



European Year of Volunteering 2011



## **THERMOVALORISATIONS Project**

### **Leonardo Da Vinci Partnership**

#### **MEETING REPORT**

#### **5<sup>th</sup> SEMINAR, GRETA Quercy Rouergue, Rodez, France (10 to 12<sup>th</sup> May 2011)**

#### **Attendees :**

From Flemish Belgium : Staff : Wim Geuens (delegation leader), Elsen Jurgen, Patrick Ampe,  
From Flemish Belgium : Students : Matthias Ceulemans, Suphot Kongrap, Patrik Krok, Nick Van Aeken,  
Jelle Van Der Berg, Staf Vanduffel.  
From Bulgaria : Staff : Radostina Vasileva Petrova (delegation leader), Petar Stefanov Kostov, Koycho  
Tonchev Atanasov,  
From Bulgaria : Students : Ivan Antonov Petrov, Neven Jordanov Krastev, Stephan Vasilev Kalchev,  
Natalia Atanasovia Miteva.  
From Finland : Staff : Ulla Pantsar (delegation leader), Markku Ollinen,  
From Finland : Students : Ville Anttinen, Niko Tahtinen.  
From France : Staff : Jean-Rémy Filtz, Etienne Bascou, Philippe Bazzoli, Nathalie Lavaurs, Françoise  
Villeneuve, Gilles Fontange, Carole Laur, Ludovic Lacombe, Elian Coment, Stéphane Palaprat, Jocelyne  
Blaser, Marie-Christine Osmont, Patrick Nicolas, Jean-Philippe Marquié (delegation leader).  
No students from France.

**Thanks to:** Mr. Michel Trigosse, Lycée Alexis Monteil's headmaster and Greta Quercy Rouergue President.  
Mr Jacques-Yves Rousseau, Lycée Louis Vicat's headmaster.  
The Rodez city Hall staff.  
French organizers and delegation's referents : Béatrice Agnelli, Alexandra Fontanilles, Sophie Brousse,  
Delphine Vayrou Guitard, Sophie Lafon, Leïla Daoda.

**These minutes and the associated PowerPoint presentations will be available on the following website  
page in the group password protected area**

<http://wiki.lamk.fi/display/THERMOVAL/Home>

Website of the project : <http://87.121.77.174/thermoval/index-thermoval.html>

Structure according to Leonardo application file p. 42/48

#### **Objectives of the meeting :**

It was the fifth (and last) mobility of the project.

The main objective beyond general presentations was to debrief on the EPD + IR made in Oplinder, Flemish  
Belgium in January. With the maximum same input data, we wanted compare and analyse the results.

The second objective planned was that all delegations make a proposal for the EPD + IR operating mode test  
and elaborate a common synthesis.

The third objective planned was that all delegations make a proposal for a European vocational training  
curriculum to the job of EPD diagnostician and elaborate a common synthesis.

The last objective was to propose ideas for an potential continuation of this project.

### 1) Reviewing the actions :

Following the previous meeting report (4<sup>rd</sup> seminar, Leuven, Flemish Belgium, January 2011), we couldn't really compare results after our last EPD + IR test made in Oplinder, because we didn't have the same input data for the same building. So we decided to have the maximum same input data. We still consider that all countries's software are "black boxes". We will obtain different output data and we will try to explain these differences.

### Partners' presentations :

Presentation by the Finnish delegation of the EPD made in Belgium and results.  
Presentation by the Belgian delegation of seminar synthesis.  
The coordinator has uploaded the main presentations on the dedicated website.  
This action will be finished at the end of the project.

### Policies on low energy buildings :

Work done is not in agreement with the time-schedule. So the different delegations are asked to provide urgently a synthesis relative to the national/regional policy of each country.

The coordinator proposes here this link : [http://ec.europa.eu/energy/efficiency/buildings/buildings\\_en.htm](http://ec.europa.eu/energy/efficiency/buildings/buildings_en.htm)  
He will propose to all the delegation leaders to resume their national policies on low energy buildings. Our partner from LNE in Trappes, Mr Jean-Rémy Filtz send a link <http://www.epbd-ca.org/> about the Energy Performance of Buildings Directive.

### National policies and comparative study analysis :

All the national policies have been presented in detail (action fully completed 100 %).

### Low energy buildings :

Comparison elements have been produced (Data Capture for EPD : Maximum same input data, Help Infrared Camera Landmarks, Outputs and complete Lexicon).

We visited a Low Consumption Building in construction in Gaillac near Albi (Maison Commune Emploi Formation). The private company NEOTIM was in charge of thermal calculations. The "Regional Agency For Environment" in Toulouse (ARPE) was in charge of "Cahier des Charges" elaboration.

**MAISON COMMUNE pour l'EMPLOI et la FORMATION**

Maitrise d'Ouvrage : **COMMUNE de GAILLAC**  
Place d'Hauptpoul - 81600 - Gaillac  
tel : 05 63 81 20 20  
Maitrise d'Ouvrage déléguée : **SEM 81**  
Le Causse, 81100 - Castres  
tel : 05 63 73 50 20  
Maitrise d'Œuvre : **ASTRUC Architectes**  
28 Av. St-Exupéry, 81600 - Gaillac  
tel : 05 63 57 48 01  
**Ugo NELSON, Architecte**  
Lagarrique, 81600 - Senouillac  
tel : 05 63 57 09 60

**Financement**

Europe & ADEME :	131 600 €
Region Midi Pyrénées :	630 600 €
CC Tarn & Dadou :	150 000 €
Ville de Gaillac :	1 739 800 €
<b>Total :</b>	<b>2 652 000 €</b>

Permis de construire n°081 099 09 E 1131  
accordé le 23/03/2010

Lot n° 01 - V.R.D.  
SAGER 81600 - Gaillac tel : 05 63 57 08 26  
LACLAU 81600 - Brens tel : 05 63 57 05 18  
Lot n° 02 - Gros Œuvre  
BULDIEC 81600 - Gaillac tel : 05 63 57 15 77  
DIAS Alam & Fils 81600 - Gaillac tel : 05 63 41 01 04  
Lot n° 03 - Façades & Isolation extérieures  
KUENTZ 31600 - Fronton tel : 05 61 82 92 24  
Lot n° 04 - Charpente & Couverture  
RIVIERE CHARPENTE 31600 - Labège tel : 05 62 47 34  
EIFFIRA 31000 - Toulouse tel : 05 61 22 19 94  
Lot n° 05 - Etanchéité  
MAEB 31200 - Toulouse tel : 05 61 47 16 35  
Lot n° 06 - Plâtrerie  
TRUJILLO 81340 - Valence d'Albi tel : 05 63 53 43 71  
Lot n° 07 - Menuiseries extérieures  
ATELIER du BOIS 81990 - Puygouzon tel : 05 63 54 24  
Lot n° 08 - Menuiseries intérieures  
COUCOUREUX 31240 - L'Union tel : 05 34 25 11 55  
Lot n° 09 - Serrurerie  
VERDIER 81600 - Brens tel : 05 63 57 08 67  
Lot n° 10 - Revêtement sol/souple  
REY - SOL CONFORT 81600 - Gaillac tel : 05 63 57 46 22  
Lot n° 11 - Carrelage  
CLC 81000 - Albi tel : 05 63 47 99 13  
Lot n° 12 - Peinture  
LACOMBE 81600 - Gaillac tel : 05 63 57 12 22  
Lot n° 13 - Courants forts & courants faibles  
SPIE 81000 - Albi tel : 05 63 48 86 70  
Lot n° 14 - Chauffage, Ventilation & Plomberie  
SPIE SUD-OUEST 81200 - Mazamet tel : 05 63 61 27 60  
Lot n° 15 - Ascenseur  
CID 31400 - Toulouse tel : 05 61 12 21 55

### Evaluation of the last seminar in Leuven, Flemish Blegium :

All the different items were assessed and evaluated at the end of the seminar by all the partners. Therefore the evaluation has been fully completed and results have been reported. Proposal for the seminar in Rodez has been produced by the French delegation (action fully completed 100 %).

## 2) Common framework for an EPD+IR test :

We organised a synthesis workshop (Workshop 2) on this topic during the seminar in Rodez, France. A written synthesis of this workshop was agreed by all the delegations. Mr Stéphane Palaprat (Neotim) was the workshop leader.

## 3) EPD operator career :

We organised a synthesis workshop (Workshop 3) on this topic during the seminar.

- On Tuesday, the Bulgarian delegation presented a document “European Vocational Training Curriculum to the job of EPD diagnostician” with 11 themes and

*Total duration : 90 hours + test + course test.*

Mr Etienne Bascou exposed a complete and very interesting presentation “Vocational Training Curriculum”, Energy improvement of buildings.

This document propose four modules :

Module 1 : Analysis and evaluation of energy performances : 4 days

Module 2 : Thermographic or IR camera : 1 day

Module 3 : Blower door : 1 day

Module 4 : Advising customers : 1 day

*Total duration : 7 days.*

- On Thursday, after discussions, we arrived to a presentation of a “European Vocational Training Curriculum to the job of EPD diagnostician with IR camera”.

This vocational training curriculum is aimed at :

- Basic building technicians
- Job rehabilitation applicants
- The man “Lambda” of the street
- Architects, engineers.

Two different levels of training should be considered : a basic level and a higher level, each of them with different training schedule.

This document proposes four modules :

Module 1 : Analysis and evaluation of energy performances : 4 days to 8 days

Module 2 : Thermographic or IR camera : 1 day to 2 days

Module 3 : Blower door : 1 day

Module 4 : Advising customers : 1 day

*Total duration : 7 days to 12 days.*

A written synthesis of this workshop was agreed by all the delegations. Mr Etienne Bascou (CAFOC, Rectorat Toulouse) was the workshop leader.

## 4) Self-assessment process presentation and plan for the partnership :

Greta Quercy Rouergue in Rodez hosting this fifth seminar presented in detail the self-assessment process.

## 5) Evaluation and self-assessment of the fifth seminar :

All the different items were evaluated at the end of the seminar by all the delegations and partners. Mrs Marie-Christine Osmont will send a synthesis (made by Mrs Carole Laur from Greta) to the different delegation leaders (action fully completed : 100%).

## 6) General evaluation of the complete project and continuation of the project :

Mrs Marie-Christine Osmont presented in detail the general scheme of the project, made by the coordinator. All the different items were evaluated at the end of the seminar by all the delegations and partners.

Leonardo/Thermovalorisations/Partners Meeting/GRETA Rodez

Mrs Marie-Christine Osmont will send a synthesis (made by Mrs Carole Laur from Greta), to the different delegation leaders (action fully completed : 100%).

The coordinator tried to give the conclusions about this LEONARDO DA VINCI Partnership Project in the Rodez City hall.

In this project, we notice a great interest from all the stakeholders. The challenges we face are new and scary and force leaders and experts to adopt a modest attitude based on mutual confidence : no one has the solution but everyone has a part on it.

Jean-Philippe Marquié  
Coordinator of the project  
7 June 2011

Mrs Hélène BEGON (Manager for the Integration of Sustainable Development Concerns by economic actors, French ministry of Ecology) said :

“We want to focus more on educational, training and labor market instruments that will allow workers to skip from a job to another more easily, especially thanks to common, transverse skills that would be taught together”.

### 7) Results analysis (EPD in Tienen)

With the maximum same input data, we get to the following results for the four countries : Mr Jean-Rémy Filtz was the workshop leader.

(Same living area = 179 m <sup>2</sup> ) Same U values	<b>Flemish Belgium</b>	<b>Bulgaria</b>	<b>Finland</b>	<b>France</b>	<b>Maximum gap value (except Finland)</b>
Heating (kWh)	5928	5448	31262 <sup>(*)</sup>	5011 <sup>(***)</sup>	15 %
Domestic Hot Water (kWh)	2229	1188	8937	1937	46 %
Cooling (kWh)	/	/	/	/	
FINAL ENERGY (kWh/year)	8157	6636	40199	6948	18 %
FINAL ENERGY (kWh/m <sup>2</sup> .year)	46	37	225	39	19 %
PRIMARY ENERGY (kWh <sub>EP</sub> /year)	15564	19908	(*) We haven't results in terms of primary energy and gas emission. The user can choose the heating system <sup>(***)</sup> .	17926	22 %
PRIMARY ENERGY (kWh <sub>EP</sub> /m <sup>2</sup> .year)	87	111		100	22 %
LABEL	<b>B</b>	<b>B</b>		<b>C</b>	/
GAS EMISSION (kg CO <sub>2</sub> /year)	778	13597		895	?
GAS EMISSION (kg CO <sub>2</sub> /m <sup>2</sup> .year)	4	76		5	?
LABEL					

1. Survey : We had different EPD calculation methods (simplified approach);

2. Each Country has used a software taking into account the European EPD regulation and calculating with some advantages and disadvantages,...

3. Input Data -> Objective achieved : Agreement on hypothesis and data used

4. Output Data -> Comparison of results : Calculation implemented during the seminar :

- a) Calculation of the surface area differs from one country to another. Standard size can include indoor or outdoor dimensions of the house, stairs, garage, embrasure of the doors, windows, ... these differences are quite important and can be critical for the analysis of the result. We decide to get a value of 179 m<sup>2</sup> for the living area.
- b) Comparison of climate data between countries is not so easy and considering the different softwares used, input data process produces impact on the results that could be substantial.
- c) Depending on the country, calculation of the wall coefficients (horizontal or vertical walls) for wall in contact with the ground/floor is considered differently.
- d) Conversion factor used for calculating « Final energy in Primary energy » has a significant influence. In France : 2,58. In Bulgaria : 7.
- e) With our French Software (From PERRENOUD, EPD module), on the basis of the Finnish results (heating = 31262 kWh), if we take into account the heating system (heat pump with performance coefficient of five or six, in this case), we get to a similar value of Heating (kWh)! So we can consider that we have a common agreement on the results.
- f) We can't obtain harmonization with our labels. Mr Elian Coment proposed a special European label.

(\*\*\*) 5011 kWh :

This result was found with the French software PERRENOUD module DPEWIN version 3.01 of 6th December 2010 (calculation method 3CL), with the choice of a geothermal heat pump.

If we replace this chosen heating system with a class III wood stove, we get 40555 kWh for heating needs. This result is very close to the Finnish value of 31262 kWh, a value obtained without any particular choice of heating system.