

**ANNEX 2**  
**Best practices Identified and transferred**

Section	Indication of content
1. Title of the best practice	Energy Certification
2. Specific topic/issue tackled by the practice	30% of primary energy consumption is due to buildings, hence the initiative to influence the energy consumption of buildings.
3. Objectives of the best practice	The aim is to promote energy efficiency through the design of ecological projects and through information provided for users in terms of energy characteristics of buildings.
4. Location	- Spain. National character.
5. Detailed description of the best practices	<p>- <u>Origin: Europe.</u></p> <p>- <u>Timescale:</u> Since 2007 for newly constructed buildings. Since 2009 for major renovations of buildings.</p> <p>- <u>Bodies involved / Implementation</u> Ministry of Industry, Tourism and Trade</p> <p>- <u>Process and detailed content of the practice</u></p> <p>In order to achieve an energy rating of a building, modeling of the energy consumption of the building is performed, to make both the certification and the class of efficiency available when the building is to be sold.</p> <p>In the design phase, the energy demand of the building under design should be calculated. For this calculation of building efficiency, the only currently recognized program is the LIDER program. The program models the total electricity consumption data from a description of the building which includes characteristics of the surrounding areas, ventilation and orientation, indoor climate, the existence of passive solar systems and solar protection, heating facilities, and lighting.</p> <p>The following step is to calculate the energy rating of the building. Hitherto, the only recognized program is that of CALENER. This tool compares the modelled building a "standard" building of similar characteristics, located in the same geographical location, whose energy performance has been analyzed in a field study.</p> <p>Finally, using this category rating, (from G to A), the energy certificate and provisional label are issued. Later, during the execution of the building, it is checked that this simulated efficiency matches the actual energy performance.</p> <p>- <u>Legal framework</u> <u>European Legislative context.</u></p> <p>Directive 93 / 76/CEE. Policy intended to reduce CO2 emissions by improving energy efficiency.</p> <p>Directive 2002 / 91/CE. Energy efficiency of buildings. Progress and concretion of the lines of action set out in Directive 93 / 76/CEE.</p>

	<p><u>Spanish legislative context.</u></p> <p>ROYAL DECREE 47/2007, of 19 January, by which the Basic Procedure is approved for the certification of energy efficiency of newly constructed buildings.</p> <p>Building Technical Code (Código Técnico de la Edificación (CTE)). Basic Document "DB HE Energy saving".</p> <p>- <u>Financial framework</u></p> <p>Advance Energy Efficiency Grants, Madrid. By the Ministry of Economy and the Treasury.</p> <p>Public subsidies for energy efficiency and audits in Catalonia. By the Department of Economics and Finance of the Government of Catalonia.</p> <p>Energy efficiency subsidies in Andalusia. By the Andalusian Energy Agency.</p>
<b>6. Evaluation</b>	<p>- <u>Demonstration of results</u></p> <p>Through the certificate of energy efficiency.</p> <p>- <u>Possible factors of success</u></p> <p>The result of the energy rating of the building will be expressed in the energy efficiency label: these labels must be included in any promotion on the sale, thereby enabling buyers to compare energy efficiency.</p> <p>- <u>Difficulties encountered</u></p> <p>It is difficult to implement a verification system that demonstrates the proper energy operation of the building due to the large number of variables that characterize buildings. Thus such verification may be possible by means of major simplifications that do not faithfully reflect reality.</p>
<b>7. Lessons learnt from the best practices</b>	<p>Increase in the energy efficiency of buildings with the consequent reduction in consumption.</p>
<b>8. Contact information</b>	<p>Energy efficiency certification of newly constructed buildings:</p> <p><a href="http://es.csostenible.net/legislacion/rd-472007-certificacion-de-eficiencia-energetica-de-edificios-de-nueva-construccion/">http://es.csostenible.net/legislacion/rd-472007-certificacion-de-eficiencia-energetica-de-edificios-de-nueva-construccion/</a></p> <p>Energy efficiency rating for buildings:</p> <p><a href="http://www.arquiblo.com/calificacion-de-eficiencia-energetica-para-edificios/">http://www.arquiblo.com/calificacion-de-eficiencia-energetica-para-edificios/</a></p> <p>R.D. 47/2007:</p> <p><a href="http://www.coasevilla.org/raiz/visado/pdf/rd_47_2007.pdf">http://www.coasevilla.org/raiz/visado/pdf/rd_47_2007.pdf</a></p> <p>Energy Certification of Buildings</p> <p><a href="http://www.terra.org/articulos/art01870.html">http://www.terra.org/articulos/art01870.html</a></p>
<b>9. Other information of possible interest</b>	<p>- Various documents (reports, presentations, etc.)</p>
<b>10. Best practices transferred</b>	<p>Aimed at developers, buyers and users of housing.</p>