

A couple of months ago, I started receiving a magazine called Fast Company. I don't know who put me on the list but I have found it a fascinating collection of new designs for living. Their website, www.fastcompany.com, describes their mission as "charting the evolution of business through a unique focus on the most creative individuals that are sparking that are change in the marketplace."

Fast Company has an interesting section called Ethonomics. What is Ethonomics?

In 2009, Noah Robischon wrote, "The end of the modern financial system as we know it has cleared the way for an era of ethical economics, or Ethonomics. We live in a world that is resource_constrained but ingenuity_rich. So an upstart generation of entrepreneurs and innovators within the world's biggest companies are starting businesses that are good for the world as well as the bottom line. They are practicing social change through urban revitalization, sustainable agriculture, green IT(Information Technology), alternative energy, and online community_powered investing."

In the current Fast Company, they reported about companies that are designing power_scavenging devices fitted with piezoelectric (PE) crystals. These pressure_sensitive materials, normally made of ceramics, give off a small charge when squeezed, squashed, bent, or slapped.

If a layer of PE was slotted beneath a supermarket parking lot, it could convert the movement of cars to power the store's checkout conveyor belts or pump that free electricity back into the grid.

Here are some examples of pilot projects using PE technology.

ROADS

Late last year, Haifa_based Innowattech dug up 33 feet of Israel's Highway 4 and inserted PE generators 2 inches below the blacktop. The pilot was successful and they reported that if the gizmos were placed under one lane of a busy half_mile stretch (at an estimated cost of \$500,000), it could create enough energy to meet the needs of 250 homes.

RAILWAYS

Railway tracks absorb huge amounts of kinetic energy from passing locomotives. Innowattech is building customized concrete sleepers loaded with PE generators. A concrete sleeper is a railroad tie made out of reinforced concrete instead of wood. The firm is currently testing the kit with Israel Railways and estimates the passage of 300 cars an hour over 1 kilometer of track will provide enough electricity for 150 households.

SIDEWALKS

In London, Pavegen Systems is building walkway slabs that can generate a steady 2.1 watt hours when positioned in heavy footfall zones. Clusters of energy_absorbing pads will soon be installed at a major London transport hub to power lighting and signs.

SPORTS STADIUMS

Powerleap, based in Ann Arbor, Michigan, is testing PE floor tiles (a square foot will cost from \$50 and \$100) in stadiums. Excited fans jumping up from their seats will generate enough power to light up LED displays and other devices around the ballpark. So the popular "wave" at sporting events is now more important than anyone thought.

HUMAN BODIES

The rise and fall of our lungs during breathing produces close to one watt of power per minute. Up to 80 percent of that energy can be captured with nano_size crystals printed onto flexible film developed by Princeton scientists. The biocompatible generators could soon be implanted to recharge pacemaker batteries.

PAPER SHREDDING EVENT.

Confidential Paper Shredding will be held on Saturday, June 19, at VALCORE Recycling (38 Sheridan Street, Vallejo 707 645-8258) from 10:00 a.m. to 2:00 p.m. There is a charge of \$10 per twenty pounds (maximum: 100 pounds).

VALCORE Recycling Board Secretary Jane Bogner's "A Sorted Affair" is published every other week in the Times-Herald. For recycling information call VALCORE Recycling at 645-8258 or visit www.VALCORErecycling.org.

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