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## 8<sup>TH</sup> RENAISSANCE MEETING – 10/1/2009 – 10/2/2009



### RENAISSANCE ZARAGOZA

#### WP 3 : Demonstration (new & refurbished buildings)

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### WP3 STATE OF PROGRESS (NEW CONSTRUCTIONS)



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- ZARAGOZA -  
SPAIN

#### VALDESPARTERA

##### New bioclimatic constructions (RUE)

- Plot 12,17 and 18 are finished.
- Plot 13 the initial delay has permitted one more basement floor for garages and the selection of a more efficient exterior insulation System for the facade (see *photos*)

##### Local progress under WP3.3.2 (RES)

- The installation of 564m<sup>2</sup> of solar thermal panels will allow a saving estimated in 733, 2 MWh.

Located	Flats	Energy	M <sup>2</sup>	Installations dates
Plot 12	164	Solar panels	165	Done
Plot 17	164	Solar panels	165	Done
Plot 18	144	Solar panels	144	Done
Plot 13	144	Solar panels	90	December 2009
Total	616	Solar panels	564	



Plot 17, 12



Plot 13 (83% constructed) and the new facade selected



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## WP3 STATE OF PROGRESS (NEW CONSTRUCTIONS)

### VALDESPARTERA Demonstration Centre (CUS)

- Only **68,989 € remain to certify**. At the present date, the works are almost completed and focus on "Jardín de las Energías" an outdoor space where photovoltaic panels and wind turbine demonstration will be placed.

A number of changes to improve the efficiency in the thermal and electrical energy saving:

- Modification of the enveloping so that, in accordance with the requirements of the Technical Code, the building reaches the **qualification A**. It has worked on the building envelope by changing the insulation around the space, **increasing the quality of the glazed spaces**.
- It has improved summer cooling through forced ventilation from previously cooled night air through underground pipes enclosed in order to reduce the demands throughout the day thanks to the thermal mass of the building.

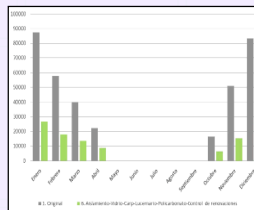


Illustration .Heating demand (before and after)

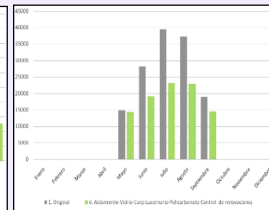


Illustration .Cooling demand (before and after)

### Local progress under WP3.3.2 (RES)

- In this period, the **installation of the biomass boiler** in the interpretation Centre has begun. This installation will provide **450 operating hours** (theoretical) per year.



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## WP3 STATE OF PROGRESS (REFURBISHMENT) PICARRAL AREA

### Local progress under WP3.3.1 (RUE)

- **ANZANIGO 10-12: Works in the 30 flats have already finished.**

It has been done a complete refurbishment of the building:

- Increasing the insulation of covers and facade
- Renewal of drainpipes and draining the solar
- Installation of double glazed windows to improve insulation and protect against exterior noise.
- Installation interior of central heating with gas combining the installation with the preheated water from solar panels
- Installation of 23,4 m<sup>2</sup> of solar thermal panels to preheat water.
- Counter centralization of gas, water and electricity installations.

**GENERAL YAGUE 2-4-6-8** (involving 40 flats) starting in October. The refurbishment of these houses will be similar.

Two more contracts have been signed and will be starting in 2010 and also will involve the installation of solar panels:

- **CRUCERO BALEARES 14-16** (involving 16 flats)
- **ANZÁNIGO 2-4-6-8-14** (involving 75 flats)

### Local progress under WP3.3.2 (RES)

**103 m<sup>2</sup>** of solar thermal panels are installed or foreseen to be for 2010/2011 in the social buildings in Picarral; that would allow a saving estimated at **133,9 MWh**.



Resume of refurbishment

Located	Flats	M <sup>2</sup> Solar panels	Installations dates
Anzánigo nº 10-12	30	23,4	Finished
General Yague 2,4,6,8	40	13,98	Starting nov 2009
Anzánigo 2-4-6-8-14	75	58,5	Starting during 2010
Crucero Baleares 14-16	16	7	Starting during 2010
<b>Total</b>	<b>161</b>	<b>103</b>	



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## WP3 STATE OF PROGRESS (REFURBISHMENT) CANDIDO DOMINGO SCHOOL



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### PICARRAL - CANDIDO DOMINGO SCHOOL

The work on the facade

Rehabilitation public school aims to demonstrate the potential energy savings obtained with the refurbishment of old buildings for public use.

#### Local progress under WP3.3.2 (RES)

The rehabilitation and installation of photovoltaic panels in public school has been done.

The process had many difficulties:

- Works could not be done during the summer, whereas this period of the year would have been the best, as not occupied by children.
- to install photovoltaic panels in the School, we had to replace the old roof of the building to isolate and strengthen it.
- the PV panels were placed under a special system to prevent theft and focused properly



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## WP3 DEMONSTRATION



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SPAIN

### FORESEEN ACTIVITIES FOR THE NEXT 12 MONTHS

#### VALDESPARTERA NEW BUILDING

- PLOT N° 13 will be finished and training course will be done with the owners.

#### VALDESPARTERA EXHIBITION CENTRE

- Opening of Interpretation centre (expected first half 2010) referred also to WP 4.1, 4.2, 5.1 & 5.2 (**seminars and expositions** will be carry out in that place).
- EVZ will continue to seek sponsors.
- EVZ will programme different seminars & expositions when the centre is open.

#### PICARRAL REFURBISHMENT

- GENERAL YAGUE 2-4-6-8, ANZANIGO 2-4-6-8-14, CRUCERO BALEARES 14-16 (131 flats)

We'll be starting the refurbishment in 2010 and hopefully finishing the process in the same year (we have realised that works last between 12 an 13 months). But with very little margin.

#### PICARRAL, CANDIDO DOMINGO SCHOOL REFURBISHMENT

- In Wp3.3.1 Will check the sealing of the building with the new isolation system by doing choreographies during the winter.
- In Wp3.3.2 to complete the installation process which must be done and some work by the electric company to connect the school to the general grid.  
Once it 's done the computer program will start and will allow the visualization of savings in CO2 production through the use of such renewable energy.



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## WP3 DEMONSTRATION



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- ZARAGOZA -  
SPAIN

### FORESEEN ACTIVITIES FOR THE NEXT 18 MONTHS (SCENARIO 2)

#### VALDESPARTERA

As it was said in the REQUEST FOR AN AMENDMENT TO PROLONG THE RENAISSANCE CONTRACT, it's expected that almost all houses in Valdespartera be completed in 2010, so, if the scenario 2 will be approve, the network data obtained remotely from that year were closer to reality and materials that were realized in the year 7 would have better (updated) information of the telemando network.

#### PICARRAL

This is a very slow process that involves a lot of different entities, the neighbourhood, the constructor, banks for the loans and the local administration for the municipal licences. All this facts are followed by a multidisciplinary team of social workers, architects, technical architects... that impulse the process and solve problem. Having 6 months more assure us that the refurbishment process will be completed and the monitoring information will be more exhaustive.

#### PICARRAL, CANDIDO DOMINGO SCHOOL

*This extra time will allow us to verify the installation and intensification of the program and act more on the diffusion of this action. Also will permit us study the behaviour of the building with the new insulation, check the energy saving in electricity bills and in the absence of production of CO2*

production and maintenance of new facilities.



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### RENAISSANCE ZARAGOZA

#### WP 3.3: Demonstration Zaragoza (CUS/Valdespartera)

EVZ n° 11

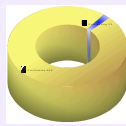


### WP3.3 (Progress) Valdespartera (CUS)

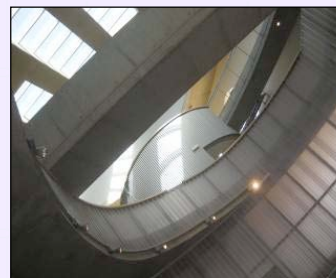


#### Demonstration Centre (CUS) of Valdespartera

- In June 2009, 97,93% (3.258.851,99 €,) of the budget certificated.



- Telemando network: concluded.
- Biomass boiler: Installed
- 22/07/09. Press conference
- Museum back-drop: In progress
- Energy saved through efficiency and renewable production (MWh/year)



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- ✚ **Foreseen activities for the next 12 months (Scenario 1)**
  - Opening of Demonstration Centre (expected first half 2010)
  - **Seminars and expositions** will be carry out in that place.
  - EVZ will continue to seek sponsors.
  - EVZ will programme different seminars & expositions when the Centre is opened.



- ✚ **Foreseen activities for the next 18 months (Scenario 2)**

### Updated information



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