

FIRST REVIEW MEETING

HEAT4U PROJECT

July 19th 2013
Paris, GDF SUEZ

Gas Absorption Heat Pump solution
for existing residential buildings



Under the EU's Seventh Framework Programme for Research



The Consortium



First Review Meeting – 19th July 2013

WP 5.

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SUEZ**



FIRST REVIEW MEETING HEAT4U PROJECT

**Gas Absorption Heat Pump solution
for existing residential buildings**

Aim of WP 5 : test on the field the complete system

- Validation of GAHP technology in a variety of applications that represent of a large portion of retrofitted applications
- Validation of GAHP performance in real applications
- Third party recognized data for standardization and regulation activities (WP4)
- Experimental data for validation of the Decision Support System (WP6)
- Feedback for overall GAHP System optimization (control logic, schematics, end-user interface, installer instructions, integration into building, etc.) to achieve maximum “application tolerance” in efficiency delivery.

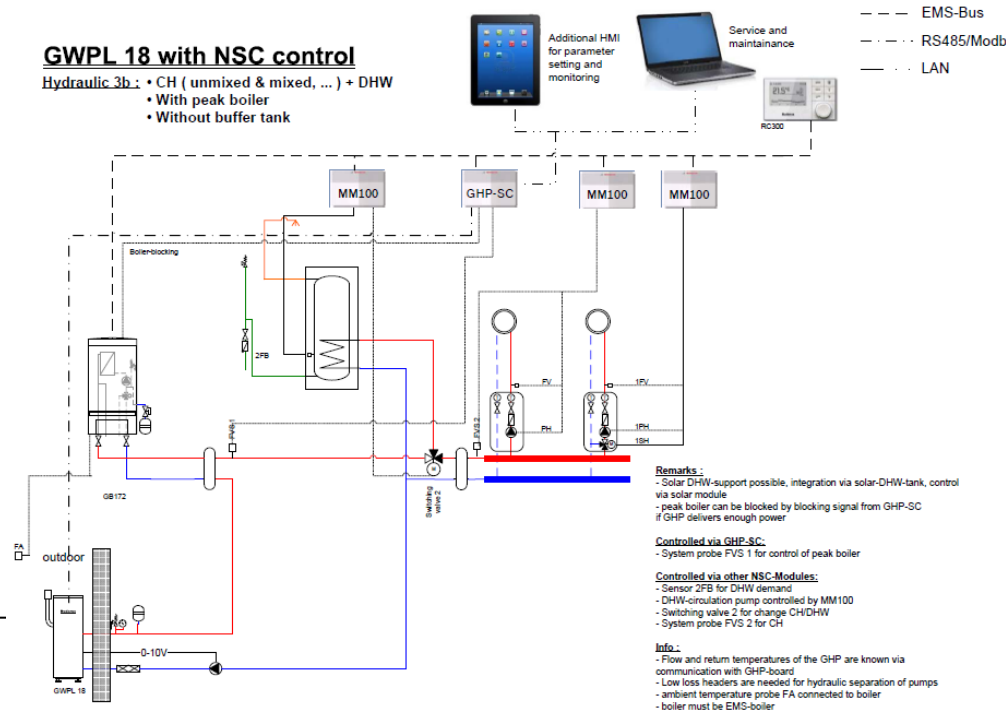
Achievement of WP 5 Overview

Task	Status	Leader	Comment
Task 5.1 : Design and realization of Field Testing GAHP system and Modules	Ongoing	ROBUR	
Task 5.2 Field Testing and Metrology Protocol	Finished	GDF SUEZ	Deliverable D.5.1. sent on time
Task 5.3 Multi-storey/Social Housing Building Demonstration Testing	In preparation	GDF SUEZ	Configuration changed Planned to start in october
Task 5.4 District Level approach Demonstration Testing	In preparation	BRITISH GAS	Planned to start in october
Task 5.5 Low temperature Demonstration Testing ("Cold" climate according to ErP)	In preparation	FLOWAIR	Planned to start in october
Task 5.6 High Humidity Demonstration Testing ("Average" climate according to ErP)	In preparation	E.ON	Planned to start in october
Task 5.7 Warm Climate Demonstration Testing "Warm" climate according to ErP)	In preparation	ENEA	Planned to start in october

WP5. Task 5.1

Design and realization of Field Testing GAHP system and Modules

- Work ongoing in WP1, WP2, WP3 and WP4 have been used to prepare the units which will be on the field.
- Hydraulic scheme and control strategy have been defined.
 - The hydraulic system will be without a buffer tank.
 - A peak load boiler is connected to the system.
 - The GHP-SC will block the peak load appliance so monovalent operation is ensured.



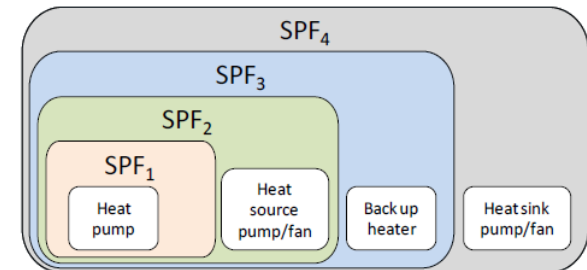
WP5. Task 5.2

The aim of these task was to establish a common measurement method and define the output of the measurement

Thanks to the quality of inputs of each partner, two physical meetings and intermediate phone conferences, the different steps have been defined :

- Classification of hydraulic schemes and operation strategies
- Checklists for planned installations: building data, building loads and system configuration
- Definition of methodology to calculate Seasonal Performance Factor, Gas Utilisation Efficiency, Auxiliary Energy Factor, Primary Energy Ratio

Boundary 1 is not considered, boundary 2 and 3 are mandatory and boundary 4 including useful heat after storages is optional



- Measurement sensors positions
- Measurement equipments and uncertainties
- Installation guide for measurement equipment, commissioning protocol
- Preparation with Fraunhofer of the data communication aspects and output treatment

WP5. Task 5.3 to WP 5.7 : the different configuration field tests

Building Demonstration Testing

GDF SUEZ

Common progress :

The look for the tests places have started. Metrology scheme installation have been prepared. Exchange for communication with Fraunhofer are ongoing

Definition of role, responsibilities are in progress

5.3 : France : Multi-storey/Social Housing Building Demonstration Testing , France, GDF SUEZ

After having discussed the first market priority

And assuming that the hydraulic defined in WP3 should be tested first,
→ it has been decided to test a unit in a retrofitted house in monovalent configuration

5.4 : District Level approach Demonstration Testing, UK, BRITISH GAS

The configuration chosen is : 100% Heating & DHW service by GAHP in UK with biogas ratio in the gas grid

WP5. Task 5.3 to WP 5.7 : the different configuration field tests

Building Demonstration Testing

GDF SUEZ

Task 5.5 Low temperature Demonstration Testing (“Cold” climate according to ErP) Poland, FLOWAIR

Task 5.6 High Humidity Demonstration Testing (“Average” climate according to ErP), Germany, E.ON

Task 5.7 Warm Climate Demonstration Testing “Warm” climate according to ErP) Italy, ENEA

A “Load simulator” will replace the building

Future plans : 5 field tests running

Next step : proceed to the installations

- 5 field tests in 5 countries (Winter 2013 –r 2014)
- Installation of the system and the measurement equipment
- Commissioning
- Analysis of the first data
- Intermediate analysis
- Report