



## The Provincial Park of Chevetogne

Joint Press Release – May 2009

### First major solar panel dismantling, renewing and recycling project in Europe

Making the photovoltaic industry '**DoubleGreen**'. On this day, the provincial domain of Chevetogne and the renewable energy system integrator Nizet Entreprise, part of the CFE Group, jointly organise with PV Cycle the first major European dismantling of 1983 end-of-life solar panels and the installation of new solar panels.

#### Presentation

Initially a 19<sup>th</sup> century aristocratic park which, since 1969, has become the property of the Province of Namur, the park of Chevetogne offers the 500 000 visitors that visit us each year, 550 Ha of nature at its best and brightest. The park especially appeals to families who enjoy each others company in the luminous setting of a beautiful and verdant landscape.

Based on the concept of heterotopia and multi-cultural philosophy, the park of Chevetogne has become a gathering place with a special appeal for those who enjoy combining active leisure activities and a close encounter with nature.

#### Policy relating to the implementation and development of renewable energy sources in the park Chevetogne

Since the very beginning, one of the main concerns of the parks management has always been education, in particular on the subject of the wide variety of alternative energy sources that can be employed to reduce our eco-footprint.

#### Historical background

- **1981 Pilot project**

25 years ago, the first major **solar heating system** (63 kW) in Europe was built in Chevetogne, supplying enough energy to heat the Olympic size open air swimming pool.

The Province of Namur was a pioneer in this particular area. Indeed, the Province was one of the first in Belgium to put into practice the use of solar energy to heat an open air swimming pool.

The thermal panels cover an area of 2018 m<sup>2</sup> and maintain the 2606 m<sup>3</sup> water of the swimming pool at a temperature of 20 to 25 °C between June and September.

- **1983**

A few years later, **photovoltaic solar cells** were added to the initial project so as to create a fully independent complex. The photovoltaic system was inaugurated in June 1983. Covering an area of 992 m<sup>2</sup> the photovoltaic cells supply the circulation engines of the solar heating system and also the lighting of some of the parks roads.

- **December 2007**

**A wind turbine with** a power output of 900 kW has been set up on one of the parks headlands. This wind turbine is managed by the non-profit-making association *Incubateur*.

**A passive house.** This energy efficient construction will very soon be put into use as an educational center.

### **Relevance today**

The originality of the project resides in the fact that it unites different sources of renewable energy in order to develop a detailed educational program based on eco-friendly energy consumption and its inevitable environmental benefits... with an eye to the future.

The recycling of the whole photovoltaic modules is therefore of the utmost importance and inherent to our intention to develop alternative energy sources.

The eldest and greatest Belgium photovoltaic free field is now in the process of full renovation.

Nizet Entreprise has won this public tender through creative engineering design and monitoring capabilities.

Specificities and challenges:

- Dismounting of 1984 modules
- Adaptation of existing 26 years old structure in order to support new photovoltaic modules (370 instead of 1984 modules)
- Preserve aesthetic appearance while enabling access to the field
- Installation of 370 new polycrystalline modules, equivalent to a 485 m<sup>2</sup> surface
- Interconnection of the modules using the existent buried cables
- Transforming of solar energy into alternating current with high level efficiency
- Monitoring of the installation data (kwh, solar irradiation, avoided CO<sup>2</sup>, ...) and proactive maintenance
- Digital display of data on an large outdoor screen: kwh production, CO<sup>2</sup>..
- Recycling of 1984 modules: aluminum frames, silicium, glass with full energy balance output through PV Cycle

The total output of the renovated field will be 62.900wc with estimated green electricity production of 57.946Kwh/year and a CO<sup>2</sup> economy of 24,9 Tons/year.

The Chevetogne site is one of the first 16 photovoltaic (PV) pilot plants, which were initiated and supported by the European Commission in the eighties. It is now the first major site to be dismantled and serves as learning experience on our way towards creating the PV CYCLE voluntary take-back and recycling program for end-of-life PV modules across Europe.

PV CYCLE, which represents 70% of the European PV industry, is delighted to take responsibility for the entire process from the recycling of the panels to putting them back into a second life-cycle and enabling other CO<sup>2</sup> emissions reductions.

The global Co<sup>2</sup> energetic balance of the Chevetogne photovoltaic 'relifting' will demonstrate the positive impact of PV recycling potential from now and for all existing photovoltaic's plants.

**For additional information :**



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ANNEXES PHOTOS

