Condo dwellers to get energy-wise fuel cell system

October 23 2013, by Nancy Owano

(Phys.org) —Tokyo Gas and Panasonic are to start selling a unique home fuel-cell system for condos in Japan starting April 2014. This system involves a fuel-cell unit, hot-water storage unit and heat source equipment for backup purposes installed in the pipe shaft of a condominium. At the press conference where the system was announced, there was no manufacturer's suggested retail price offered, but the talk

was about the system's features and benefits. This is the condo version of the now-famous Ene-Farm fuel cell that first went on sale in 2009. The design was modified in order to accommodate the requirements unique to installing such systems in condominiums. As such, this is another first in Japan's effort toward commercial fuel cell systems targeted at household heating and power generation. The unit now can be installed in the pipe shaft in the corridor of a condominium.

The reason for the effort is clear when examining multifamily building trends. According to *The Japan News*, condos and other multifamily housing account for 70 percent of Tokyo Gas' 10 million household customers.

Questions unique to condo environments had to be resolved. This time around, the system consists of a fuel cell unit, hot-water unit, and backup heat source unit that are all stored in the pipe shaft of the condominium. A pipe shaft is a space to store water and gas pipes; the shaft runs vertically through condominium floors. In comparison to detached houses, said the announcement, "condominiums have more restrictions on the conditions for installations." The designers increased the air-tightness of the unit, and it was possible to install the new fuel cell in the pipe shaft in the open hallway. They also worked on the unit to meet quake-resistance standards. Thirdly, the engineers had to consider fashioning the air supply and exhaust system to work under high wind conditions on a building's higher floors.

At the press conference, Tokyo Gas showed an example of the product installed in a pipe shaft. In a model case, it was said that the system can reduce utility costs by $306 to $420 on a user's annual utility bill. They are emphasizing, in the introduction of this condo system, the Ene-Farm advantage of reducing energy consumption and CO2 emissions, as well. "Compared to using electricity from thermal power plants and heating water using city gas, the new Ene-Farm fuel cell for condominiums

reduces primary energy consumption by approximately 37 percent and CO2 emissions by approximately 49 percent when operating at the rated electricity generation," said the news release.

Stepping forth to show interest in the new system for condos, according to the release, are Tokyu Land Corporation and Sogoh Real Estate. They expressed "their will to adopt the new fuel cell in condominiums they will sell." This would involve two properties, 456 units.

More information: techon.nikkeibp.co.jp/english/ … _EN/20131022/310280/
the-japan-news.com/news/article/0000738668
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