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| Title | **Demonstrate knowledge of solar water heating system types** |
| Level | **2** | **Credits** | **15** |

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| Purpose | This competency standard is intended for those who carry out installations, commissioning, operation and maintenance of Solar Water Heating System. People holding credit for this module are able to understand Basics of Solar Water Heating Applications, Overview of Domestic and Commercial Solar Water Heating Systems and perform Commissioning, Operation and Maintenance of Domestic Solar Water Heating System. |

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| Classification ISCED | 0732 Building and civil engineering |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

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| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
| **A1:****Basics of Solar Water Heating Applications** | **P1-** Define basics of solar water heating**P2-** Understand importance of solar water heating**P3-** Identify applications of solar water heating | **K1-** Define water heating**K2-** Define fundamentals of solar collectors and Solar tubes Flat plates.**K2-** Types of water heating system**K3-** Applications of solar water heating system |
| **A2:** **Overview of Domestic and Commercial Solar Water Heating Systems** | **P1-** Explain the basic functions of domestic solar water heating system**P2-** Identify types of solar water heating system**P3-** Analyze the water discharge level for domestic and commercial Water Heating Systems | **K1-** Define water heating functions ,Solar system effects and Principle of heating **K2-** Market needs, purpose and requirements of domestic and commercial water heating**K3-** Measurement of water discharge**K4-** Equipment used for calculation of water discharge |
| **A3:** **Commissioning, Operation and Maintenance of Domestic Solar Water Heating System** | **P1-** Follow safety and other regulatory requirements for Domestic Solar Water Heating System.**P2-** Interpret and confirm layout plan**P3-** Identify and select tools and equipment **P4-** Perform measurements**P5-** Conform to commissioning specifications**P6-** Conduct operational testing | **K1-** Safety and regulatory requirements**K2-** Drawings and symbols**K3-**  Tools and equipment for Commissioning, Operation and Maintenance**K4-** Measuring units and conversions**K5-** Commissioning procedures and specifications**K6-** Testing procedures and requirements  |