## Case Study Specification – Active Solar Thermal

Section I. Installer

| Installer Contact Information |
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| Installer Name: |
| Business Name: |
| Business Address: |
| Business Phone: |
| Business E-mail: |
| Business web address: |

| Installer Qualification |
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| Qualifications: |
| Training relevant to solar thermal installation (please note duration of training course in hours): |
| Number of installations of solar equipment to date: |
| Potential capacity for installations per year: |
| |

Section II. Case Study

*Please provide information on an active solar thermal system that you have personally installed in a residential building in order to illustrate your competence in this area, using the case study template provided below. The solar system installed can be for hot water only or for space heating and hot water (combisystem). Where available, additional reference sites should also be listed. Note that the installation submitted as a case study, and those submitted as additional reference installations, may be selected for sample inspections by SEI.*

| Case study installation |
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| Date of installation start-up: |
| Address of Dwelling including name and telephone number of contact person: |
| Size of dwelling (sq. ft.): |
| Number of inhabitants: |
| Your involvement in the solar installation (tick appropriate box):<br>□ Sale □ Design and sizing □ Installation of solar panels □ Installation of solar storage and solar loop □ Electrical installation □ Commissioning and customer hand-over □ Maintenance |
| Did you work on the rest of the heating system? □ Yes □ No.<br>Explain: |
| Are inhabitants aware their installation may be selected for inspection? |

| Case study installation description<br>*Please provide a description with sufficient detail for each numbered section below addressing each of the specific points identified. Where appropriate, you can use photographic material or technical drawings to describe the installation.* |
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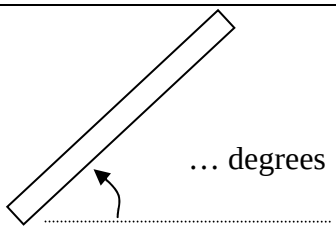
| 1. Sizing and design of the system |
| Size of the solar collectors (absorber area, in m2): |
| Size of the storage tank (buffer/hot water, in litres): |
| Distance between collectors and storage tank (m): |

| Please indicate orientation of collectors on dial and tilt on diagram: | |
|---|---|
|  |  |
| Please briefly describe the sizing and design, explaining the choice of the solar thermal solution adopted (type of collectors, location of equipment, back-up heating, etc.) and describing the method used to size the tank and collectors: | |
| 2. Installation of solar collectors | |
| Position of collectors: □ as roof cover □ over roof cover □ on façade □ on ground | |
| Details of the collectors (incl. manufacturer, make and model number): | |
| Please describe the solar collectors installation:<br>*(Please address any shading of collectors, fastening to the roof/façade/ground, waterproofing including collectors-roof junction, pipe penetration)* | |
| 3. Solar Loop | |
| Heat transfer fluid (air? water? type and concentration of antifreeze?): | |
| Pressure in the solar loop: | |
| Material of solar loop piping (copper, stainless steel, etc.): | |
| Insulation of the indoor pipe work (material, thickness): | |
| Insulation of the outdoor pipe work (material, thickness, protection): | |
| De-airing device(s) (location in solar loop, manual/automatic venting, etc.): | |
| Expansion tank (make, volume, location): | |
| Pressure relief valve (relief threshold, location, fluid collection): | |
| Heat exchanger (internal or external, type, heat transfer area): | |
| Circulating pump (make, model, speed setting): | |
| Pressure and temperature measurement (how and where): | |

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| Please describe the solar loop installation, including description of the pipe joining method, the fastening of the pipe work, and elaboration on any of the above elements: |
| 4. Controller and electrical work |
| Type of control system for solar loop (make, model, main functions): |
| Collector temperature sensor(s) (type, location, connection): |
| Protection against overheating: |
| Storage tank temperature sensor(s) (type, location, connection): |
| Please describe the control systems and electrical work<br>*(please address the protection against overheating)* |
| 5. Safety |
| Please describe the safety measures included in the installation:<br>(please address protection against scalding, and safety of the electrical installation) |
| 6. Storage tank |
| Details of the tank (incl. manufacturer, make and model number): |
| Dimensions (height & width, in centimetres): |
| Tank material (e.g. enamelled steel, copper, stainless steel): |
| Insulation (material, thickness): |
| Position of supply/return connections for solar loop (level compared to tank height): |
| Please describe the storage tank installation: |
| 7. Back-up heating |
| Type of back-up heating: □ instantaneous □ by accumulation |
| Position of heat exchanger: □ in tank □ outside tank.<br>Level of supply and return connections (compared to tank height): |

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| Type of fuel: □ gas or oil □ electrical □ renewable energy: …… |
| Control of back-up heating: |
| Please describe the back up heating provisions: |
| **8. Commissioning & Hand-over, Maintenance, Warranties:** |
| Please describe the commissioning and hand-over procedure followed:<br>(Please address the following: check-list used, users' manual provided, training provided, maintenance service offered, warranties for equipment and labour provided): |
| Have you had to call back following installation completion? |
| **9. Finance:** |
| Cost of equipment: |
| Cost of labour: |
| Financing option given (loan, payment in instalment, etc.): |
| Estimated annual savings (in energy unit or euro): |
| **10. Further information:** |
| What kind of assistance have you received from the solar equipment manufacturer or supplier (training, on-going technical support, installation manuals, etc.)? |
| Any further comments: |

The information presented above is certified sincere and accurate (please sign):

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Please indicate if you would like to have your case study available on the Residential Renewable Energy Grant Programme installers list □ Yes □ No, please keep my information confidential

Please return this case study to Sheila Judge


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