

# Press Release

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## Tenesol supports French eco home at Solar Decathlon 2010

Tenesol, the global solar power provider owned by energy giants TOTAL and EDF, has helped create one of France's submissions to the international Solar Decathlon (SD) 2010 competition, entitled *The Armadillo Box*. The SD competition involves 20 universities from around the globe competing to design and build an eco-friendly, life-size home that runs entirely on solar energy. The home is lived in for the duration of the competition, to demonstrate the latest innovations in efficient, attractive and affordable solutions to sustainable living of the future.

**Supported by TOTAL, official sponsor of *The Armadillo Box*, Tenesol provided its products and latest innovations to the project.** The result is a state-of-the-art home that incorporates close to 100 of Tenesol's PV panels in its design, including 48 of the company's most powerful (250 Wp). The design, which gives a glimpse of what future home living might be like, was created by **specialist architectural school ENSAG in Grenoble, in partnership with the French National Solar Energy Institute (INES) and Grands Ateliers de L'Isle d'Abeau (GAIA).**

"We are delighted to support *The Armadillo Box* project at Solar Decathlon and to help develop and promote solar technology as the renewable energy of the future," says Benoit Rolland, managing director of Tenesol. "Advancing PV technology is a major drive of our R&D division and raising awareness of this practical and sustainable form of energy is a highly beneficial and rewarding task. ***The Armadillo Box* is a very impressive structure and illustrates the level of quality and ingenuity involved in this competition. I am proud that Tenesol has been involved in its creation.** We believe it has a real chance of winning and we wish the team the best of luck for the competition."

As well as supplying 97 PV panels, Tenesol provided all cabling and an integrated monitoring system that measures the amount of solar generated electricity in the project. Tenesol also provided a dedicated project manager to work alongside the students and provide all necessary assistance. This helped the ENSAG team build their understanding of PV technology and how best to achieve the most efficient results from its operation.

"It has been great to work with these enthusiastic and highly innovative students," says Jean Christophe Girouard, technical director at Tenesol. "**We have a great working relationship and the team has expressed their appreciation of our efforts.** They are very happy with our response to their needs and the overall time and technical support we have provided."

## **The Armadillo Box** (<http://www.solardecathlon.fr/en/>)

The design of *The Armadillo Box* is based on the results of a European research project into passive housing in hot countries. It focuses on the concept of a compact structure and aims to minimise heating and cooling needs according to the seasons. The building incorporates a number of advanced technologies that focus on eco-friendly development, including:

- A total of 97 PV panels covering 102m<sup>2</sup> with a capacity of 15 kWp are architecturally integrated into the building's rooftop and sunshade structure. The system is grid connected and supports the home's entire electricity needs.
- A mechanical, double-flux ventilation system is installed throughout the framework of the house. It uses just one pump to support the building's heating and cooling. This system also produces hot water, dependant on sun exposure.
- The building is thoroughly insulated and all kitchen appliances are A-class energy rated.
- The house is also fully automated; all appliances and accessories (including the curtains) are controlled by a home-automation system.
- A complex water collection system is in place that disperses water throughout the home to maintain a constant room temperature during summer or winter.
- The building itself incorporates natural and recyclable materials such as wood, recycled steel and earth.

*The Armadillo Box* was designed and built by a team of 50 students at ENSAG, in partnership with INES and GAIA, with assistance from Tenesol.

For the project the students actually built two *Armadillo Box* houses. One will be entered into SD 2010 and the other will go on display at INES's solar village at the institute's headquarters in Le Bourget du Lac. This will give the project even more exposure as INES employs 3,000 people and welcomes more than 6,000 industry professionals at its headquarters each year.

## **Solar Decathlon**

SD is a biannual event created by the US Department of Energy in 2002 to educate, raise awareness and encourage the use of solar power. SD 2010 marks the first occasion the event has moved out of the US with this year's event taking place 10<sup>th</sup> – 19<sup>th</sup> June in Madrid, Spain.

The prototype houses must run entirely on solar energy, be grid connected and incorporate energy efficient technologies. Houses are judged over the course of ten contest (hence the 'Decathlon'). Each contest is designed to demonstrate the house's capabilities. SD supports global efforts to promote the use of renewable energy across an international platform. As a result, teams receive substantial

financial support to create their prototype home. In the case of SD Europe, the Spanish Ministry of Housing has offered approximately €100,000 to each team.

The prototype houses will be on display to the general public on the banks of the River Manzanares in the heart of Madrid. To fully test the capabilities of each entry, each prototype house will be inhabited over the entire 10-day competition and energy usage will be closely measured. Following the event, *The Armadillo Box* will embark on a European promotional tour before returning to INES.

SD is an important event for Tenesol. The company recently increased its activity in the consumer market; it now sells PV solutions to the French market directly and is increasing distribution of consumer focused products across Europe.

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### **About Tenesol**

A rapidly expanding global player in the field of solar energy (*with a turnover of €249 million in 2009, +29%*), Tenesol works on behalf of businesses, local authorities and private individuals. For more than 26 years, Tenesol has been engineering, designing, manufacturing, installing and managing solar energy systems including production and consumption of supplied systems (*Off-grid sites, general grid supply via direct connection, solar water heating*) for its customers around the globe. A benchmark player in its sector, Tenesol currently has a staff of over 1,000 employees across 20 subsidiaries including 2 production facilities.

For more information, please visit: <http://www.tenesol.com/?lang=en>

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