



Industrial

Toyota Motor Manufacturing France



Two different views of the SolarWall® system at TMMF's plant in Valenciennes, France

Background

Toyota Motor Corporation (TMC), the world leading automobile manufacturer is a trailblazer in their effort towards sustainable plant operations. Since 2007 TMC has undertaken an environmental initiative for Toyota plants based on three conceptual pillars:

1. Achieving reductions in energy use through the development and introduction of low-carbon production technologies and daily continuous-improvement activities;
2. Shifting to renewable sources of energy such as solar heating and solar electricity, and;
3. Preserving local ecosystems and interacting with local communities through afforestation activities at plant sites.

Out of this initiative Toyota Motor Manufacturing France (TMMF), which is TMC's French production subsidiary that produces the Yaris (Vitz) for Europe, was designated one of five plants by TMC to develop pioneering initiatives towards sustainable manufacturing. The SolarWall® solar air heating system was an ideal technology to help Toyota achieve some of their ambitious green objectives. It stands in good company among other environmental initiatives already undertaken at the facility in Valenciennes, such as; a photovoltaic membrane on the roof of its logistics building in 2008, a system for wastewater recycling, preservation of biodiversity within the site, and environmental education activities for children in nearby communities.

Solution

The SolarWall® solar air heating system will heat the make-up air required in the manufacturing plant. SolarWall Europe Sarl. (headquartered out of France) met with TMMF and designed a 400m² (4,305 ft²) black SolarWall® system that integrates into their ventilation system. TMMF chose to accessorize their SolarWall system with a logo of a sun (located in the corner) to highlight the fact that their wall is actually a solar collector.

Results

The SolarWall® system has already generated positive results and will raise the temperature of the air entering the building by up to 9°C during the coldest months of the year. It is estimated that the installation will result in annual energy savings of up to 25% over conventional heating methods with CO₂ emissions reduced by about 20 tonnes a year.

On June 20, 2011 TMMF hosted a press event at the facility in Valenciennes to inaugurate the SolarWall® system and to introduce it to the dozens of reporters that were present. *"This innovative technology will contribute to reducing CO₂ emissions by the plant,"* the automaker said in a statement.

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