2 kWh/(m ² rok)	Budynek oceniany 111 kWh/(m ² rok)	Budynek wg WT2008 130,0 kWh/(m ² rok)	
Zapotrzebowanie na energię pierwotną (EP)	Zapotrzebowanie na energię końcowa (EK)						
Budynek oceniany 123,2 kWh/(m ² rok)	Budynek oceniany 111 kWh/(m ² rok)						
Budynek wg WT2008 130,0 kWh/(m ² rok)							
<small>¹⁾Charakterystyka energetyczna budynku określana jest na podstawie porównania jednostkowej ilości nieodnawialnej energii pierwotnej EP niezbędnej do zaspokojenia potrzeb energetycznych budynku w zakresie ogrzewania, chłodzenia, wentylacji i ciepłej wody użytkowej (efektywność całkowita) z odpowiednią wartością referencyjną. ²⁾Rozporządzenie Ministra Infrastruktury z dnia 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie (Dz. U. Nr 75, poz. 690, z późn. zm.), spełnienie warunków jest wymagane tylko dla budynku nowego lub przebudowanego. Uwaga: charakterystyka energetyczna określana jest dla warunków klimatycznych odniesienia – stacja oraz dla normalnych warunków eksploatacji budynku podanych na str 2.</small>							
Sporządzający świadectwo:							
Imię i nazwisko:							
Nr uprawnień budowlanych albo nr wpisu do rejestru:							
Data wystawienia:							
	Data Pieczęćka i podpis						

6 > Qualified experts

Experts qualified for preparing energy performance certificates, according to the Construction Act of the 19th of September 2007, are persons who fall into any one of the following three categories:

- > architects and engineers eligible for being responsible for specialised architectural designs and the construction of buildings or installations (after

- a few years of practice in both design offices and on site, following an exam arranged by the Chamber of Engineers),
- > persons with graduate studies and an M.Sc. degree who have completed a specialised training course and passed the exam at the Ministry of Construction, Spatial Planning and Housing,
 - > persons who have completed at least one year of postgraduate study in architecture, construction, environmental engineering, energy or related subjects, e.g., in energy auditing for thermo-modernisation or energy certificate purposes.

In order to create the conditions for the setup of adequate training, on the 21st of January 2008 the Minister of Infrastructure signed the Ordinance on the scope of training and the required examination for experts who wish to be qualified to issue energy performance certificates, to meet the requirements of article 10 of the EPBD. According to the Ordinance, there are no specific requirements for institutions offering training courses. Conversely, the scope and method of training, the form of the certificate, together with the training fees are subject to regulation. The scope of training is described in detail in the annex to the Ordinance. The regulations intend to promote an objective, fair and efficient verification of candidate certification experts' skills, taking into account the real costs of the training and examination, and the condition for registering experts.

Twenty-eight post-graduate courses for future energy experts have already been launched by Technical Universities.

Polish regulations that implement the EPBD do not provide for a national register of certificates. The Authorities have not made provision for a system of direct control of the quality of certificates.

All potential conflicts between qualified experts and building owners will be solved by the Courts. The Construction Act (art. 5 paragraph 6) clearly states that an energy certificate that contains false information is a "physical failure of product" according to Civil Law (Parliament Act from the 23rd of April 1964). The Ministry of Infrastructure is working on alternatives to change this situation.

7 > Inspection of energy efficiency of installations

General requirements of the frequency and scope of different inspections of buildings are regulated by the Construction Act- article 62. The implementation of the EPBD resulted in new obligations for:

- > Periodical inspections of boilers, including an assessment of the energy efficiency of the boiler and the boiler sizing compared to the heating needs
 - at least once every 2 years - boilers fired by a non-renewable liquid or solid fuel of an effective rated output over 100 kW
 - at least once every 4 years - boilers fired by a non-renewable liquid or solid fuel of an effective rated output of 20 kW to 100 kW and gas fired boilers.
- > Periodical inspections of air-conditioning systems of an effective rated output of more than 12 kW: this inspection shall include an assessment of the efficiency of the devices and their size compared to the cooling needs.
- > A one-off inspection of heating installations with boilers of an effective rated output of more than 20 kW, which are older than 15 years: the inspection shall include an assessment of the boiler's efficiency and sizing compared to the heating requirements of the building.

The inspections of boilers, heating installations and air-conditioning systems will be performed by engineers and technicians eligible for supervising installation works.

The procedures of inspection of boilers and AC systems are still under discussion.

8 > Proposed amendments to existing and planned regulations

In October 2008, the Ministry of Infrastructure proposed several changes to the Construction Act, which will soon be sent to the Parliament. With the complete and adequate fulfilment of the Directive's requirements in mind, the main changes include:

- > the set-up of a unique set of requirements (at the moment, there are three different regulations for the preparation of certificates for apartments, and the lack of certificate is not penalised);
- > the achievement of absolute conformity with the Directive's requirements by adding the definition of the "certificate of energy performance" to the Construction Act. The definition should include the requirement of an energy performance assessment by comparison with reference values, and the obligation to define the possibilities of improving the energy quality of the assessed building or apartment;
- > the achievement of full conformity with the Directive of the existing requirements for the qualifications of the persons responsible for the delivery of energy performance certificates, by improving the qualification criteria and introducing professional responsibility and insurance, along with the requirement of experts' independence, to avoid conflicts of interest;
- > monitoring the system issuing energy performance certificates and carrying out inspections of installations.

Other measures are also under way in order to develop standardized procedures and conditions for the inspections of boilers, heating installations and air conditioning systems.



9 > Informational campaign

An informational campaign, performed in the context of the educational program „Dom przyjazny” (Friendly house) and aimed at facility managers and building owners, started in June 2005. From 2005 to 2007, two informational leaflets on the benefits and obligations deriving from the EPBD were published. These publications can be downloaded from the website www.domprzyjazny.org. The following actions are planned for 2009:

1. Continuation of the informational campaign in the context of the educational program „Dom przyjazny” addressed to:
 - managers, owners and local government administration officers, through leaflets, brochures and posters;
 - notaries, surveyors and real estate agents, through leaflets and posters presenting the advantages of energy performance certificates;
 - designers and construction supervisors, through brochures supporting their self-education on the erection of energy efficient and passive buildings.
2. Preparation of a TV spot to be emitted by the governmental television channel.
3. Preparation of an informational platform on the ministry's site www.mi.gov.pl dedicated to the Directive, which will include FAQ and climate databases.
4. Organisation of an international experts conference on experiences and problems faced in the Directive's implementation.
5. Organisation of a conference for the building products industry on achievements of energy efficiency goals and problems in fulfilling regulations.

This paper has been prepared in collaboration with the EPBD Concerted Action (www.epbd-ca.org)



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