

Japan has floating solar power plants in Hyogo Prefecture

April 24 2015, by Nancy Owano



Kyocera is in the news this month. Two floating solar power plants in two reservoirs in Kato City, Hyogo Prefecture, Japan, are complete. This is a joint venture. The two players are Kyocera and Century Tokyo Leasing, which is in the business of equipment leasing. Construction started last year in September. They use 255-watt Kyocera modules, 11,256 modules in total.

The 11,256 Kyocera modules are affixed to specially developed floating platforms, [attached](#) to the lakebeds, said *RenewablesBiz.com*.

The plants are on Nishihira Pond and Higashihira Pond. Capacity on Nishihira is 1.7MW. Capacity on Higashihira is 1.2MW. Tom Kenning reported in *PV-Tech.org*, which covers the solar PV supply chain, that, combined, the plants will generate enough to power 920 [households](#).

The electricity generated will be sold to the local utility, Kansai Electric Power, through Japan's feed-in-tariff system. *BusinessGreen* commented that the feed-in-tariff system "has played a key role in establishing Japan as one of the world's largest solar [markets](#) in recent years." Liat Clark in *Wired.co.uk* made the observation that "Solar power is booming in Japan; the nation doubled its [solar power](#) capacity within two years of the 2011 Fukushima nuclear disaster, and is now a world leader along with China and the US."

What is the advantage of a "floating" solar power system design? Kyocera said the cooling effect of the water results in more electricity generated than with ground-mount and rooftop systems. Also, by shading the water, they reduce reservoir water evaporation and algae growth.

The platforms use high-density polyethylene, which can withstand ultraviolet rays and resist corrosion. The floating plants are said to be engineered to withstand typhoon conditions.

This is not the last you will hear of floating plants. Liat Clark in *Wired.co.uk* said "[floating solar power plants](#) are having a moment in the sun." He said some "are starting to appear in the UK, while larger scale projects are also planned in California's wine country." *BusinessGreen* also mentioned plans for arrays on reservoirs in California. Last year, Young-Kwan Choi of the Korea Water Resources Corporation, discussed at length Floating PV Systems in terms of power generation

and environmental impact. He wrote that the floating PV system demonstrated in his paper was a new way of generating solar energy, using the water surface that is available on dams, reservoirs and other bodies of water. "This method has an advantage that allows efficient use of the nation's soil without bringing damages to the environment." His paper compared and analyzed the empirical [data](#) of the floating PV system that K-water installed with that of the existing overland PV. The author verified that the generating efficiency of floating PV system was superior by 11 percent and more (the floating PV system has 11 percent better generation efficiency than overland equivalents.)

His paper was published in the *International Journal of Software Engineering and Its Applications*.

More information: global.kyocera.com/news/2015/0401_tome.html

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