INSCEA4

Identify ways to optimise energy efficiency and achieve carbon reduction

Overview

This standard is about the identification of ways in which energy efficiency can be improved, reviewing alternative ways of optimising energy efficiency and achieving carbon reduction. You will cover the review of buildings, activities, products, systems and people which could improve energy efficiency and reduce carbon emissions. You will also cover both single buildings and a site where there are several buildings which interact with each other in terms of energy efficiency.

This standard is for professionals in energy management and advice.

You will be required to know and understand the relevant requirements of each devolved nation.

Performance criteria

You must be able to:

1. determine the requirements of the customer regarding energy consumption and carbon reduction
2. identify areas of high energy consumption, trends in energy consumption or changes in the pattern of energy consumption over time
3. compare available energy consumption data with operational performance and establish differences
4. establish the expected future energy consumption and its implications
5. identify and prioritise ways of optimising the energy efficiency of both the building fabric and services
6. identify changes and measures to existing organisational and building procedures and behaviours that improve the energy efficiency of the building, reduce carbon emissions and meet relevant legal, safety and operational requirements
7. review current activities, products, systems, processes and behaviours that effect energy efficiency and carbon emissions
8. review alternative activities, products, systems, processes and behaviours that would enhance energy efficiency and achieve carbon reduction
9. evaluate the feasibility, practicality and relevance of alternatives in relation to the fabric of the building and the building services
10. identify changes in current activities, products, systems, processes and behaviours to improve energy efficiency and reduce carbon emissions
11. identify ways of optimising the efficiency of current plant and equipment in relation to heating, lighting and air conditioning
12. establish ways of improving the monitoring and measurement of operational energy usage including metering and sub-metering
13. identify current financial incentives and schemes which support energy efficiency and carbon reduction relevant to the measures being considered
14. identify the relevant legal requirements which impact on energy use and carbon emissions and their impact on the measures being considered
15. identify measures to reduce operational energy consumption and achieve carbon reduction

Knowledge and understanding

You need to know and understand:

1. how to determine the requirements of customers regarding energy consumption and carbon reduction
2. how to explore the types of financial constraints that impact on the customer's ability to optimise energy efficiency and achieve carbon reduction
3. the activities, products, systems and processes of the customer's organisation and their impact on energy and carbon consumption
4. the key metrics by which energy consumption is measured and recorded
5. how to track energy consumption over time and how to identify trends in usage
6. the alternative methods for optimising the use of existing plant, equipment and consumables
7. the alternative activities, products, systems, processes and measures that would optimise energy efficiency and achieve carbon reduction
8. how to evaluate alternative activities, products, systems, processes and behaviours that would enhance energy efficiency and achieve carbon reduction
9. how to balance customer's needs with the requirements of your organisation
10. the sources of financial support available for energy efficiency and carbon reduction
11. the sources of information and agencies providing advice and support to organisations in relation to energy efficiency and carbon reduction
12. the relevant legal and regulatory framework relating to energy efficiency and carbon reduction

Scope/range

Expected future energy consumption based on:

- meter readings
- hours run
- name plate data
- compiled utility bills
- planned operational changes

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