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The price of energy performance certificates

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Executive Summary

The price of certificates is an inevitable issue when putting building energy certification schemes into practice. In order to develop the topic, a working group was established in the scope of the Concerted Action (CA), with the aim to collect information and to provide further insight. The information was collected by a survey and some case-studies that provided a useful picture of the situation in different Member-States (MS) in 2008. The identification of the factors that most influence the price can be helpful in the practical implementation of certification schemes, either in the MS that haven't yet such a system in place or in those wishing to improve an existing scheme.

Aspects such as the number of experts available, the nature of the scheme, whether or not it applies to existing or new buildings, the complexity of the method for determining ratings, etc. should all be examined by the MS when addressing this issue.

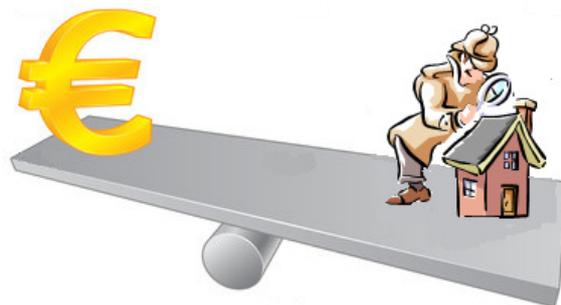
We can conclude that the price of certification is mainly dependent on the cost of the expert's work, and is defined, for the majority of the MS, by market conditions. Across Europe, the price of certificates varies, due to the different economic realities in each country, and to the different methodologies used by those countries. Certificates for residential buildings typically have a price ranging from 200€ to 600€; it is not possible to establish a pattern or range for non-residential buildings, though the price can be up to 20,000€. In general, the certification of existing buildings is more expensive than that of new buildings. It was also found that the filling out and the issuing of the certificate have no significant influence on the overall work of the expert.

Further developments on the topic should take place, in order to monitor the progress on the certification price, and also due to the changes introduced by the EPBD recast published in 2010.

1 Introduction

The Energy Performance of Buildings Directive (EPBD) established the basis for the implementation of building energy performance certification schemes at Member-State level, based on the work of qualified experts. In practice, certification is (or will be) a service provided by experts to the owner or renter of the building.

Like any other service, price is an unavoidable issue when putting the certification scheme into real practice on a large scale. When people pay the expert for the certificate, they will question themselves about the added value of that service. Particularly in those countries where no previous experience exists on the application of voluntary or other type of building certification schemes, some kind of market reaction should be expected. Depending on the circumstances, such a reaction can be of political relevance, and may impact or even challenge the actual level of the implementation of the EPBD.



Therefore, it is important to make an evaluation of this topic and to try to gather the (still) limited information available. By looking at those MS that already have some kind of experience about prices, other MS can benchmark their own situation and have a more or less clear perspective about the main factors affecting the price to be charged by the expert.

2 Results of the survey

The approach to the investigation of the topic was based on a survey that has been performed by distributing a questionnaire to all members of the CA at the beginning of 2008. There were answers from 24 MS, which have been analysed aiming to produce useful results. However, it is important to stress that the results of the survey come from data collected in 2008. Thus, changes on the certification market might have taken place from then until the publication of this report.

2.1 Price definition

By looking into the results of the survey, as shown in Figure 1, a clear trend towards market definition of the price of certification can be noticed.

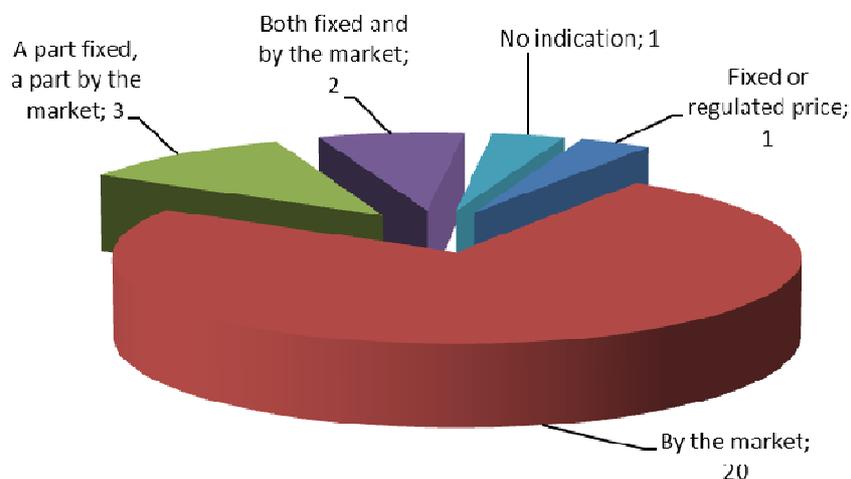


Figure 1. Number of Member States per approach to the price definition for issuing building energy performance certificates.

The survey showed that only 6 MS have adopted options different from the aforementioned market definition:

- Spain, Portugal and Malta, where a part of the price is (or will be, in the case of Malta) fixed, and the other part is determined by the market. In Spain, the regional governments have fixed certification fees for each certificate and/or for registered experts. In Portugal, a fixed mandatory fee of 45€ for single flats or single family houses and of 250€ for non-residential buildings is charged for each certificate issued in the system. The expert can charge the building owner with any price, depending on the free market forces.

- In Denmark and Greece, both price models are considered. For Danish residential buildings up to 299 m², the price is fixed, determined by legislation, while for other building types it is market dependent. In Greece, prices will be regulated by a board or association of professionals, or will be determined by the market, depending on the building's type and size.
- In a separate survey, it was found that, in a large number of MS, the price for the quality assurance scheme is paid partly by a fee for every issued certificate and partly by a fee paid by the expert in order to become accredited.
- In Slovenia the price will be fixed by legislation.
- The remaining MS that answered the questionnaire of this survey have either adopted a free market price strategy or have not indicated any pricing strategy.

2.2 Average price of certification

Tables 1 and 2 synthesise the information provided by the MS regarding the average indicative final price for the building energy performance certification. Values are presented in Euros per certificate (except where indicated) for new and existing buildings, and have been differentiated according to the type of building.

Table 1. Average price (in €) of certification for new buildings per certificate (except when otherwise stated). Information on prices was gathered in the spring of 2008

Member State	Residential, single family house	Residential, single flat in multifamily building	Residential, entire multifamily building	Small non-residential building (< 1000 m ²)	Large non-residential building (> 1000 m ²)
Austria	1 €/m ²	-	-	-	-
Belgium - Flemish	500 – 1250	200 – 750	Not applicable	-	-
Belgium - Walloon	-	-	-	-	-
Bulgaria	0.5 €/m ²	-	0.5 €/m ²	0.5 €/m ²	0.5 €/m ²
Czech Republic	800	Not applicable	1000	1000	1500
Denmark	680 (up to 100 m ²) 750 (up to 200 m ²) 800 (up to 299 m ²) 1.3 – 2.7 €/m ² (larger b.)	Not applicable	Market price	Market price	Market price
Estonia	> 150	> 150	-	-	-
Finland	100 – 150	Not applicable	200 – 300 €	200 – 300	200 – 300
France	200	-	-	-	-
Germany	300 - 500	Not applicable	300 - 1000	1000 - 2000	2000 – 8000
Ireland	< 300	< 300	Not applicable	< 1000	> 3000
Italy	200 + 2 €/m ²	-	-	500 + 1.2 €/m ²	700/2200 + 1.0/0.7 €/m ²
Latvia	250	Not applicable	500	450	800
Portugal	< 500	100 - 400	Not applicable	600 - 1200	2 – 5 €/m ²
Romania	2 – 3 €/m ²	1.5 – 2.5 €/m ²	1 – 2 €/m ²	2 – 3 €/m ²	2 – 3 €/m ²
Slovakia	550	Not applicable	> 900	> 1.5 €/m ²	> 1.5 €/m ²
Slovenia	200 – 300 (estim.)	Not defined yet	2000 (estim.)	Not defined yet	Not defined yet
Spain	450	450	800	500	1000
United Kingdom	no price information for new buildings				

Table 2. Average price (in €) of certification for existing buildings per certificate (except when otherwise stated). Information on prices was gathered in the spring of 2008.

Member State	Residential, single family house	Residential, single flat in multifamily building	Residential, entire multifamily building	Small non-residential building (< 1000 m ²)	Large non-residential building (> 1000 m ²)
Austria	1 €/m ²	-	-	-	-
Belgium - Flemish	Not yet known	Not yet known	Not yet known	Not yet known	Not yet known
Belgium - Walloon	200	250	-	-	-
Bulgaria	0.5 €/m ²	-	0.5 €/m ²	0.5 €/m ²	0.5 €/m ²
Czech Republic	800	Not applicable	1000	1000	1500
Denmark	680 (up to 100 m ²) 750 (up to 200 m ²) 800 (up to 299 m ²) 1.3 – 2.7 €/m ² (larger b.)	Not applicable	Market price	Market price	Market price
Estonia	150 (estimate)	150 (estimate)	-	-	-
Finland	400 – 1000 €	Not applicable	200 – 2000	300 – 1500	300 – 1500
France	150	100	50	200	250
Germany	100 – 1000 almost free (on-line)	Not applicable	200 – 2000 almost free (on-line)	2000 - 4000	5000 – 20000
Ireland	300 - 400	300	Not applicable	< 1000	> 3000
Italy	200 + 2 €/m ²	-	-	600 + 1,4 €/m ²	900/2400+1,1/0,8€/m ²
Latvia	300	Not applicable	600	550	1000
Portugal	< 500	< 400	Not applicable	700 - 2000	2500 – 10000
Romania	2 – 3 €/m ²	1.5 – 2.5 €/m ²	1 – 2 €/m ²	2 – 3 €/m ²	2 – 3 €/m ²
Slovakia	550	Not applicable	> 900	> 1.5 €/m ²	> 1.5 €/m ²
Slovenia	200 – 300 (estim.)	Not defined yet	2000 (estim.)	Not defined yet	Not defined yet
Spain	-	-	-	-	-
United Kingdom	150	100	Not applicable	1500	> 4500

By looking at the content of Table 1 and 2, we note that prices for new and existing buildings are very similar, which reflects the fact that most MS use the same approach for both building categories, i.e. the same level of accuracy for the building energy audit, the same calculation procedure and the same procedure for filling out and issuing the certificate.

The information gathered shows a variety of situations, which reflect not only the different technical approaches and practices in building certification, but also the different socio-economic realities of the MS. Some MS offer different possibilities for the certification of buildings, ranging from self-service on-line certification to high quality certificates issued by accredited experts. This publication deals only with the price of issuing high quality certificates.

Differences between prices in the MS are more evident in the case of non-residential buildings, ranging from a few hundred Euros for small and simple buildings, up to 20,000€ per certificate for large and/or complex buildings. The price is often higher for the existing than for the new non-residential buildings, and the difference is more noticeable in the case of large and/or complex buildings.

According to the 2008 survey, and by examining just the specific case of single family houses, prices ranged from 75€ up to 1,000€ (for a 150 m² house). Despite this general wide range, a relative shorter range can be pointed out, between 200€ and 600€ per certificate, which covers the price range in 50 % of the MS in the survey¹. This may be taken as a useful reference for other MS.

In the case of multifamily buildings, prices depend on the strategy adopted by the MS for the certification (a certificate for each flat or a certificate for the whole building), and it is more difficult to determine a trend or a clear range. Certification of the individual flats in new buildings provides a clear economy of scale in the individual price per flat, given that the certificates are usually issued at the same time by the same expert, though, in the case of existing multifamily buildings, this might not happen. The certification of existing buildings tends to have the same price as that of new buildings, or a higher one.

¹ More recent data (2010) including more countries and market development shows that prices for single family houses range from 100 € to 1,250 €, but the same typical range of 200€ - 600€ remains valid.

When analysing this information for each MS, particularly for those adopting the market price approach, it is important to relate such information with the respective level of implementation and experience in building certification. In 2008, most countries were still in the early stages of actual implementation and market development according to the EPBD framework (particularly regarding aspects like the number of experts available and the demand for certificates), which may lead to future changes in the average prices indicated above.

2.3 The most time-consuming activities in the certification process

The price is normally related to the amount of the work necessary to perform and complete all the expert's tasks in the certification process. Although this is strongly dependent on the specific methodologies used in each MS, the perception of the level of influence that some of the expert's activities have on the price of the certification for new and existing buildings may be verified from the average values presented in Figures 2 and 3 respectively.

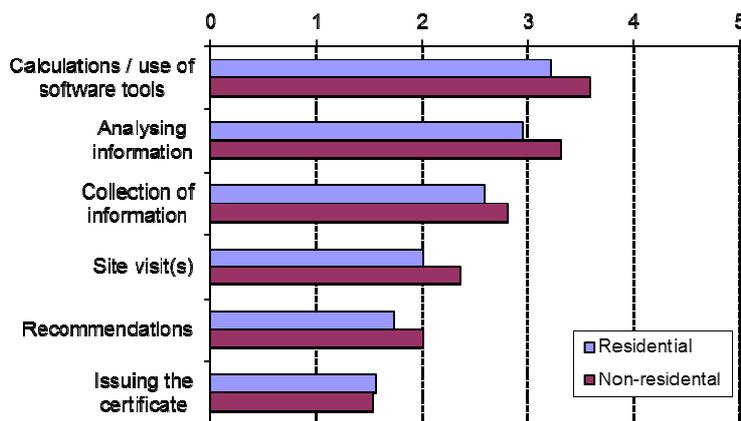


Figure 2. The most time-consuming tasks in the expert's work for the certification of new buildings.

The scale adopted:
 1) very little influence;
 2) little influence;
 3) some influence;
 4) strong influence;
 5) very strong influence.

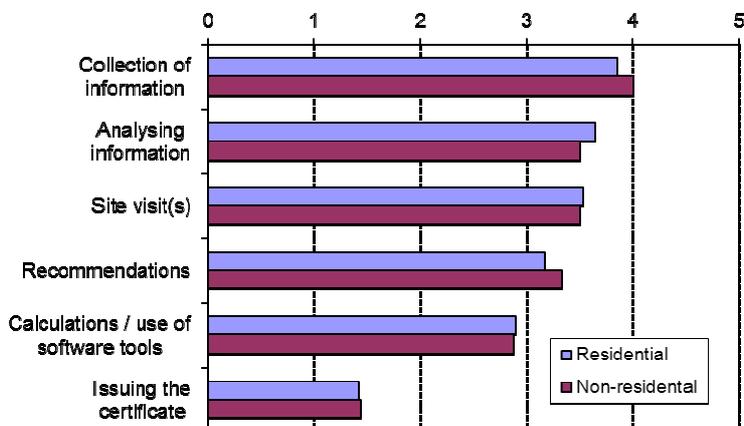


Figure 3. The most time-consuming tasks in the expert's work for the certification of existing buildings.

In new buildings, “performing calculations / use of software tools” and “analysing and collecting information” are the most relevant activities in the expert's work. Accordingly, “site visit(s)” and “preparation of recommendations” have little or very little influence on the work performed by the experts. The audit of a new building is often a control of the information given when applying for a building permit.

In existing buildings, “site visit(s)” and “preparation of recommendations” group up with “collection and analysis of information” in the highest level of influence on the expert's work. “Calculations and use of software tools” are lower on the scale of influence. These changes may be explained by the fact that simplified methodologies are often used in existing buildings, and their results are strongly dependent on the quality of the information collected and used. Also, the fact that the proposal of recommendations is one of the main objectives of the certification of existing buildings, explains in part why recommendations are more time-consuming in these buildings than in new buildings.

Results also show that the filling out and the issuing of the certificate have no significant influence on the overall work of the expert. In most cases, the certificate is a pre-formatted template, sometimes used together with annexes resulting from the auditing.

2.4 Main factors affecting price

A more detailed analysis of the technical aspects that may have direct influence on the work of the expert was performed, by rating each factor using the same scale as before. The results are presented in Figure 4 for new buildings and in Figure 5 for existing buildings.

In the case of new buildings, some of the most significant factors are different between residential and non-residential buildings. Although the adopted methodology is commonly pointed out as the most influential aspect, the characteristic of the HVAC system and the different spaces inside the building play a more important role in the case of new non-residential buildings, since there are technical issues that usually pose more challenges to the expert’s work. Aspects related to the building’s envelope are considered to be more relevant in residential buildings. These results seem to be a clear and expected reflection of the methodologies used by the MS, following what has been adopted as European standards for this purpose.

Regarding existing buildings, there are no evident differences between residential and non-residential, but the experience factor seems to have a clear relevance in both cases. Other factors, like size, geometry, methodology and HVAC systems show similar influence. As for new buildings, the fees to the authorities have very limited influence on the overall price.

These results may be of use to the MS for the (re)definition of certification methodologies. To reduce the price of certification, the MS should look for smart and practical technical options to address the aspects identified above.

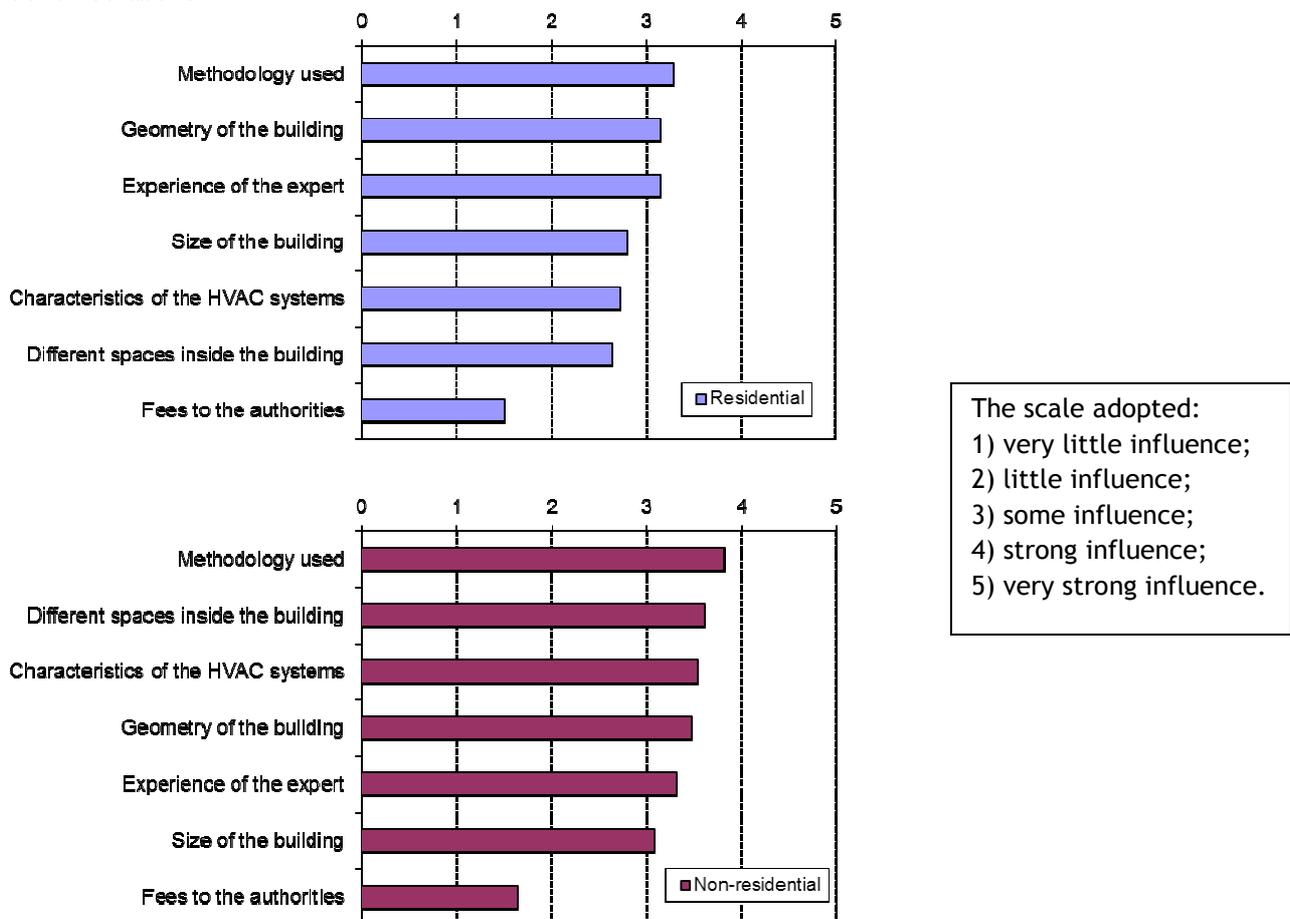


Figure 4. Main factors affecting the prices of certification for new buildings

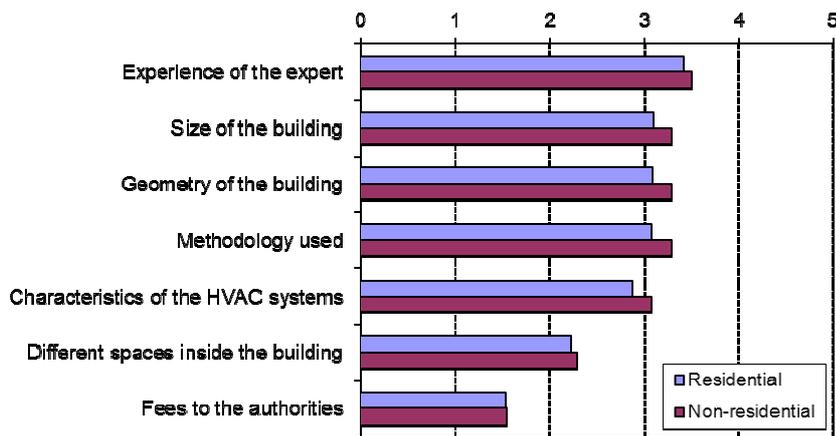


Figure 5. Main factors affecting the prices of certification for existing buildings

3 Conclusion

The survey provided useful information for the MS, particularly for those in the early stages of the EPBD implementation, when reference values may be needed for passing the message to stakeholders and to the general public. Identification of the factors influencing the price can be helpful in the practical implementation of building energy performance certification schemes. Aspects like the number of experts available compared with the size of the building stock, the nature of the certification scheme, whether or not it applies to existing or new buildings, the complexity of the method for determining ratings, etc. should be examined by the MS when addressing this issue.

From the work made in preparation of this report, it is possible to outline the following conclusions:

- the price of the building energy performance certification is mainly dependent on the cost of the expert's work;
- some countries have a part of the price fixed, which corresponds to the mandatory fees paid for the issuing of the certificate in the system;
- across Member States, the price for high quality certificates varies considerably;
- in general, the price ranges from a few hundred Euros up to 20,000€ depending on whether the building is a residential or a non-residential one, as well as on the size and complexity of the building;
- the price of certificates for residential buildings typically range from 200€ to 600€, while it is not possible to establish a pattern or range for non-residential buildings;
- the filling out and the issuing of the certificate have no significant influence on the overall workload of the expert;
- in new buildings, the price is highly influenced by the methodology used and the geometry of the building. The same applies to existing buildings, though, in this case, the experience of the expert is the most noticeable factor;
- for existing buildings, there is usually lack of information on the building thermal characteristics. Consequently, the Member States should adopt methodologies to optimise the balance between the accuracy of the energy performance indicated in the certificate and the time spent on the certification process, in order to optimise the price-value ratio of the certification.

Further considerations on the topic “Price of energy performance certificates” should take place in order to monitor the progress on the certification price, given that the building energy performance certification market is still growing. Another reason is the EPBD recast, published in 2010, which will inevitably lead to changes on the market and consequently on the price.

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