



TREN/07/FP6EN/S07.70442/038514 SEMS

SEMS

Sustainable Energy Management Systems

Instrument: **Integrated Project**

Thematic Priority: **No. 6: "Sustainable development, global change and ecosystems (including energy and transport research)"**

D 2.14.3 First small scale DHS installed

Due date of deliverable: **M40**

Actual submission date: **M40**

Start date of project: **1st June 2007**

Duration: **5 years**

Organisations name of lead contractor for this deliverable: **Weilerbach**

Revision **01**

| Project co-financed by the European Commission within the Sixth Framework Programme (2002-2006) | | |
|---|---|----|
| Dissemination Level | | |
| PU | Public | PU |
| PP | Restricted to other programme participants (including services) | |
| RE | Restricted to a group specified by the Commission (including the Commission Services) | |
| CO | Confidential, only for members of the consortium (including the Commission Services) | |

First small scale DHS installed

The first small scale DHS in existing building structure is running since November 2009. A local SME (company Lukas and Hebel) connected three neighboring houses (936m², 25 people, 9 dwelling units, year of construction 1994).

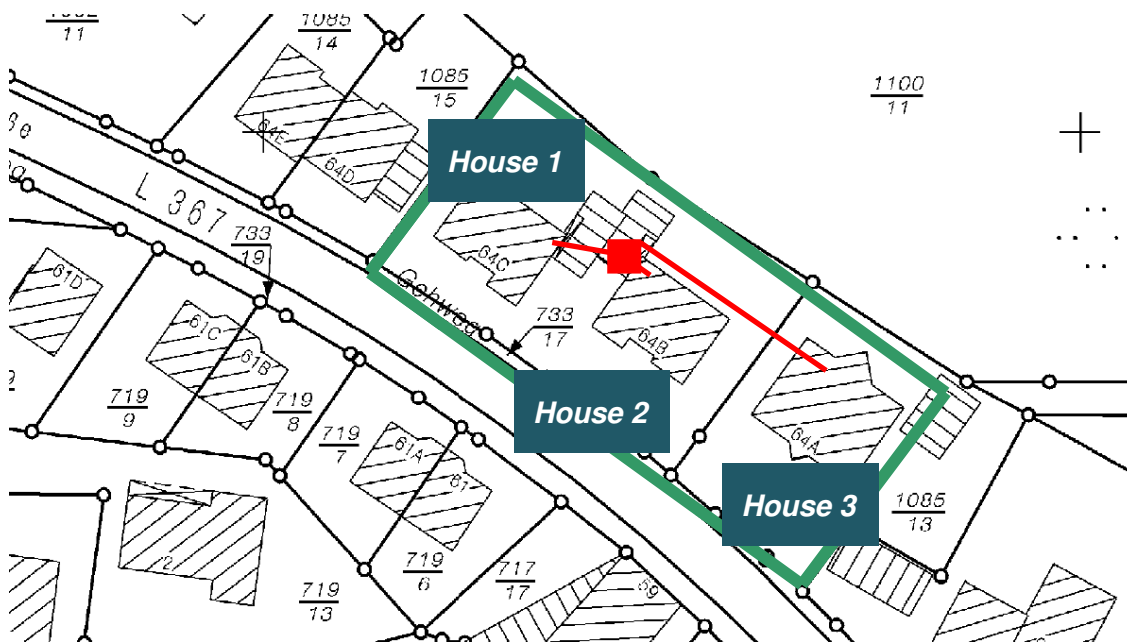


Figure 1: Location plan

KEY DATA

A wood pellet oven with a capacity of 50 kW and 32m² solar collector units has been installed under the roof of the garage between house 1 and 2. Flow temperatures can be low, because the houses are directly supplied. Hydraulic balancing is obligatory to guarantee efficient energy consumption.

| | |
|------------------------|---|
| Operator | Owner association Horbach Huck and Lukas Contact: +49 171 2000714 stefan@lukas-hebel.de |
| Operation start | Nov 2009 |

| | |
|---------------------------------|---|
| Capacity | 50 kW biomass heating with pellets substitution of gas |
| Solar unit | 32 m ² |
| Installation site | Hauptstraße 64a, 64b, 64c, D 66789 Reichenbach-Steegen |
| CO₂ reduction | 42 t/a |

Details about the buildings:

- House 1: 3 times 86m², 7 persons, formerly 3 gas heaters
- House 2: 3 times 86m², 6 persons, formerly 3 gas heaters
- House 3: third floor 140m², second floor 2 times 70m², first floor 140m², floor heating, 4 persons and 3-8 employees, formerly 3 gas heaters

Energy Saving measures:

The houses have been retrofitted. The retrofitting started in M36, so the consumption is now less than 50%. The following measures have been done:

- New windows
- Insulation of the roof
- Insulation of the walls

PICTURES



Figure 2: Building site in Reichenbach-Steegen



Figure 3: Example for the formerly gas heater, site photos from the building phase



Figure 4: Site visit in the course of the SEMS Consortium Meeting 13th Nov 2009