



Australian Government

MSS015021 Measure and report carbon footprint of a product or product class

Release: 1

MSS015021 Measure and report carbon footprint of a product or product class

Modification History

Release 1. Updated unit code. Unit title changed. Changes to performance criteria. Range of conditions removed. Assessment requirements amended. Equivalent outcome.

Application

This unit describes the skills and knowledge to determine the carbon footprint of a product or product class across the value chain (which may be internal or external to the enterprise). It includes determining the carbon dioxide (CO₂) equivalent tonnes and calculating the embodied carbon of a product.

This unit applies to the requirement to measure the carbon footprint as part of an enterprise's regulatory obligation, market or social response or for other purposes.

This unit applies to a manager or technical specialist who has a major responsibility for sustainability as part of a broader work role or sustainability may be their primary work responsibility.

Skills covered by this unit may be applied individually or in a team context.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Sustainable operations

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|----------|---|------------|--|
| 1 | Map carbon sources and sinks along the value | 1.1 | Select portion of the value chain for analysis |
| | | 1.2 | Identify process steps along the chain |

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
	chain	1.3	Identify the carbon-related change which occurs at each step
2	Determine nature and source for carbon emissions	2.1	Determine carbon emissions from each step
		2.2	Determine source of each emission
		2.3	Identify measurements available for each emission and each source
3	Quantify carbon	3.1	Quantify each emission
		3.2	Determine CO ₂ equivalent tonnes for each emission
		3.3	Determine total carbon embodied in product
4	Recommend strategies for reducing carbon footprint	4.1	Short-list high carbon sources
		4.2	Determine root cause of emissions
		4.3	Identify relevant carbon sinks
		4.4	Investigate methods for reducing emissions
		4.5	Prepare recommendation for improvement
5	Report carbon footprint	5.1	Identify purpose of report and key stakeholders
		5.2	Compile data, implications and recommendations
		5.3	Write report and communicate with stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS015001 Measure and report carbon footprint.

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS015021 Measure and report carbon footprint of a product or product class

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- measured and reported the carbon footprint of at least 1 product or product class.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- process and changes which occur at each step in selected value chain
- types of carbon emissions, including:
 - gases, vapours and fumes
 - liquids
 - solids
 - assumed emissions through material balancing
 - assumed emissions through energy loss, including heat, friction and other energy conversion yield losses
 - greenhouse gases, including those defined under the Kyoto protocol
- carbon emission sources
- root cause analysis
- methods of reducing carbon emissions and embodied carbon
- carbon equivalence of different emissions
- environmental legislation, regulation and protocols, including greenhouse gas protocols and associated ISO standards.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions, contingencies, facilities, equipment and resources.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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