Survey

IEA SHC Task 49 - Solar Process Heat for Production and Advanced Applications

### GENERAL INFORMATION

Survey questions answered by (company):

Author:

Email:

Phone:

### GENERAL SYSTEM INFORMATION

Country the solar thermal system is installed:

Address:

Industry sector the solar thermal system is installed: <Please select an item>

[NACE code](http://ec.europa.eu/competition/mergers/cases/index/nace_all.html):

Solar Thermal Energy used for:

Solar thermal system owner / operator:

Solar thermal engineering company:

Process integration engineering company:

Year / Date of operation start:

Homepage (or other source for project related information):

### SOLAR THERMAL SYSTEM CHARACTERISTICS

1. **TECHNICAL PARAMETERS** *(please note the drop down lists in the table)*

|  |  |  |
| --- | --- | --- |
| *SOLAR HEAT SOURCE* | DATA | REMARKS |
| Kind of solar thermal collectors installed | <Please select an item> |  |
| Installed collector area [m²] |  | <Please select an item> |
| Solar collector loop heat transfer fluid | <Please select an item> |  |
| Solar energy storage | <Please select an item> |  |
| Storage volume [m³] |  |  |

|  |  |  |
| --- | --- | --- |
| *CONVENTIONAL HEAT SOURCE* | DATA | REMARKS |
| Kind of conventional heat source | <Please select an item> |  |
| Kind of fuel used | <Please select an item> |  |

|  |  |  |
| --- | --- | --- |
| *SOLAR HEAT INTEGRATION* | DATA | REMARKS |
| Point of Solar Heat Integration(please refer to below) | <Please select an item> |  |
| Short description of solar heat integrationHow and where is solar heat integrated?At which temperature (range) is the solar heat delivered [°C] (min/max)? |  |

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Figure 1: Possible integration points for solar process heat applications

1. **ECONOMIC PARAMETERS**

|  |  |
| --- | --- |
| **Total investment costs excl. VAT [€]**solar thermal system (+ storage) + process integration |  |
| **If possible, please specify (in € or %)**Solar loopSolar energy storageProcess integrationOther |  |
| **Subsidies [€] or [%]**Please also specify kind of subsidy (e.g. subsidies on investment costs, tax rebates, feed-in tariffs…) received: |  |
| **Cost for fuel replaced [€/MWhfuel]**Cost for conventional fuel replaced by solar thermal system |  |
| **Calculated solar thermal system life time [a]** |  |
| **Annual (useful) solar heat delivery [MWh/a]**Please specify reference year(s): |  |
| **Share of solar heat delivery compared to the total heat delivery at point of solar integration (solar fraction) [%]**Please specify reference year(s): |  |

1. **“LESSONS LEARNED”**

|  |  |
| --- | --- |
| **Initiative**Who was responsible for the initial start-up of the project with solar integration and why? |  |
| **Solar thermal integration methodology**How (based on which parameters / methodology) was the point of solar thermal heat integration determined? |  |
| **Designing / Tendering / Procurement**What are the most crucial interfaces? What are your experiences / lessons learned? |  |
| **Construction / Commissioning**What have been the main challenges? What is your experience (positive and negative)? |  |
| **Operation / Solar thermal system performance**Is there any kind of problems during operation? Does the performance meet your expectations? |  |
| **Recommendations**Due to your experience, which recommendations would you give for future projects? |  |

1. **ATTACHMENTS**

The following attachments to this survey are kindly requested:

1. Hydraulic scheme(s) of the solar thermal system integration

**☐ Attached**

1. Data sheet(s) of the solar thermal collector(s) in operation

**☐ Attached**

1. Pictures with permission for publication of the solar thermal system / energy storage / process integration measures

**☐ Attached**

**Thank you for your valuable contribution to the IEA Task 49 “Solar Process Heat for Production and Advanced Applications”**

[**http://www.iea-shc.org/task49/**](http://www.iea-shc.org/task49/)

**Please send this completed questionnaire + attachments per e-mail to**

**w.glatzl@aee.at**

[**http://www.aee-intec.at/**](http://www.aee-intec.at/)