Energy Performance Certificates

WHAT THEY ARE

Energy Performance Certificates (EPCs) are an information instrument in the buildings policy package. EPCs are usually documents that inform on the energy performance of a building and its energy demand, indicating how efficient – and often how environmentally-friendly – a building is. EPCs can differ, but some of the key elements may include:

- **Energy Efficiency Rating**: A scale of several energy classes, for example from A (most efficient) to G (least efficient), visually represented, often as a color-coded bar chart.
- **Current and Potential Ratings**: Display the building's current state and its potential efficiency rating after recommended improvements.
- **Property Details**: Basic information about the property, including size and evaluation date.
- **Recommendations**: Specific, cost-effective advice on improving the property's energy efficiency, such as the addition of insulation, heating system upgrades, and the use of renewable energy.
- **Estimated Energy Use**: Projection of energy consumption and costs based on standard usage patterns, identifying potential savings.
- **Carbon Emissions**: Information on the building's carbon dioxide emissions, emphasising its environmental impact.

HOW TO IMPLEMENT

Implementing an EPC programme involves several steps to ensure it effectively encourages improvements in buildings. These may include:

1. **Legislative framework**: Set the scope, objectives and requirements, including which buildings need an EPC, under what circumstances (e.g., sale, rent, construction), and the validity period of certificates.
2. **Standards**: Develop a methodology to assess energy performance and calculate the efficiency rating. This should include guidelines on the evaluation process, data collection and calculation methods.
3. **Training and accreditation**: Set up a system to train and accredit assessors who carry out energy performance evaluations. Certified and competent assessors are crucial to the credibility of EPCs.
4. **Certification process**: Implement a process for issuing EPCs, including property inspections, data analysis, and the creation of the certificate with recommendations for efficiency improvements.
5. **Data collection and registry**: Establish a database to record and manage EPC information to facilitate the tracking of energy performance across the building stock and support policy analysis.
6. **Quality control and enforcement**: Put mechanisms in place to ensure the quality of EPCs, such as random checks or audits. Also, define penalties for non-compliance to enforce the requirements.
7. **Public engagement**: Launch initiatives to raise awareness among property owners, buyers, tenants and the general public about the importance of energy efficiency and the role of EPCs in promoting it.
8. **Updates and revisions**: Regularly review the effectiveness and update standards, trainings and methods to reflect technological advancements, changes in energy prices and other relevant factors.

HOW TO MONITOR

Monitoring the effects of EPCs is crucial to evaluate their impact on improving building energy efficiency, influencing real estate markets, and contributing to environmental goals. To track these effects, a comprehensive approach to data collection and analysis is needed. This may include the following elements:

- Collect data on the distribution of energy efficiency ratings across the building stock to understand the current state of buildings.
- Require regular updates to EPCs and track changes in buildings' ratings, especially after renovations or efficiency improvements.
- Track the implementation of energy efficiency recommendations provided in EPCs (for example, through building energy passports), such as insulation upgrades, heating system replacements, or the installation of renewable energy sources.
- Monitor energy consumption data (for example, with smart meters) before and after the implementation of EPC recommendations to measure energy savings.
- Compare actual energy savings (and/or reductions in greenhouse gas emissions) with estimated building energy performance made in EPCs to assess the accuracy of assessments and the effectiveness of recommended measures.
- Collect data on why recommendations are not implemented, such as financial constraints, regulatory barriers, or lack of awareness.
- Collect data to analyse the impacts of EPC ratings on property values, sales prices and rental rates to see how efficiency influences real estate market dynamics.