



Australian Government

Assessment Requirements for CPCPPS5023

Design solar water heating systems

Release: 2

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Modification History

- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.5.
Change to Performance Criteria 4.1.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCPPS5023A Design solar water heating systems. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria for this unit by:

- designing, sizing and documenting an approved layout using two methods of solar heated water systems with:
 - one gas-boosted commercial solar system
 - one heat pump-boosted system
- for:
 - a high-rise unit development building to a minimum of 29 floors including sanitary fixtures on each floor level
 - a wide span, multi-building project such as a school, nursing home or university incorporating a solar pre-heat systems and heating systems.

Each project is to include a specification and maintenance manual.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- application of the National Construction Code (NCC) and relevant Australian standards and codes, manufacturer specifications and operating procedures relevant to the sector
- common terminology and definitions used in design of solar water systems
- work health and safety (WHS) requirements, relevant statutory regulations, codes and standards
- cost-benefit analysis
- inclusions for establishing scope of work:
 - interpreting plans and specifications
 - sizing and documenting layout solar water heating systems:

- characteristics
- compatibility
- dimensions
- location
- patterns
- quantities
- sizes
- surfaces
- types of product and service
- design requirements:
 - architectural specifications
 - builder specifications
 - owner requirements
 - specialist use applications
- manufacturer requirements:
 - material specifications
 - pump tables
 - sizing tables
 - technical and trade manuals
- types of information collected during desktop study for design purposes:
 - council plans
 - developer plans
 - applications
 - architectural and building plans
 - other reports as available
- principles of technology used in design of solar water heating systems:
 - solar radiation calculations
 - solar efficiencies
 - sustainability principles and concepts
- installation requirements
- health risks and hazards associated with solar water heating systems
- testing and commissioning schedule
- operation and maintenance manuals.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion volumes to this training package are available at the VETNet website -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>