**究極の節電ハウス、太陽電池・直流家電　シャープが実験**

The Ultimate Energy Saving House – Solar Panels and Direct Current Electronics – Sharp Experiments

シャープは８日、太陽電池などの新エネルギーと直流電力（ＤＣ）で動く新たな家電を組み合わせ、従来の電力消費を限りなくゼロに近づける省エネ住宅の実証実験を大阪・堺で始めたと発表した。消費電力を自動制御する近未来の住宅を想定し、「究極の節電」を目指す。

On the 8th, Sharp announced the completion of a proof-of-concept low energy home, that uses renewable energy sources such as solar power combined with home appliances that run off of direct current electricity to bring its total power consumption near zero. The residence was built in the Sakai, Osaka prefecture. By demonstrating a home that automatically controls its own power consumption can be built in the near future, Sharp is aiming for the “ultimate in electricity savings”.

　省エネ住宅は、木造２階建てで、延べ床面積２７１平方メートル。太陽光発電や蓄電池の電力を、直流のまま家庭内で利用するのが大きな特徴だ。家庭の消費電力量をシステムで制御し、同程度の住宅で従来消費していた電力量に比べ、大幅に削減できるという。

The new energy home is two stories, made of wood, and has 271 square meters of floor space. A key feature of the home is that the direct current electricity provided by the solar panels and the storage batteries is used directly by the devices inside the home. By using a special system to control the rate of electricity consumption, the new home achieves a dramatic reduction in consumption in comparison to other similar houses, Sharp claims.

家庭内はすべてＬＥＤ照明を採用し、センサーで人を感知した時だけ点灯。電気自動車用の蓄電池を家庭用に使う技術も導入し、検証する。

Only LED lightbulbs are used inside the residence, and only turn on when a sensor detects the presence of a person. Sharp also introduced a new breed of technology that enables batteries originally developed for electric cars to be used inside a home; the testing of this technology is another goal of the project.

従来の交流（ＡＣ）を使う家電のほか、新たに開発した直流対応のエアコンやテレビ、冷蔵庫、給湯器などを備え、直流から交流の変換時に生じるムダな電力を削減する。直流の家電の普及は、安全性や規格の標準化などの課題もあり、１０年単位の時間がかかるという。

Unlike homes that use alternating current electricity, the home uses newly developed appliances, such as refridgerators, televisions, air conditioners, that are designed to run on direct current power. This decreases the amount of wasted energy caused by the conversion from DC to AC. The spread of DC-capable appliances still faces a variety of challenges relating to standardization and safety, and some say it make take up to ten years.