IEA SHC TASK 60 & PVT IN SHAPE PROJECT

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INTRODUCTION

- IEA SHC task 60, on PVT
- PVT systems
- PVT Performance
- PVT Modeling
- Systems and designs

- Expert meetings

PVT inSHaPe project
- 3 different WISC water collectors
- heat source for the HP (no noise, no boreholes)
- Roof aesthetics
- Market study / opportunities & barriers
- Field test – performance
- System simulations (for single family houses)

The PVT inSHaPe project was realized with subsidy from the Topsector Energy of the Dutch Ministry of Economic Affairs
10 uncovered (or WISC) PVT collector producers

2 concentrated PVT

NUMBER OF PVT PRODUCERS IN THE NETHERLANDS

- Concentrated
- Uncovered - no insulation
- Uncovered - insulation

Without ventilated PV systems
BARRIERS & OPPORTUNITIES (2017 / 2018)

Barriers
- Complexity of system design and installation
- Lack of Testing Procedures and Certification
- Lack of Awareness
- High Investment Costs

Opportunities
- Compact (High Yield in Limited Roof Area)
- BIPVT & Aesthetics
- Combination with Heat Pump
- Energy Performance of Dwellings (EPC/BENG)
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**Addressed in Task 60**
TYPICAL SYSTEMS AND TEMPERATURES

- Focus on WISC, low temperatures
PVT COLLECTOR PERFORMANCE

Field test set up:
• PV technologies: CIGS & cSi
• Different absorbers
• Connected to a heat pump
Conclusion: it is feasible to use PVT collectors as a direct source for a heat pump. A better heat exchange with the ambient results in a lower needed collector area.
IEA SHC TASK 60 – INDUSTRIAL WORKSHOP TASK MEETING MAY 2019

Organised by TNO and TU Eindhoven
THANKS FOR YOUR ATTENTION

Questions?

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