



Photo: AFP

Floating Solar Panels

Italian Inventor Pushes Small-Scale Installations



SAN GIULIANO, Italy — Rays of the winter sun bounce off gleaming mirrors on the tiny lake of Colignola in Italy, where engineers have built a cost-effective prototype for floating, rotating solar panels. Marco Rosa-Clot and his team say they are revolutionizing solar power and that their floating flower-petal-like panels soaking up the Tuscan sun have already attracted a lot of interest from international buyers. Standard solar panels on buildings or in fields have been criticized for taking up valuable agricultural land, being unsightly and losing energy through overheating -- issues the floating plants would resolve. The Floating Tracking Cooling Concentrator (FTCC) system is designed to exploit unused areas of artificial reservoirs or disused quarries. While the water keeps the panels at low temperatures, reflectors are positioned to maximize solar capture at different times of day, making it more efficient than a traditional installation, Rosa-Clot said. The head of Scintec, a small family business which produces a variety of renewable energy and industrial devices, Rosa-Clot said the pilot plant set up on the lake near Pisa, Tuscany, was a model of efficiency. "It's a small-scale design, 30 kilowatts, which would suffice for a dozen or so families. The standard is set at 3kW per apartment," he said. At an estimated price of around 1,600 euros per kW including installation, a plant the size of Colignola could cost some 48,000 euros (\$63,000). Scintec says its system costs 20 percent less than ground-based structures. The flat panels are winged by reflectors and sit on raft-like structures which are anchored to the lake bed with a pylon. Engineer Raniero Cazzaniga said, "Our system is designed for low-lying quarries. The installation is only about a metre (three feet) high and usually you can't see it until you get to the water's edge. It is not at all intrusive," he said.

Hybrid's Unlikely Rival: Plain Old Cars Reflected In Chevy's Decision To Drop The "Volt"



When Doug Hacker decided he needed a car that was light on gas, he figured a Toyota Prius hybrid was the way to go. Many of his co-workers at Procter & Gamble's soap research lab in Cincinnati drove Priuses and bragged about getting more than 50 miles per gallon. After a little research of his own, Hacker made a surprising discovery: While more costly hybrids still win the mileage competition, he could save more money by buying a Ford Fiesta powered by a technology that's been around for 151 years—the internal combustion engine. That's because the efficiency of conventional engines has improved so much that the mpg gap is closing, making it harder to justify paying more for gas-electric hybrids. "I was surprised to see that cars like the Fiesta were actually about a nickel cheaper to run per mile than the Prius," says Hacker. He bought a Fiesta for \$16,400 instead of a \$23,015 Prius. He's averaging 37 mpg, which he says is on par with the real-world mileage of his Prius-driving friends who don't take extreme measures to boost their mpgs. ("To get 50 miles per gallon, some dress like Eskimos because they don't want to turn the stinking heat on," says Hacker.) As automakers use new and not-so-new technology to wring efficiency from traditional motors, gasoline-electric hybrids are falling out of favor. Hybrids fell to 2.2 percent of the U.S. auto market last year, from 2.4 percent in 2010, after peaking at 2.8 percent in 2009, says researcher LMC Automotive. The reason is simple: Consumers don't want to pay as much as \$6,000 extra for a hybrid when they can get 40 mpg on the highway in a standard car, such as a Chevrolet Cruze or Hyundai Elantra. And even more conventional cars with hybrid-caliber mileage are coming this year, thanks to advancements that enable engines to burn fuel up to 20 percent more efficiently. "Internal combustion engines are giving hybrids a run for their money," says Mike Omotoso, a hybrid forecaster at LMC. Combustion's comeback is running head-on into the auto industry's ambitious plans to roll out an array of electrified vehicles in coming years to meet more stringent federal fuel economy regulations. The number of hybrids, plug-in hybrids, and electric vehicles on the U.S. market will nearly quadruple by 2020 to 153 offerings from 40 last year, LMC forecasts. But with buyers showing a preference for gas-sipping regular cars, automakers may rethink the need to stock their showrooms with so many hybrids, which aren't nearly as profitable because of their costly technology. "It does have a chilling effect in the short and medium term" on development of vehicles that run on something other than old-fashioned gasoline, Omotoso says. Ford Motor, for instance, is dropping the hybrid version of its Escape SUV after seven years of slim sales. Instead, the automaker will offer two fuel-efficient gasoline engines this year that nearly match the 34 mpg the gas-electric version got in the city. Everyday engines are being enhanced by modern technologies such as electronic controls, eight-speed transmissions that keep engines operating in their optimal range, and direct fuel injection that allow gas to burn more efficiently. Combine those with tried-and-true technologies like turbo-chargers, and automakers can improve mileage and horsepower simultaneously.

Infinity Switches To Green Positioning Decides To Target Luxury Car Buyers



The luxury Japanese car brand is preparing to unveil its electric concept car Infiniti Emerg-e in a bid to align its luxury positioning with environmental motoring. Infiniti has ambitious growth plans to sell 100,000 cars in Europe by 2016, up from 5,000 last year and part of its expansion strategy hinges on the development of greener electric and hybrid vehicles that maintain the power and performance of traditional luxury vehicles. The Emerg-e model will be unveiled at the Geneva Motor Show in March. "Be there when inspiration strikes" has been developed to encourage consumers to watch the "big reveal" on Facebook. Wayne Bruce, European communications director, says: "Technology makes it easier to marry environment and performance and we want drivers to be able to enjoy the performance of a luxury car without feeling guilty. The concept car isn't a vehicle that's currently available to buy, but it's a brand exploration of what high performance means to Infiniti. "We want to communicate that it's about having a clear conscience so we're replacing the aural sensation of powerful engines with visual sensations like lights." Infiniti is also preparing a year long marketing, experiential and PR campaign under the banner "silence is the new vroom" to promote the luxury appeal of high performance vehicles. Car marques could quadruple sales of green vehicles by targeting high-end consumers with marketing for environmental cars, rather than "traditional environmentalists", according to a survey by GfK. GfK surveyed 3,000 UK motorists and found that by the nature of the journeys they make by car and the amount they are willing to spend, luxury car owners are the best audience to target with green messaging for eco vehicles. It claims that younger, environmentally-conscious urban families driving premium cars are four times more likely than the overall population to buy electric models as they have an above average interest in environmentally-friendly vehicles.

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