



Australian Government

Department of Education, Employment and Workplace Relations

CPPHSA4017A Cost measures to improve thermal performance of residential buildings

Release: 1

CPPHSA4017A Cost measures to improve thermal performance of residential buildings

Modification History

Version	Comments
1	This version first released with CPP07 Property Services Training Package Version 11.

Unit Descriptor

This unit of competency specifies the outcomes required to collect information on the costs of measures required to improve the thermal performance of planned and existing residential buildings which may be identified through a Nationwide House Energy Rating Scheme (NatHERS) assessment. It includes confirming required measures for improving thermal performance, gathering information on costs of measures, and analysing those costs.

Application of the Unit

This unit of competency supports the work of NatHERS assessors engaged in assessing, and making recommendations for improving, the thermal performance of planned and existing residential buildings.

Licensing/Regulatory Information

In some jurisdictions, this unit of competency may form part of the accreditation, licensing, legislative, regulatory or certification requirements for NatHERS assessors.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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| 1 | Confirm potential measures for improving thermal performance. | 1.1 | <i>Measures for improving thermal performance of residential buildings</i> are identified in line with organisational procedures. |
| | | 1.2 | Details of potential measures for enhancing thermal performance of building are identified and confirmed with client. |
| 2 | Gather information on cost of measures to improve thermal performance. | 2.1 | Information on cost of measures to improve thermal performance is researched and obtained from <i>appropriate sources</i> . |
| | | 2.2 | <i>Information on rebates and other forms of assistance</i> for particular measures to improve thermal performance is researched and obtained. |
| | | 2.3 | Information on availability, suitability and likely supply time of products and services, where applicable, is obtained in line with organisational procedures. |
| | | 2.4 | <i>Factors that may influence cost</i> of measures are identified and documented. |
| | | 2.5 | Information on cost of measures is collated and documented. |
| | | 2.6 | Ethical practices are observed in identifying and gathering product and service information. |
| | | 2.7 | Details of information obtained on products and services are maintained and securely stored. |

- 3 Analyse cost of measures to improve thermal performance.
 - 3.1 Information on costs of measures to improve thermal performance of building is collated and analysed in line with organisational policy and procedures.
 - 3.2 Indicative costs of measures to improve thermal performance are determined in line with organisational procedures.
 - 3.3 **Limitations** of cost information are identified in line with organisational policy and procedures.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to interpret documents, such as comparative charts of specifications for products designed to improve thermal performance of residential buildings
- communication skills to interact with people from diverse social, economic and cultural backgrounds
- decision-making and problem-solving skills to assess relative costs of products and services
- literacy skills to read and interpret a variety of texts, including product descriptions
- numeracy skills to calculate and interpret cost data on measures to improve thermal performance of residential buildings
- planning, organising and scheduling skills to undertake work-related tasks, such as obtaining information on products and services
- research skills to identify and locate documents and information on the costs and features of measures to improve thermal performance of residential buildings

Required knowledge

- factors involved in providing cost measures to improve thermal performance of residential buildings:
 - ethical practices in identifying suppliers and product and service information
 - product and service knowledge:
 - benefits and limitations of products and services
 - inclusions and exclusions in products and services
 - rebates and other forms of assistance for products and services that enhance thermal performance of residential buildings
 - specifications
- measures to improve thermal performance of residential buildings that consider:
 - construction materials
 - draught proofing
 - floor coverings
 - glazing
 - insulation levels
 - landscaping and planting
 - orientation
 - overshadowing

- passive cooling
- passive design
- passive solar heating
- shade
- structural changes
- thermal mass
- ventilation
- window coverings
- window size, location and type
- zoning and layout
- relevant commonwealth, state or territory, and local government legislation and regulations relating to:
 - building and construction
 - consumer protection, fair trading and trade practices
 - energy conservation
 - work health and safety
- sources of information on products and services to improve thermal performance of residential buildings

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by candidates collecting and analysing information on the costs of measures for improving the thermal performance of a residential building based on the outcomes of a NatHERS assessment of potential options.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person should demonstrate the ability to: <ul style="list-style-type: none"> • identify potential measures for improving the thermal performance of residential buildings • gather information on costs of measures for improving thermal performance of residential buildings • analyse costs of measures for improving thermal performance of residential buildings • identify limitations of cost information.
Context of and specific resources for assessment	Assessment of this unit: <ul style="list-style-type: none"> • must be in the context of the work environment • may be conducted in an off-site context, provided it is realistic

	<p>and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills</p> <ul style="list-style-type: none">• must meet relevant compliance requirements. <p>Resource implications for assessment include:</p> <ul style="list-style-type: none">• computer equipment suitable for producing reports for clients• technical reference library with current publications on energy efficiency materials, products and services.
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<p>Method of assessment</p>	<p>Assessment for this unit must verify the practical application of the required skills and knowledge, using one or more of the following methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment • observed, documented and/or first-hand testimonial evidence of the candidate collecting and analysing information on the costs of measures for improving the thermal performance of a residential building based on the outcomes of a NatHERS assessment of potential options.
<p>Guidance information for assessment</p>	<p>This unit could be assessed on its own or in combination with other units relevant to the job function.</p> <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Measures for improving thermal performance of residential buildings</i> may include changes to:</p>	<ul style="list-style-type: none"> • construction materials • draught proofing • floor coverings • glazing • insulation levels • landscaping and planting • orientation • overshadowing • passive cooling • passive design • passive solar heating • shading • skylights • structural changes • thermal mass
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	<ul style="list-style-type: none">• ventilation• windows:<ul style="list-style-type: none">• coverings• size• type• zoning and layout.
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<p><i>Appropriate sources</i> may include:</p>	<ul style="list-style-type: none"> • catalogues • conferences • government agencies • industry associations • industry publications: <ul style="list-style-type: none"> • electronic • print • product and service suppliers • professionals: <ul style="list-style-type: none"> • architects • building consultants • building designers • building thermal performance assessors • engineers • environmental consultants • professional organisations • published costing guides • regulatory bodies • technical experts • trade exhibitions • tradespeople • utility companies.
<p><i>Information on rebates and other forms of assistance</i> may include:</p>	<ul style="list-style-type: none"> • amount of rebate or assistance • application period • application process • eligibility criteria • qualifying period • type of assistance.
<p><i>Factors that may influence cost</i> may include:</p>	<ul style="list-style-type: none"> • availability • building design • building siting • building type • changes in product and service specifications • changes in professional fees • condition of building • date of order or purchase • delays in supply • foreign exchange movements • guarantees • insurance • labour costs

	<ul style="list-style-type: none"> • product changes and upgrades • service changes and upgrades • source of supply • taxes and charges • transport and handling costs.
<p><i>Limitations</i> may include:</p>	<ul style="list-style-type: none"> • availability of products and services • building condition • building design • building siting • exclusions • factors that may be subject to change: <ul style="list-style-type: none"> • installation charges • prices • product and service back-up and support • product and service features • product and service performance • rebates and other support programs • specialist advice on products and services that may be required • supply time for products and services • fees, taxes and levies • inclusions.

Unit Sector(s)

Home sustainability assessment

Custom Content Section

Not applicable.