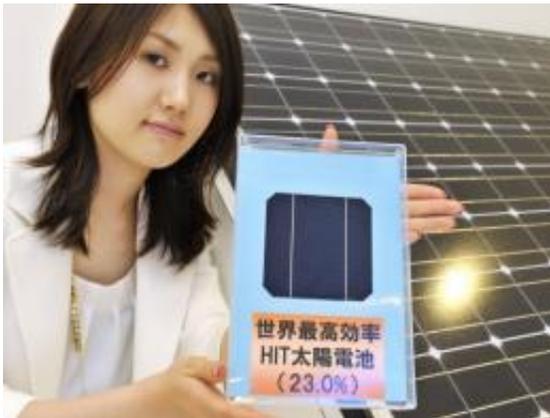


Hi-tech, eco-friendly dream home takes shape in Japan

December 14 2009, by Karyn Poupee and Patrice Novotny



The world's highest efficiency energy conversion photovoltaic (solar panel) cell, displayed by an employee of Japanese electronics giant Sanyo in Tokyo. On Tokyo Bay, at the edge of the largest urban sprawl on Earth, sits what may be an environmentalist's dream home. Solar panels on the roof and a fuel-cell in the backyard power the family house.

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Solar panels on the roof and a fuel-cell in the backyard power the family house, a [lithium-ion battery](#) stores the surplus [electricity](#), hot water pipes double as floor heating, and good insulation saves energy all round.

But it's the little high-tech touches that give this eco-house a cutting edge

when it comes to futuristic low-carbon housing.

Its maker, Panasonic, has fitted the "Eco idea house" with super-efficient and intelligent appliances that promise to save power at every turn while ensuring a comfortable lifestyle for its residents.

Sensors follow people as they move from room to room and can, for example, blast a jet of warm or cool air at a person sitting in the living room, said Panasonic group president Fumio Ohtsubo during press conference.

"If the person leaves for the kitchen, the lights there can turn on, while the (living room) lights, air-con and television all turn off thanks to sensors that detect human presence, temperature and lighting," he said.

The house also boasts a washing machine that halves water use simply by tilting its drum, and a fridge that 'learns' its users' habits and switches into sleep mode when it doesn't expect to be opened for some time.

Innovations like these have made Panasonic the country's most environmentally-friendly manufacturer, according to a survey by the Nikkei business daily, ahead of Sharp, [Mitsubishi](#) Electric and [NEC](#).

Japan's corporate giants -- from electronics makers to the big car companies -- are increasingly betting on environmental and energy-efficient technologies as they seek to dig out from Japan's worst post-war recession.

Toyota's Prius hybrid car has been the top domestic seller since the spring, followed by Honda's hybrid, the Insight. Mitsubishi Motors has meanwhile bet on electric cars and promoted its [zero-emission](#) compact, the i-MiEV.

The government, seeking to meet ambitious [climate change](#) targets along with economic recovery, has encouraged Japan Inc. to go green to get out of the red.

State subsidies have helped boost hybrid car sales, while an eco-point programme, just extended in a new stimulus package, encourages consumers to buy energy-efficient appliances such as those in the Panasonic house.

The government is also working on an ambitious programme to cover public buildings in solar panels and boost other renewable energy sources.

-- Japan, world's second largest economy, the number five emitter --

At the UN climate change summit in Copenhagen, Japan has put on the table one of the world's most ambitious targets -- to cut its carbon dioxide emissions by 25 percent from 1990 levels by 2020.

Among the major economies, this is second only to the European Union's 30 percent reduction target, contingent on action by other major emitters.

Prime Minister Yukio Hatoyama, whose centre-left government took office in September, has made climate change policy his signature topic on the world stage, where Japanese diplomacy has long stepped softly.

"This is probably one of the greatest contributions Japan has ever made in the international arena," said Environment Minister Sakihito Ozawa.

Questions remain about how Japan intends to meet the goal, which has been strongly criticised as harmful to the economy by major business groups.

Japan has also promised to give 9.2 billion dollars in aid by 2012 to help developing countries combat global warming, the phenomenon blamed for melting glaciers and ice caps and changing world weather patterns.

Japan is the world's second largest economy but only the fifth largest emitter of greenhouse gases.

Its so-called carbon intensity stood at 0.24 kilograms (0.53 pounds) of CO₂ per dollar of economic activity in 2007 -- compared to 0.50 kg in the United States and 0.40 kg in the European Union.

Much of Japan's past success has been due to the need to conserve energy in the resource-poor island nation.

During the 1970s oil crisis, "each company made efforts to improve energy-saving technologies and contributed to Japan's current economic industrial advantage," said Ozawa. "We need to accomplish this success story again."

Japan has struggled to keep the promise it made in the Kyoto Protocol -- to slash emissions by six percent between 1990 and the 2008-2012 period.

But Ozawa said that, after lagging behind for years, Japan had "finally reached its objective," thanks in part to the economic downturn.

Official data however says overall emissions have grown by 1.9 percent since 1990, if the benefits of reforestation and carbon-trading are not factored in.

Kimiko Hirata, who heads the Kiko Network, an anti-climate change association, criticised government data as misleading and said emissions from coal power plants had grown by about 10 percent in that time.

Other experts say that the Japanese public, some 127 million people, has shown little concern about climate change and could do much more to reduce the nation's collective carbon footprint.

"Unfortunately, until now the Japanese people have not been trying to meet the Kyoto Protocol commitment," said Koichi Kitazawa, president of Japan Science and Technology Agency.

Energy in the rich high-tech society is being gobbled up by households packed with TV sets, computers and electronic gadgets, while air-conditioners often double as heaters in poorly insulated homes.

Especially since the 1990s, "we can say that the Japanese individual lifestyle has become Americanized," Kitazawa said. "[Japan](#) should change the lifestyle of its people."

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