

## Unit FM4.20: Understanding energy and utilities management and the impact on facilities management

*The assessment criteria form part of the unit and specify the standard that a learner is expected to meet to demonstrate that the learning outcomes within the unit have been achieved. The additional guidance, which is shown in brackets and italics alongside the assessment criteria, does not technically form part of the unit, in that it is not included in the reference version of the unit shown by the Register of Regulated Qualifications. The additional guidance is provided to illustrate how the assessment criteria might be interpreted. The BIFM will generally expect assessors to interpret the assessment criteria as described, or to an equivalent level of demand.*

### Aim of the unit:

This unit enables learners to develop their understanding of energy and utilities management principles, processes and monitoring systems and how to implement an energy and utilities management policy.

Title:	Understanding energy and utilities management and the impact on facilities management	
Level:	4	
Credit value:	3	
Learning outcomes	Assessment criteria	
<i>A learner when awarded credit for this unit will:</i>	<i>Assessment of this learning outcome will require a learner to demonstrate that they can:</i>	
1. Understand the principles of energy and utilities management	<p>1.1 Describe the principles of energy and utilities management (<i>including drivers of for the management policies (e.g. , compliance, environmental impact, cost efficiency) and the methods used to evaluate the policies' effectiveness (e.g. monitoring, measurement, analysis of usage)</i>)</p> <p>1.2 Explain what is meant by renewable sources (<i>no additional guidance</i>)</p> <p>1.3 Explain how sustainable building design impacts on energy efficiency of building performance (<i>supporting the explanation with example/s from the learner's own experience and/or case studies</i>).</p>	

	<p>1.4 Explain the legislation affecting energy use and efficiency in buildings <i>(supporting the explanation with example/s of such legislation relevant to the learner's own experience and/or case studies, rather than trying to provide an exhaustive list)</i></p>
<p>2. Understand how to monitor utilities efficiency of buildings</p>	<p>2.1 Explain how to establish utilities consumption targets</p> <p>2.2 Explain how to measure utilities consumption against targets <i>(supporting the explanations required by both assessment criteria with example/s from the learner's own experience and/or case studies).</i></p>
<p>3. Understand what is involved in the energy efficiency of buildings</p>	<p>3.1 Explain how to measure and monitor use of energy in a building <i>(see below)</i></p> <p>3.2 Explain how facilities management can identify energy efficiencies in the operation of a building <i>(see below)</i></p> <p>3.3 Describe how buildings can generate a percentage of their own power from renewable sources <i>(no additional guidance)</i></p> <p>3.4 Explain how factors in energy efficiency are considerations in sustainable building development <i>(supporting the explanation with examples, such as the efficient use of space, light and natural ventilation, and technologies such as can be used to reduce carbon emissions, energy consumption, solar gain)</i></p> <p>3.5 Explain how results from monitoring can be used to benchmark a building's energy performance for continual improvement <i>(see below)</i></p> <p><i>(supporting the explanations required by assessment criteria 3.1, 3.2 and 3.5 by reference to the same example or</i></p>

	<i>examples used for the previous learning outcome)</i>	
4. Understand how to implement an energy and utilities management policy	<p>4.1 Explain the contents of an energy and utilities management policy (<i>including statement of purpose, target setting, monitoring activities, record keeping, and assignment of responsibilities</i>).</p> <p>4.2 Explain how to implement an energy and utilities management policy (<i>using example/s from the learner's own experience and/or case studies</i>)</p>	
Unit expiry date	31st December 2020	
Unit reference number	Y/601/2135	
Link to National Occupational Standards	FM418	
FM Professional Standards reference	FM functional area:	FM functional area component:
	Business Continuity and Compliance	Compliance
	Sustainability	Energy Management

## Resources:

Energy Management Principles and Practice. A Companion to BS EN 16001 by Vilnis Vesma

Energy Management Handbook, Eighth Edition by Wayne C. Turner and Steve Doty

Guide to Energy Management by Barney L. Capehart, Wayne C. Turner, and William J. Kennedy

[www.bifm.org.uk](http://www.bifm.org.uk)

FM World [www.fm-world.co.uk](http://www.fm-world.co.uk)

Facilities Management Journal <http://www.fmj.co.uk/>