Vibration-powered generating batteries recharge when shaken

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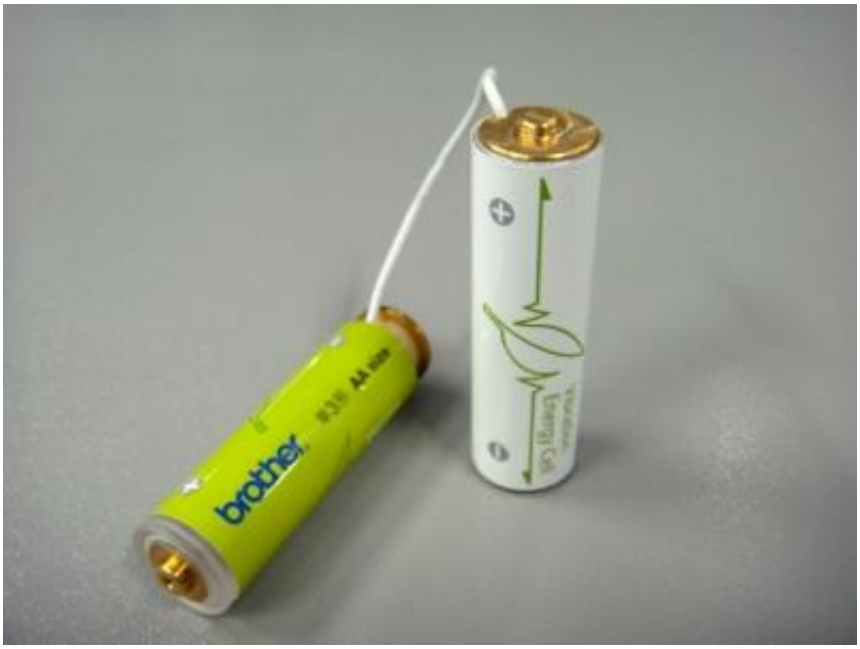

In this AA-size prototype, the generator and rechargeable battery are installed in two different cases. The voltage of the capacitor is 3.2V or lower. Image credit: Brother Industries Ltd.

(PhysOrg.com) -- Whether you're away from electricity or you don't mind expending a few of your own calories, a new generator allows you to recharge it simply by shaking it. Its developer, Brother Industries Ltd, says that the "vibration-powered generating battery" can replace AA and AAA batteries for devices that have a power consumption of about 100 mW, such as a flashlight or remote control.

Although the new gadget is technically a small generator, it is designed to fit inside a battery-shaped case. Inside the case is the generator as well as a capacitor that has a capacitance of about 500 mF. The company has developed prototypes in which the generator and capacitor both fit into a single battery-size case, and prototypes in which the generator and capacitor each have their own battery-size case, in which the capacitor has a greater voltage.

To recharge the unit, the entire device containing it (such as a flashlight or remote control) can be shaken. The company hopes that the new approach to recharging could cut down on the amount of batteries used in low-power electronics.

"The new generator will semipermanently eliminate the need to replace batteries and contribute to reducing the amount of wastes," Brother Industries said.

The company will exhibit the vibration-powered generating battery for the first time at the Techno-Frontier 2010 exhibition later this week in Tokyo. The demonstration will include using the generator in an LED flashlight, a TV remote control, and a remote control for lighting equipment.

More information: via: Tech-On