



ANNEX 2

Best practice Identified and transferred

Section	Indication of content
1 Title of the best practice	Calculation of energy demand
2 Precise theme/issue tackled by the practice	Calculation of the building's energy demand in order to quantify proposals for energy reduction.
3 Objectives of the best practice	<p>The energy demand of a building is a consequence of heat transference amongst the air of the space to be conditioned, the external atmosphere (solar radiation, wind speed and direction), and internal heating loads (occupancy, lighting and equipment). It depends on the external conditions (which are imposed) and the internal conditions required by comfort temperatures and air renovations.</p> <p>The main objective of this best practice is to ensure that the SEA methodology and tool provide a way of conducting energy audits which calculate the energy demand of buildings. This approach aims to encourage energy consulting firms to use the SEA methodology and tool in order to obtain information about the theoretical energy demand of each building analyzed. Calculation of energy demand will allow a reduction of a building's energy consumption through the reduction of the demand itself.</p>
4 Location	This best practice applies to all partner regions – Modena (Italy), South East England (UK), Andalucía (Spain) and Malopolska (Poland).
5 Detailed description of the best practice	Most often, the energy demand of buildings is not taken into account in an energy audit, due to the complexity of calculation. This best practice and the SEA methodology/tool aim to bridge this gap in energy auditing. The energy demand will be calculated by inputting building description data, (including geometric characteristics, materials, and solar radiation), and through the use of a balance method to obtain a

	<p>theoretical value for this factor. Consulting firms will have additional evidence to propose energy reduction measures based on the improvement of the building's efficiency, which may optimize values of energy demand and consequently reduce the thermal demand from HVAC systems.</p>
6 Evaluation	<p>The SEA should lead to an increased uptake of energy audits in public buildings, as the new methodology created by the partnership will include energy demand calculations, which are not usually considered by current energy audits.</p> <p>Project partners' analysis of the state of the art in energy auditing has shown that very few consulting firms are really analyzing the energy demand of buildings. The success of this best practice will be confirmed by the quantification of demand reduction measures proposed by users of the SEA tool. Until now consulting firms have not been able to quantify these measures if they do not calculate the energy demand of the building being analyzed.</p>
7 Lessons learnt from the best practice	<p>Current energy audits performed in GENERATION partner regions are omitting a very important factor of energy efficiency calculation for buildings this factor is the energy demand. By omitting the energy demand, consulting firms are not really quantifying the measures to reduce it (e.g. through reduction of solar radiation by the use of solar protectors, and reducing energy demand by using new insulation materials).</p>
8 Contact information	<p>Contact: valcaide@iat.es</p> <p>Website: www.environmentcentre.com/GENERATION/BestPractice</p>
9 Other possible interesting information	
10. Best practice transferred	<p>The “Calculation of energy demand” will be promoted at project events, to partners' local authority contacts, through the project Advisory Board and on the website.</p>