

### **Solar Integrated's photovoltaic installation on a re-naturing landfill near Rome fulfills all expectations**

**In June 2008 the 1 MW solar installation on the roman landfill was connected to the Italian energy grid. The American company Solar Integrated with its European headquarters in Mainz was able to secure this project by using flexible photovoltaic modules integrated into roofing membranes. The innovative installation of a solar system on a re-naturing landfill makes the area accessible to alternative usage 25 years earlier than so far possible. Measurements of the energy output generated up to now from this installation meet the expectations of the owner completely.**

The flexibility of the modules was the determining factor, because the photovoltaic system is located on Rome's largest landfill, Malagrotta. When waste decomposes gases emit, which leads to moving of the ground for a longer period of time. Due to this shifting of the ground, conventional modules faced a high risk of breakage, which could only have been eliminated by an uneconomically expensive substructure. The flexible modules, however, integrated into the landfill can adapt to the moving ground and additionally produce more energy. The reason being that the thin-film technology employed shows higher energy yields at higher temperatures compared to crystalline solar modules.

The 1 MW photovoltaic installation covers an area of nearly 16.000m<sup>2</sup> and produces annually approx. 1.421.000 kWh of electricity. This equals the demand of 315 four-person households. As the owner confirmed during the Conferenza dell'Industria Solare in Rome in February, the current energy output meets the yield prognosis on which the decision for the investment into the solar system was based.



1.257 tons of CO<sub>2</sub> emissions are saved each year because of the application of this solar-system. If this amount would be emitted by energy production with fossil fuels, a forest area of 1,42 km<sup>2</sup> or 199 soccer fields would be necessary to neutralize the effect of the green house gas emissions.

Ground mounted photovoltaic installations are usually only installed on fully re-natured landfills. Due to the emitting gases and the related shifting of the ground, landfills areas remain unused for 20 to 25 years after they have been actively used until the re-naturing process and its inherent changes to the landscapes surface are entirely completed. Only then the area is returned to the community for alternative usage. The application of flexible solar modules allows to use this pace during that time period (and thereafter) in an ecologically and economically profitable manner.

### **About Solar Integrated**

Solar Integrated is a renown pioneer and leader in the commercial/industrial solar industry. Expanding beyond our core building integrated photovoltaic (BIPV) capabilities, we also provide solutions across a wide variety of ground and roof-mounted applications using both BIPV and related solar technologies for utmost reliability, productivity, financial performance and environmental benefits.

Our blue chip customer base includes Carrefour, Coca-Cola Enterprises, Frito-Lay, Honeywell, IKEA, Lidl, Metro, ProLogis, San Diego Unified School District, Tesco, Toyota, Unibail-Rodamco, UPC Solar, U.S. Air Force, U.S. General Services Administration (GSA), U.S. Navy and Westfield and many more.

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