



SCF project reporting

Status: August 2012

Acronym of project:	Pcalc
Title of project:	Revision for collector performance calculation tool for new collector designs such as PVT collectors and air heating collectors (Pcalc)

Project Start Date:	2012-01-13	Project End Date:	2012-07-13
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Report	Final	Reporting period (up to):	August 2012
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1. Overall progress

Please evaluate the evolution of the project so far, considering:

A)	Fulfilling initial objectives	1 (will fail) → 5 (will fully achieve)	4
B)	Complying with timeline	1 (critical delay ¹) → 5 (on schedule or ahead schedule)	4

1) In case of a critical delay, action shall be taken: revision of content, budget, duration or project termination.

Please provide a short explanation for the rating indicated above:

A)	The model extension has been implemented as foreseen but during the review carried out by ITW, TUV and ISE it became clear that current test data available is limited to data from steady state tests on uncovered collectors. As Scenocalc does not yet have the option for this collector model, the model extension implemented in this project has a limited use and as a result it could not be fully checked. We consider this as a natural part of the development process where unexpected limitations can arise. In order to get the full applicability for PVT collectors the next step will be to incorporate the steady state model for unglazed collectors in Scenocalc. Furthermore it should be further analysed how the results from test of the PV part of the PVT shall be implemented in the model. After that the PVT model extension can be fully validated and tested and thereafter finalized.
B)	The project requested a two month extension but due to holidays and Qaist final reporting it was still not possible to finalize in time.

2. Main achievements towards goals and milestones

Please indicate main achievements of the project so far, in order of relevance:

a)	Analysis of background data and definition of model extension
b)	Implementation of model extension in Scenocalc
c)	Review of the work by external SKN partners ITW, ISE and TUV
d)	
e)	

3. Deliverables

Please indicate the progress regarding deliverables:

C)	Progress regarding deliverables	1 (completed < 25%) → 5 (completed = 100%)	5
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	Information about each deliverable	Due Date	Completed (%)	Delivery Date ²
D1	Updated model and user interface of Scenocalc (version 3.10 contains the PVT extension but this part will remain hidden to the users until the PVT extension is fully validated and approved by SKN). In the meantime, a non-released version 3.10d with the PVT option unhidden is available for	May 2012	100	May 2012



	review and future work. Version 3.10d is appended to this report.			
D2	An updated (not released) manual including new features for PVTs is appended to this report.	July 2012	100	August 2012

(2) Actual or foreseen delivery date

4. Deviations from initial plan

Please indicate main deviations and proposed corrective measures:

The delivered model and updated Scenocalc version partly fulfils the aims of the project. The annual heat and electricity production of PVT collectors tested steady state or Quasi dynamic can now be calculated with the tool. During the external review of the results it was however acknowledged that the tests carried out so far on PVTs (at TUV) were all done steady state and using the unglazed collector model. As this was not foreseen during the definition of the project it meant that checking and validation of the PVT extension could not be finalized (the option for unglazed collectors tested steady state was never given any priority during the previous development of Scenocalc).

In order to get the full applicability for PVT collectors the next step will be to incorporate the steady state model for unglazed collectors in Scenocalc. Furthermore it should be further analysed how the results from test of the PV part of the PVT shall be implemented in the model. After that the model extension can be fully validated and tested and thereafter finalized. This will however require additional funding as the current project used its available funds.

Done in Borås, Sweden at 2012-08-30

Responsible: Peter Kovacs