

Solar Hot Water

Identify and Advise on Efficient Solar Heated Water Design and Installation

This unit specifies the competency required to develop skills in effectively managing existing resources, increasing sustainability through water and energy efficient products and practices.

Plumbers are in *direct contact with end users on a daily basis*. A clear understanding of existing water efficient products, emerging technologies, best management practices and existing conservation programs is essential in fostering conservation, developing partnerships with local water utilities and authorities, and increasing business opportunities.

Work associated with this unit is undertaken within the plumbing and services sector in accordance with relevant US standards.

It is a pre-requisite that all participants seeking *accreditation* in any 'Course in GreenPlumbers Environmental Solutions' are required to be licensed and or recognized as a plumber by the Authority Having Jurisdiction.

Nominal Hours – 4

Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

1. The recent history of solar heated water (solar thermal) design.

- 1.1 List *the perceptions of solar heated water design and installation*.
- 1.2 Identify and understand the advantages and disadvantages of *different solar heated water systems*.
- 1.3 Specify *potential problems and customer perceptions of solar heated water systems*.
- 1.4 Outline *potential best practice design and installation of solar heated water systems*.
- 1.5 Determine *the sizing requirements for heated water loads related to solar design*.

2. Identify the requirements of solar water heaters site considerations.

- 2.1 Demonstrate knowledge site location options.
- 2.2 Demonstrate knowledge of the optimum orientation and shading considerations.
- 2.3 Identify utility and other site connection requirements.

3. Determine and install efficient solar water heating systems.

- 3.1 Use design and performance (Solar Fraction) expectations with installation.
- 3.2 Identify applicable safety installation considerations.
- 3.3 Advise on potential hazards associated with solar thermal systems and design considerations to control hazards

4. Provide advice on solar hot water financial support programs and regulations.

- 4.1 Outline utility, local, state and federal rebate or credit opportunities
- 4.2 Outline and advise customers of *eligibility requirements*.
- 4.3 Identify installation certifications to meet support criteria.